

Contact details:

Cable Factory BITNER

30-009 Kraków,
3/3 Józefa Friedleina Street
Poland

Production Plant:

32-353 Trzyciąż
2 Krakowska Street
phone: +48 12 389 40 24
e-mail: bitner@bitner.com.pl

Export:

phone: +48 12 389 40 24 ext. 390-398
e-mail: export@bitner.com.pl

About Us

1996

Established

Cable Factory BITNER has been operating on the cable and wire market since 1996. Nowadays we offer over 40,000 items divided into several cable groups and our extensive product portfolio enables us to handle a wide range of investments in a comprehensive way.

We have been improving production processes and developing warehouse premises concomitantly relying on solid knowledge, well-established practical experience and up-to-date technologies since Cable Factory BITNER was established. We are ISO 9001 and ISO 14001 certified and our cables comply with required national/international standards. We offer widely recognized cable types as well as special constructions requiring a specific design that would enable faultless operation in the most demanding conditions.

At Cable Factory BITNER we understand that customers are our foundation. We build our company on partnership and meet customers' demands for excellent products while having the most reliable and proven team of experienced employees. Outstanding customer service, state-of-the-art machinery park, high-tech materials used and timely deliveries allow us to compete effectively on both domestic and export markets.





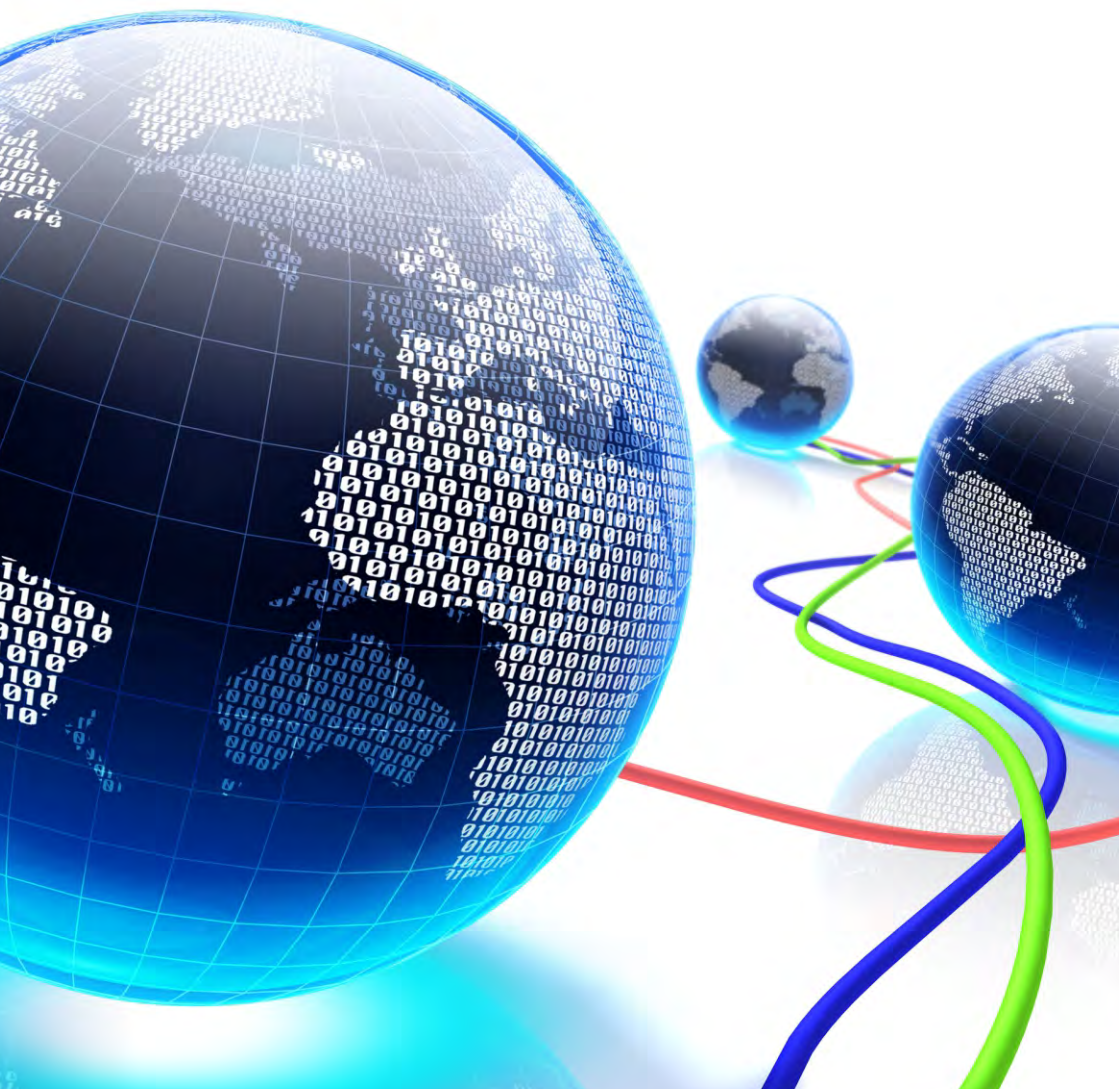


Table of contents

CHAPTER I Control cables 300/300 V

BiT LiYY	12
BiT LiYCY	14
BiT LiHH	16
BiT LiHCH	18
BiT LiHC11Y	20

CHAPTER II Control cables 300/500 V

BiT LiYY	24
BiT LiYCY	27
BiT LiHH	30
BiT LiHCH	33
BiT LiHC11Y	36
BiT 500 [®]	39
BiT 500 [®] C	42
BiT 500 [®] CY	45
BiT 500 [®] SY	47
BiT 500 [®] (St)	49
BiT 500 [®] 2(St)	52
BiT 500 [®] FR	54
BiT 500 [®] C FR	57
BiT 500 [®] (St) FR	60
BiT 500 [®] 2(St) FR	63
BiT 500 [®] OR	65
BiT 500 [®] BLACK	68
BiT 500 [®] C BLACK	71
BiT 500 [®] (St) BLACK	74
BiT 500 [®] 2(St) BLACK	77
BiT 500 [®] BLACK OR	79
BiT 500 [®] BLACK FR	82
BiT 500 [®] C BLACK FR	85
BiT 500 [®] (St) BLACK FR	88
BiT 500 [®] 2(St) BLACK FR	91
BiT 500 [®] PUR	93
BiT 500 [®] CPUR	95
BiT 500 [®] H	97
BiT 500 [®] (St)H	100
BiT 500 [®] (St)CH	103
BiT 500 [®] 2(St)H	106

CHAPTER III Power control cables 0,6/1 kV

BiT 1000 [®]	110
BiT 1000 [®] C	113
BiT 1000 [®] CY	116
BiT 1000 [®] FR	118
BiT 1000 [®] (St)FR	121
BiT 1000 [®] 2(St)FR	124
BiT 1000 [®] C FR	126
BiT 1000 [®] CY FR	129
BiT 1000 [®] OR	131
BiT 1000 [®] C OR	134
BiT 1000 [®] CY OR	137
BiT 1000 [®] H	139
BiT 1000 [®] CH	142
BiT 1000 [®] HCH	145
BiT 1000 [®] (St)H	147
BiT 1000 [®] 2(St)H	150
BiT 1000 [®] Power	152
BiT 1000 [®] H Power	155
BiT 1000 [®] PP PUR	158
BiT 1000 [®] PP C-PUR	159
BiTinstal [®] H 0,6/1 kV	160

CHAPTER IV Intrinsically safe control cables 300/500 V

IB-BiT 500°	164
IB-BiT 500°C	166
IB-BiT 500°CY	168
IB-BiT 500°(St)	170
IB-BiT 500°2(St)	172

CHAPTER V Servo motor cables

BiTservo°2XSLEY-J	176
BiTservo°3plus 2XSLEY-J	177
BiTservo°UV 2XSLEYK-J	178
BiTservo°UV 3plus 2XSLEYK-J	179
BiTservo°UV 2XSLEYK-J FR	180
BiTservo°UV 3plus 2XSLEYK-J FR	181
BiTservo°2XSLCH-J	182
BiTservo°3plus 2XSLCH-J	183
BiTservo°UV 2XSLCHK-J	184
BiTservo°UV 3plus 2XSLCHK-J	185
BiTservo°9YSLEYK-J	186
BiTservo°3GSEGCY 3,6/6 kV	188
BiTservo°3GSEGCH 3,6/6 kV	189
BiTservo°MV6	190
BiTservo°MV10	191

CHAPTER VI Drag chain cables

BiTflex°500	194
BiTflex°500 CY	195
BiTflex°500 PUR	196
BiTflex°500 CPUR	198
BiTflex°530 PUR	200
BiTflex°530 CPUR	201
BiTflex°510 encoder	203
BiTflex°510 servo	204
BiT L2 BUS High Flex	205
BiT CAN-BUS Drag Chain	206

CHAPTER VII Fire resistant cables

NHXH FE180/E90	208
NHXCH FE180/E90	211
(N)HXH FE180/E90 CERAMIC	213
(N)HXCH FE180/E90 CERAMIC	216
BiTflame°AS FE180/E90	218
BiTflame°AS(St) FE180/E90	220
BiTflame°A	222
BiTflame°A(St)	223
BiTflame°S FE180/E90	224
BiTflame°S(St) FE180/E90	226

CHAPTER VIII LAN cables

BiTLAN°U/UTP cat.5e 200 MHz	230
BiTLAN°F/UTP cat.5e 200 MHz	232
BiTLAN°U/UTP cat.5e 200 MHz LSOH	234
BiTLAN°F/UTP cat.5e 200 MHz LSOH	236
BiTLAN°U/UTP cat.5e outdoor 200 MHz	238
BiTLAN°U/UTPs cat.5e outdoor 200 MHz	240
BiTLAN°U/UTPf cat.5e outdoor 200 MHz	242
BiTLAN°U/UTPfs cat.5e outdoor 200 MHz	244

Table of contents

BITLAN®F/UTP cat.5e outdoor 200 MHz	246
BITLAN®F/UTPs cat.5e outdoor 200 Mhz	248
BITLAN®F/UTPf cat.5e outdoor 200 MHz	250
BITLAN®U/UTP PATCHCORD cat.5e	252
BITLAN®F/UTP PATCHCORD cat.5e	253
BITLAN®U/UTP cat.6 350 MHz	254
BITLAN®F/UTP cat.6 350 MHz	256
BITLAN®U/FTP cat.6 350 MHz	258
BITLAN®U/UTP cat.6 350 MHz LSOH	260
BITLAN®F/UTP cat.6 350 MHz LSOH	262
BITLAN®U/FTP cat.6 350 MHz LSOH	264
BITLAN®F/FTP cat.6 350 MHz LSOH	266
BITLAN®U/UTP cat.6 outdoor 350 MHz	268
BITLAN®U/UTPf cat.6 outdoor 350 MHz	270
BITLAN®F/UTP cat.6 outdoor 350 MHz	272
BITLAN®U/UTP cat.6 Duplex 350 MHz LSOH	274
BITLAN®U/FTP cat.6A 500 MHz	276
BITLAN®F/FTP cat.6A 500 MHz	278
BITLAN®S/FTP cat.6A 500 MHz	280
BITLAN®U/UTP cat.6A 500 MHz LSOH	282
BITLAN®U/FTP cat.6A 500 MHz LSOH	284
BITLAN®F/UTP cat.6A 500 MHz LSOH	286
BITLAN®F/FTP cat.6A 500 MHz LSOH	288
BITLAN®S/FTP cat.6A 500 MHz LSOH	290
BITLAN®S/FTP cat.6A outdoor 500 MHz	292
BITLAN®U/FTP cat.6A Duplex 500 MHz LSOH	294
BITLAN®S/FTP cat.7 1000 MHz LSOH	296
BITLAN®S/FTP cat.7A 1200 MHz LSOH	298
BITLAN®U/UTP cat.6 350 MHz LSOH B2ca	300
BITLAN®U/FTP cat.6A 500 MHz LSOH B2ca	302
BITLAN®F/FTP cat.6A 500 MHz LSOH B2ca	304
BITLAN®S/FTP cat.7A 1200 MHz LSOH B2ca	306

CHAPTER IX Data transmission and telecommunication cables

BiT L2 BUS DB	310
BiT L2 BUS LSOH	311
BiT L2 BUS outdoor	312
BiT L2 BUS Flex	313
BiT L2 BUS High Flex	314
BiT L2 BUS FC	315
BiT L2 BUS FC LSOH	316
BiT CAN BUS Drag Chain	317
BiT E-BUS	318
BiT E-BUS H	319
BiT Profibus PA	320
BiT Device	321
BiT Li2YCY-P(St)	322
BiT NOVAK	323
BiT KJAAM	324
BiT KJAAM-HF UV	325
ELQXB	326
ELQYB	328
FLAQQBR	329
FQAR-PG	330
YTKSY	331
YTKSYekw	332
YnTKSY	333
YnTKSYekw	335
PT-LSHF	337
PTS-LSHF	338
BiTsensor®PE(ST)CH B2ca	339

CHAPTER X Instrumentation cables 500 V

BiT RE-2Y(St)Y-FR	342
BiT RE-2Y(St)Yv-FR	344
BiT RE-2Y(St)Y-FR PIMF	346
BiT RE-2Y(St)Y-FR TIMF	348
BiT RE-2Y(St)Y-SWAY-FR	350
BiT RE-2Y(St)H	352
BiT RE-2Y(St)H-SWAH	354

CHAPTER XI Crane cables

BiTcrane®STN	358
BiTcrane®STCN (EMV)	360
BiTcrane®(N)GFLGOEU-J	361
BiTcrane®(N)GFLCGOEU-J	363
BiTcrane®M(StD)HOEU	365
BiTcrane®NSHTOEU-J	367
BiTcrane®(N)SHTOEU-J	369
BiTcrane®(N)SHTOEU-J FO	371
BiTcrane®(N)SHTOEU-J SPREADER	373
BiTcrane®(N)12YRD11Y-J/O	375
BiTcrane®(N)12YRD11Y-J/O	377
BiTfiber®CRANE FO 2 x 12 .../125	379
BiTfiber®FESTOON FO 2 x 12 .../125	380
BiTfiber®CRANE PUR FO 2 x 12 .../125	381
BiTfiber®FESTOON PUR FO 2 x 12 .../125	382
BiTcrane®(N)TSFLCGEWOEU	383
BiTcrane®(N)TSCGEWOEU-SR	385
BiTcrane®(N)TSCGEWOEU-SR FO	387
BiTcrane®(N)TSCGEWOEU-SR PLUS	391

CHAPTER XII Mining cables

BiTmining®NSSHOEU	394
BiTmining®NSSHCOEU	398
BiTmining®REELPUR HF	400
BiTmining®(N)3GHSSYCY	401
BiTmining®(N)3GHSSHCH	403
BiTfiber®MINING FO 2 x 12 .../125	405
BiTmining®(N)TSCGEWOEU-F	406
BiTmining®NTSCGEWOEU-W .../3	409
BiTmining®NTSCGEWOEU-W .../3E	412
BiTmining®(N)TSCGEWOEU-TR	415
BiTmining®(N)TSKCGECWOEU-CH	418
BiTmining®(N)TSKCGECWOEU-FN	420
BiTmining®NTMCGCWOEU	422
BiTflex®(N)TMCGC11Y	425

CHAPTER XIII Special application cables

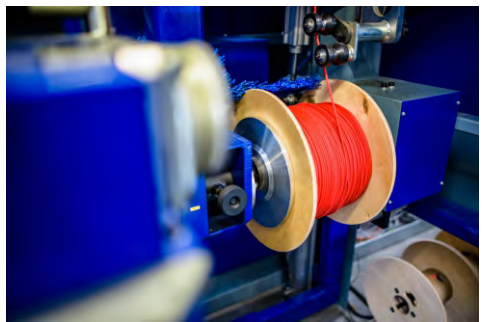
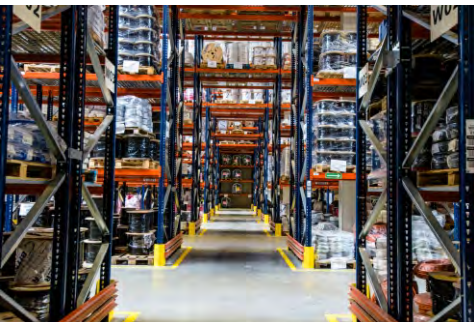
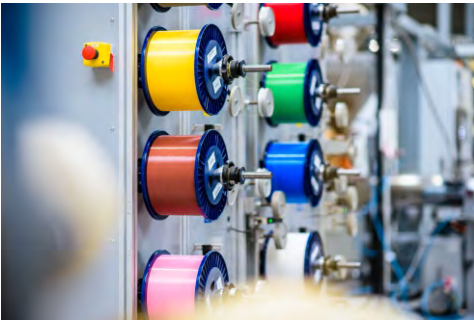
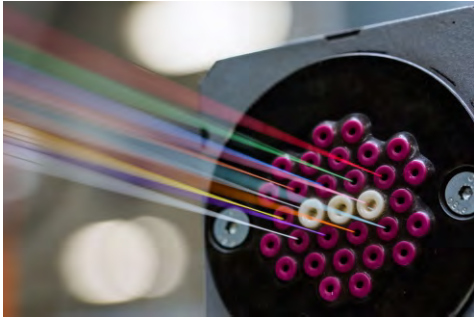
BiTcharger®EVC H07BZ5-F	428
BiTsteel AQUA POWER	429
Multibit®2xCOAX-75 2xUTP5e 1xFTTH2J	431
BiTflex®TWIN BATTERY CABLE	433
BiTflex®TWIN BATTERY CABLE LSOH	434
BiTsound®Speaker Cable OFC	435
BiTsound®INSTAL Speaker Cable OFC	436
BiTsound®INSTAL Speaker Cable LSOH OFC	437

Table of contents

BiTsound®Power Cable 300/500V	438
BiTsound®LP0217 Digital Hybrid Cable Power 3G1,5 + DMX 1x(2x0,25) OFC	439
BiTsound®LP0501 Hybrid Cable Power 3G1,5 + MOBILE DATA PATCHCORD U/UTP cat. 5e OFC	440
BiTsound®LP0504 Multi Hybrid Cable Power 3G1,5 + DMX 2x(2x0,25) + MOBILE DATA PATCHCORD 2xU/UTP cat. 5e OFC	441

CHAPTER XIV Technical data

List of standards pertaining to the construction, properties, parameters and testing of cables	444
Insulating materials	445
Properties of insulating materials	446
Conductor insulation colours	448
Conductor flexibility classes	451
Conductor resistance	452
Long-term current-carrying capacity of control and power supply cables with PVC insulation	453
Current-carrying capacity of cables with silicone insulation	454
Current-carrying capacity - BiT1000®Power, BiT1000®H Power	455
Electrical parameters - BiTflame®S FE180/E90, BiTflame®S(St) FE180/E90	456
Current rating for NHXH, NHXCH, (N)HXH, (N)HXCH	457
Guidelines for laying cable support systems in fire safety installations	459
Guidelines regarding cable installation in drag chains	460
Reduction factors for cables laid singly and in bundles in the air	463
Reduction factors for cables laid in the air	464
Correction factors for bunched multicore cables	465
Selection of frequency converter cables adapted to the power of the frequency converter	466
Tests for halogen-free and fire-resistant cables	467
CPR Construction Products Regulation	470
Guidelines regarding the handling of cable drums during transport and storage	472



Chapter I

Control cables 300/300 V

BIT LiYY	12
BIT LiYCY	14
BIT LiHH	16
BIT LiHCH	18
BIT LiHC11Y	20

Flexible control cables with coloured conductors, rated 300/300 V



industrial application



internal application



EN 60332-1-2



high flexibility

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_i/U_n = 300/300$ V

Test voltage: 1500 V

Insulation resistance: 20 M Ω x km

Approximate capacitance (at 800 Hz): 150 pF/m

Approximate inductance: 0,65 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 7,5 x \varnothing
fixed installation: 4 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

PVC compound

Core identification:

colours as per DIN 47100

Core arrangement:

cores twisted together or pairs twisted together

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2); colour: grey

Application:

Cables designed for signalling control circuits, control circuits in industrial applications, in measurement technology and for analogue and digital signals transmission in electronic industrial and automatic control engineering systems, for fixed installations and mobile/portable devices. Suitable for usage in internal systems, in both dry and damp rooms. Core arrangement ensures asymmetry attenuation of 10 dB. In the environment with considerable electromagnetic interference we recommend using a screened version - BIT LiYYC. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30079	2x0,5	4,7	33
S30080	3x0,5	5,0	40
S30081	4x0,5	5,5	48
S30082	5x0,5	6,0	58
S30083	6x0,5	6,5	68
S30084	7x0,5	6,5	72
S30085	8x0,5	7,4	82
S30086	10x0,5	8,4	97
S30087	12x0,5	8,7	112
S30088	14x0,5	9,1	128
S30089	16x0,5	9,6	144
S30090	18x0,5	10,1	162
S30091	20x0,5	10,9	184
S30092	21x0,5	10,9	188
S30094	27x0,5	12,7	252
S30095	30x0,5	13,2	268
S30097	37x0,5	14,2	322
S30098	40x0,5	15,3	360
S30099	44x0,5	16,3	404
S30101	48x0,5	16,6	430
S30102	52x0,5	17,0	460
S30103	56x0,5	17,5	492
S30104	61x0,5	18,1	530
S30105	2x0,75	5,1	41
S30106	3x0,75	5,4	50
S30107	4x0,75	6,0	60
S30108	5x0,75	6,5	74
S30109	6x0,75	7,1	88
S30110	7x0,75	7,1	92
S30111	8x0,75	8,0	105

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30112	10x0,75	9,2	124
S30113	12x0,75	9,5	144
S30114	14x0,75	10,0	165
S30115	16x0,75	10,8	192
S30116	18x0,75	11,3	216
S30117	20x0,75	11,9	240
S30118	21x0,75	11,9	245
S30120	27x0,75	14,2	330
S30121	30x0,75	14,4	348
S30123	37x0,75	15,8	427
S30124	40x0,75	17,2	465
S30127	2x1,0	5,8	53
S30128	3x1,0	6,2	65
S30129	4x1,0	6,8	79
S30130	5x1,0	7,6	100
S30131	6x1,0	8,3	120
S30132	7x1,0	8,3	125
S30133	8x1,0	9,2	137
S30134	10x1,0	10,8	169
S30135	12x1,0	11,1	196
S30136	14x1,0	11,7	223
S30137	16x1,0	12,4	255
S30138	18x1,0	13,5	300
S30139	20x1,0	14,1	332
S30149	2x1,5	6,2	65
S30150	3x1,5	6,6	81
S30151	4x1,5	7,5	103
S30152	5x1,5	8,2	125
S30153	6x1,5	8,9	150
S30154	7x1,5	8,9	160

Flexible control cables with coloured conductors, rated 300/300 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30155	8x1,5	9,9	174
S30156	10x1,5	11,6	215
S30157	12x1,5	12,0	250
S30158	14x1,5	12,6	285
S30159	16x1,5	13,7	338
S30160	18x1,5	14,5	380
S30161	20x1,5	15,4	430
S30171	2x2,5	7,8	104

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30172	3x2,5	8,4	130
S30173	4x2,5	9,3	160
S30174	5x2,5	10,2	196
S30175	6x2,5	11,3	240
S30176	7x2,5	11,3	255
S30177	8x2,5	13,0	290
S30178	10x2,5	14,9	350
S30179	12x2,5	15,6	415

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30342	2x2x0,5	6,9	55
S30343	3x2x0,5	8,0	67
S30344	4x2x0,5	8,7	83
S30345	5x2x0,5	9,4	105
S30346	6x2x0,5	9,7	114
S30347	7x2x0,5	11,2	138
S30348	8x2x0,5	11,7	153
S30349	10x2x0,5	12,6	185
S30350	12x2x0,5	13,8	228
S30351	14x2x0,5	14,7	260
S30352	16x2x0,5	16,0	305
S30353	18x2x0,5	16,7	330
S30354	20x2x0,5	17,2	360
S30355	24x2x0,5	17,7	420
S30360	2x2x0,75	7,7	73
S30361	3x2x0,75	8,7	85
S30362	4x2x0,75	9,5	106
S30363	5x2x0,75	10,3	134
S30365	7x2x0,75	12,2	176
S30367	10x2x0,75	14,2	252
S30368	12x2x0,75	15,4	301

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30369	14x2x0,75	16,3	343
S30370	16x2x0,75	17,5	395
S30371	18x2x0,75	18,5	437
S30377	2x2x1,0	8,9	94
S30378	3x2x1,0	10,0	110
S30379	4x2x1,0	11,1	143
S30380	5x2x1,0	12,1	181
S30382	7x2x1,0	14,5	245
S30384	10x2x1,0	16,6	338
S30385	12x2x1,0	17,7	395
S30386	14x2x1,0	19,1	460
S30387	16x2x1,0	20,4	530
S30388	18x2x1,0	21,6	585
S30394	2x2x1,5	9,5	116
S30395	3x2x1,5	11,0	142
S30396	4x2x1,5	12,0	180
S30397	5x2x1,5	13,4	240
S30399	7x2x1,5	15,8	315
S30401	10x2x1,5	17,8	427
S30402	12x2x1,5	19,3	510
S30403	14x2x1,5	20,7	595
S30404	16x2x1,5	22,2	680

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

Flexible control cables with coloured conductors, rated 300/300 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/300$ V

Test voltage (50 Hz): 1500 V

Insulation resistance: 20 M Ω x km

Approximate capacitance (at 800 Hz):

Core/core - 150 pF/m

Core/screen - 2700 pF/m

Approximate inductance: 0,65 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x \varnothing
fixed installation: 5 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded class 5

acc. to EN 60228

Insulation:

PVC compound

Core identification:

colours as per DIN 47100

Core arrangement:

cores twisted together or pairs twisted together

Screen:

tinned copper wire braid with coverage $\geq 85\%$

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2); colour: grey

Application:

The cables are intended for signalling control circuits, control circuits in industrial applications, in measurement technology and for analogue and digital signals transmission in electronic industrial and automatic control engineering systems, for fixed installations and mobile/portable devices. Suitable for use indoors, in both dry and damp rooms. A common screen of tinned copper wire braid ensures very good protection against external electromagnetic fields (approximately 50 dB). Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30587	2x0,5	5,3	42
S30588	3x0,5	5,6	50
S30589	4x0,5	6,2	58
S30590	5x0,5	6,7	74
S30591	6x0,5	7,2	85
S30592	7x0,5	7,2	88
S30593	8x0,5	8,0	100
S30594	10x0,5	9,1	120
S30595	12x0,5	9,3	134
S30596	14x0,5	9,8	150
S30597	16x0,5	10,5	175
S30598	18x0,5	11,0	193
S30599	20x0,5	11,7	211
S30600	21x0,5	11,7	214
S30602	27x0,5	13,4	271
S30603	30x0,5	13,8	294
S30605	37x0,5	15,1	356
S30606	40x0,5	16,3	390
S30607	44x0,5	17,3	442
S30609	48x0,5	17,5	470
S30610	52x0,5	18,0	503
S30611	56x0,5	18,6	537
S30613	61x0,5	19,1	577
S30615	2x0,75	5,8	50
S30616	3x0,75	6,1	59
S30617	4x0,75	6,7	75
S30618	5x0,75	7,2	88
S30619	6x0,75	7,9	104

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30620	7x0,75	7,9	109
S30621	8x0,75	8,7	125
S30622	10x0,75	9,9	148
S30623	12x0,75	10,2	173
S30624	14x0,75	10,8	193
S30625	16x0,75	11,5	217
S30626	18x0,75	12,4	251
S30627	20x0,75	13,1	275
S30628	21x0,75	13,1	280
S30631	27x0,75	14,8	348
S30632	30x0,75	15,3	383
S30635	37x0,75	17,8	465
S30636	40x0,75	19,0	522
S30637	2x1,0	6,5	58
S30638	3x1,0	6,9	76
S30639	4x1,0	7,6	92
S30640	5x1,0	8,3	110
S30641	6x1,0	9,0	131
S30642	7x1,0	9,0	137
S30643	8x1,0	9,9	159
S30644	10x1,0	11,4	194
S30645	12x1,0	11,7	220
S30646	14x1,0	12,7	256
S30647	16x1,0	13,5	291
S30648	18x1,0	14,3	330
S30649	20x1,0	15,2	365
S30650	21x1,0	15,2	370
S30653	27x1,0	17,4	479

Flexible control cables with coloured conductors, rated 300/300 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30654	30x1,0	17,9	521
S30656	37x1,0	19,4	625
S30657	2x1,5	7,1	74
S30658	3x1,5	7,5	94
S30659	4x1,5	8,4	116
S30660	5x1,5	9,1	141
S30661	6x1,5	9,9	169
S30662	7x1,5	9,9	177
S30663	8x1,5	11,0	210
S30664	10x1,5	13,0	259
S30665	12x1,5	13,4	295
S30666	14x1,5	14,2	340
S30667	16x1,5	15,1	386
S30668	18x1,5	15,8	431
S30669	20x1,5	17,2	502
S30670	21x1,5	17,2	510

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30673	27x1,5	19,3	632
S30674	30x1,5	20,0	690
S30676	37x1,5	21,7	834
S30677	2x2,5	8,5	126
S30678	3x2,5	9,0	168
S30679	4x2,5	10,0	195
S30680	5x2,5	10,9	210
S30681	6x2,5	11,9	278
S30682	7x2,5	11,9	296
S30683	8x2,5	13,6	345
S30684	10x2,5	15,8	403
S30685	12x2,5	16,5	540
S30686	14x2,5	17,5	589
S30687	16x2,5	18,7	640
S30688	18x2,5	19,6	681
S30689	20x2,5	21,1	762
S30690	21x2,5	21,1	816

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30849	2x2x0,5	7,7	82
S30850	3x2x0,5	8,6	92
S30851	4x2x0,5	9,3	111
S30852	5x2x0,5	10,0	137
S30853	6x2x0,5	10,3	149
S30854	7x2x0,5	11,8	174
S30855	8x2x0,5	12,3	191
S30856	10x2x0,5	13,6	237
S30857	12x2x0,5	14,4	272
S30858	14x2x0,5	15,5	314
S30859	16x2x0,5	16,8	370
S30860	18x2x0,5	17,5	399
S30861	20x2x0,5	18,0	431
S30862	24x2x0,5	18,7	499
S30864	2x2x0,75	8,3	97
S30865	3x2x0,75	9,3	112
S30866	4x2x0,75	10,1	141
S30867	5x2x0,75	11,1	177
S30869	7x2x0,75	13,2	228
S30871	10x2x0,75	14,8	297
S30872	12x2x0,75	16,0	349

Cat. no.	n x 2 mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S30873	14x2x0,75	17,1	410
S30874	16x2x0,75	18,5	476
S30875	18x2x0,75	19,3	512
S30877	2x2x1,0	9,5	121
S30878	3x2x1,0	10,8	150
S30879	4x2x1,0	11,7	179
S30880	5x2x1,0	13,1	232
S30882	7x2x1,0	15,3	298
S30884	10x2x1,0	17,4	405
S30885	12x2x1,0	18,7	476
S30886	14x2x1,0	19,9	538
S30887	16x2x1,0	21,4	622
S30888	18x2x1,0	22,4	673
S30890	2x2x1,5	10,1	145
S30891	3x2x1,5	11,6	178
S30892	4x2x1,5	12,6	218
S30893	5x2x1,5	14,0	285
S30895	7x2x1,5	16,4	366
S30897	10x2x1,5	18,8	508
S30898	12x2x1,5	20,1	588
S30899	14x2x1,5	21,5	678
S30900	16x2x1,5	23,0	774

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

Flexible, halogen-free control cables with coloured conductors, 300/300 V



Industrial application



Internal application



EN 60332-1-2



EN 60332-3-24



oxygen index



halogen-free
EN 60754



low smoke emission
EN 61034



high flexibility

Technical data:

Thermal parameters

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/300$ V

Test voltage: 1500 V

Insulation resistance: 20 M Ω x km

Approximate capacitance (at 800 Hz):
150 pF/m

Approximate inductance: 0,65 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x \varnothing
fixed installation: 5 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded class 5

acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

colours as per DIN 47100

Core arrangement:

cores twisted together or pairs twisted together

Outer sheath:

special halogen-free compound, self-extinguishing and highly flame retardant with LOI>29 (as per EN 60332-1-2, EN 60332-3-24 cat. C); colour: grey, on customer's request black

Application:

Cables designed for signalling control circuits, control circuits in industrial applications, in measurement technology, for analogue and digital signals transmission in electronic industrial and automatic control engineering systems, for fixed installations and mobile/portable devices. Suitable for usage in internal systems, in both dry and damp rooms. Core arrangement ensures asymmetry attenuation of 10 dB. In the environment with considerable electromagnetic interference we recommend using a screened version - BiT LiHCH. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33069	2x0,5	4,7	33
S33070	3x0,5	5,0	40
S33071	4x0,5	5,5	48
S33072	5x0,5	6,0	58
S33073	6x0,5	6,5	68
S33074	7x0,5	6,5	72
S33075	8x0,5	7,4	82
S33076	10x0,5	8,4	97
S33077	12x0,5	8,7	112
S33078	14x0,5	9,1	128
S33079	16x0,5	9,6	144
S33080	18x0,5	10,1	162
S33081	20x0,5	10,9	184
S33082	21x0,5	10,9	188
S33083	27x0,5	12,7	252
S33084	30x0,5	13,2	268
S33085	37x0,5	14,2	322
S33086	40x0,5	15,3	360
S33087	44x0,5	16,3	404
S33088	48x0,5	16,6	430
S33089	52x0,5	17,0	460
S33090	56x0,5	17,5	492
S33091	61x0,5	18,1	530
S33092	2x0,75	5,1	41
S33093	3x0,75	5,4	50
S33094	4x0,75	6,0	60
S33095	5x0,75	6,5	74
S33096	6x0,75	7,1	88
S33097	7x0,75	7,1	92
S33098	8x0,75	8,0	105

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33099	10x0,75	9,2	124
S33100	12x0,75	9,5	144
S33101	14x0,75	10,0	165
S33102	16x0,75	10,8	192
S33103	18x0,75	11,3	216
S33104	20x0,75	11,9	240
S33105	21x0,75	11,9	245
S33106	27x0,75	14,2	330
S33107	30x0,75	14,4	348
S33108	37x0,75	15,8	427
S33109	40x0,75	17,2	465
S33110	2x1,0	5,8	53
S33111	3x1,0	6,2	65
S33112	4x1,0	6,8	79
S33113	5x1,0	7,6	100
S33114	6x1,0	8,3	120
S33115	7x1,0	8,3	125
S33116	8x1,0	9,2	137
S33117	10x1,0	10,8	169
S33118	12x1,0	11,1	196
S33119	14x1,0	11,7	223
S33120	16x1,0	12,4	255
S33121	18x1,0	13,5	300
S33122	20x1,0	14,1	332
S33123	2x1,5	6,2	65
S33124	3x1,5	6,6	81
S33125	4x1,5	7,5	103
S33126	5x1,5	8,2	125
S33127	6x1,5	8,9	150
S33128	7x1,5	8,9	160

Flexible, halogen-free control cables with coloured conductors, 300/300 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33129	8x1,5	9,9	174
S33130	10x1,5	11,6	215
S33131	12x1,5	12,0	250
S33132	14x1,5	12,6	285
S33133	16x1,5	13,7	338
S33134	18x1,5	14,5	380
S33135	20x1,5	15,4	430
S33136	2x2,5	7,8	104

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33137	3x2,5	8,4	130
S33138	4x2,5	9,3	160
S33139	5x2,5	10,2	196
S33140	6x2,5	11,3	240
S33141	7x2,5	11,3	255
S33142	8x2,5	13,0	290
S33143	10x2,5	14,9	350
S33144	12x2,5	15,6	415

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33442	2x2x0,5	6,9	55
S33443	3x2x0,5	8,0	67
S33444	4x2x0,5	8,7	83
S33445	5x2x0,5	9,4	105
S33446	6x2x0,5	9,7	114
S33447	7x2x0,5	11,2	138
S33448	8x2x0,5	11,7	153
S33449	10x2x0,5	12,6	185
S33450	12x2x0,5	13,8	228
S33451	14x2x0,5	14,7	260
S33452	16x2x0,5	16,0	305
S33453	18x2x0,5	16,7	330
S33454	20x2x0,5	17,2	360
S33455	24x2x0,5	17,7	420
S33456	2x2x0,75	7,7	73
S33457	3x2x0,75	8,7	85
S33458	4x2x0,75	9,5	106
S33459	5x2x0,75	10,3	134
S33460	7x2x0,75	12,2	176
S33461	10x2x0,75	14,2	252
S33462	12x2x0,75	15,4	301

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33463	14x2x0,75	16,3	343
S33464	16x2x0,75	17,5	395
S33465	18x2x0,75	18,5	437
S33466	2x2x1,0	8,9	94
S33467	3x2x1,0	10,0	110
S33468	4x2x1,0	11,1	143
S33469	5x2x1,0	12,1	181
S33470	7x2x1,0	14,5	245
S33471	10x2x1,0	16,6	338
S33472	12x2x1,0	17,7	395
S33473	14x2x1,0	19,1	460
S33474	16x2x1,0	20,4	530
S33475	18x2x1,0	21,6	585
S33476	2x2x1,5	9,5	116
S33477	3x2x1,5	11,0	142
S33478	4x2x1,5	12,0	180
S33479	5x2x1,5	13,4	240
S33480	7x2x1,5	15,8	315
S33481	10x2x1,5	17,8	427
S33482	12x2x1,5	19,3	510
S33483	14x2x1,5	20,7	595
S33484	16x2x1,5	22,2	680

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

BiT LiHCH



Flexible, screened, halogen-free control cables with coloured conductors, 300/300 V



Industrial application



Internal application



EN 60332-1-2



EN 60332-3-24



oxygen index



halogen-free
EN 60754



low smoke emission
EN 61034



high flexibility



EMC

Technical data:

Thermal parameters

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/300$ V

Test voltage: 1500 V

Insulation resistance: 20 M Ω x km

Approximate capacitance (at 800 Hz):

Core/core - 150 pF/m

Core/screen - 270 pF/m

Approximate inductance: 0,65 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x \varnothing
fixed installation: 5 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

colours as per DIN 47100

Core arrangement:

cores twisted together or pairs twisted together

Screen:

tinned copper wire braid with coverage of $\geq 85\%$

Outer sheath:

special halogen-free compound, self-extinguishing
and highly flame retardant with LOI > 29 (as per
EN 60332-1-2, EN 60332-3-24 cat. C); colour: grey,
on customer's request black

Application:

The cables are intended for signalling control circuits, control circuits in industrial applications, in measurement technology, for analogue and digital signals transmission in electronic industrial and automatic control engineering systems, for fixed installations and mobile/portable devices. Suitable for use indoors, in both dry and damp rooms. A common screen of tinned copper wire braid ensures very good protection against external electromagnetic fields (approximately 50 dB). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S32869	2x0,5	5,3	42
S32870	3x0,5	5,6	50
S32871	4x0,5	6,2	58
S32872	5x0,5	6,7	74
S32873	6x0,5	7,2	85
S32874	7x0,5	7,2	88
S32875	8x0,5	8,0	100
S32876	10x0,5	9,1	120
S32877	12x0,5	9,3	134
S32878	14x0,5	9,8	150
S32879	16x0,5	10,5	175
S32880	18x0,5	11,0	193
S32881	20x0,5	11,7	211
S32882	21x0,5	11,7	214
S32883	27x0,5	13,4	271
S32884	30x0,5	13,8	294
S32885	37x0,5	15,1	356
S32886	40x0,5	16,3	390
S32887	44x0,5	17,3	442
S32888	48x0,5	17,5	470
S32889	52x0,5	18,0	503
S32890	56x0,5	18,6	537
S32891	61x0,5	19,1	577
S32892	2x0,75	5,8	50
S32893	3x0,75	6,1	59
S32894	4x0,75	6,7	75

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S32895	5x0,75	7,2	88
S32896	6x0,75	7,9	104
S32897	7x0,75	7,9	109
S32898	8x0,75	8,7	125
S32899	10x0,75	9,9	148
S32900	12x0,75	10,2	173
S32901	14x0,75	10,8	193
S32902	16x0,75	11,5	217
S32903	18x0,75	12,4	251
S32904	20x0,75	13,1	275
S32905	21x0,75	13,1	280
S32906	27x0,75	14,8	348
S32907	30x0,75	15,3	383
S32908	37x0,75	17,8	465
S32909	40x0,75	19,0	522
S32910	2x1,0	6,5	58
S32911	3x1,0	6,9	76
S32912	4x1,0	7,6	92
S32913	5x1,0	8,3	110
S32914	6x1,0	9,0	131
S32915	7x1,0	9,0	137
S32916	8x1,0	9,9	159
S32917	10x1,0	11,4	194
S32918	12x1,0	11,7	220
S32919	14x1,0	12,7	256
S32920	16x1,0	13,5	291

BIT LIHCH

Flexible, screened, halogen-free control cables with coloured conductors, 300/300 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S32921	18x1,0	14,3	330
S32922	20x1,0	15,2	365
S32923	21x1,0	15,2	370
S32924	27x1,0	17,4	479
S32925	30x1,0	17,9	521
S32926	37x1,0	19,4	625
S32927	2x1,5	7,1	74
S32928	3x1,5	7,5	94
S32929	4x1,5	8,4	116
S32930	5x1,5	9,1	141
S32931	6x1,5	9,9	169
S32932	7x1,5	9,9	177
S32933	8x1,5	11,0	210
S32934	10x1,5	13,0	259
S32935	12x1,5	13,4	295
S32936	14x1,5	14,2	340
S32937	16x1,5	15,1	386
S32938	18x1,5	15,8	431

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S32939	20x1,5	17,2	502
S32940	21x1,5	17,2	510
S32941	27x1,5	19,3	632
S32942	30x1,5	20,0	690
S32943	37x1,5	21,7	834
S32944	2x2,5	8,5	126
S32945	3x2,5	9,0	168
S32946	4x2,5	10,0	195
S32947	5x2,5	10,9	210
S32948	6x2,5	11,9	278
S32949	7x2,5	11,9	296
S32950	8x2,5	13,6	345
S32951	10x2,5	15,8	403
S32952	12x2,5	16,5	540
S32953	14x2,5	17,5	589
S32954	16x2,5	18,7	640
S32955	18x2,5	19,6	681
S32956	20x2,5	21,1	762
S32957	21x2,5	21,1	816

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33242	2x2x0,5	7,7	82
S33243	3x2x0,5	8,6	92
S33244	4x2x0,5	9,3	111
S33245	5x2x0,5	10,0	137
S33246	6x2x0,5	10,3	149
S33247	7x2x0,5	11,8	174
S33248	8x2x0,5	12,3	191
S33249	10x2x0,5	13,6	237
S33250	12x2x0,5	14,4	272
S33251	14x2x0,5	15,5	314
S33252	16x2x0,5	16,8	370
S33253	18x2x0,5	17,5	399
S33254	20x2x0,5	18,0	431

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33255	24x2x0,5	18,7	499
S33256	2x2x0,75	8,3	97
S33257	3x2x0,75	9,3	112
S33258	4x2x0,75	10,1	141
S33259	5x2x0,75	11,1	177
S33261	7x2x0,75	13,2	228
S33263	10x2x0,75	14,8	297
S33264	12x2x0,75	16,0	349
S33265	14x2x0,75	17,1	410
S33266	16x2x0,75	18,5	476
S33267	18x2x0,75	19,3	512
S33269	2x2x1,0	9,5	121
S33270	3x2x1,0	10,8	150

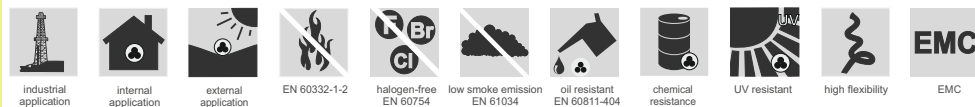
*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiT LiHC11Y

Flexible, screened, halogen-free control cables with coloured conductors, 300/300 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/300$ V

Test voltage: 1500 V

Insulation resistance: 20 M Ω x km

Approximate capacitance (at 800 Hz):

Core/core - 150 pF/m

Core/screen - 270 pF/m

Approximate inductance: 0,65 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x \varnothing
fixed installation: 5 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

special halogen-free compound
colours as per DIN 47100

Core identification:

cores twisted together or pairs twisted together

Core arrangement:

tinned copper wire braid with coverage of $\geq 85\%$

Screen:

special PUR compound, oil resistant (EN 60811-404),
resistant to hydrocarbons, industrial coolants and UV
radiation, flame retardant and halogen-free (as per
EN 60332-1-2); colour: grey

Outer sheath:

Application:

The cables are intended for signalling control circuits, control circuits in industrial applications, in measurement technology, for analogue and digital signals transmission in electronic industrial and automatic control engineering systems, for fixed installation, and mobile/portable devices. A common screen of tinned copper wire braid ensures very good protection against external electromagnetic fields (approximately 50 dB). Suitable for use indoors, in both dry and damp rooms. The cable can also be installed outdoors – UV resistance and increased mechanical protection due to special outer sheath compound (PUR). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33569	2x0,5	5,3	42
S33570	3x0,5	5,6	50
S33571	4x0,5	6,2	58
S33572	5x0,5	6,7	74
S33573	6x0,5	7,2	85
S33574	7x0,5	7,2	88
S33575	8x0,5	8,0	100
S33576	10x0,5	9,1	120
S33577	12x0,5	9,3	134
S33578	14x0,5	9,8	150
S33579	16x0,5	10,5	175
S33580	18x0,5	11,0	193
S33581	20x0,5	11,7	211
S33582	21x0,5	11,7	214
S33583	27x0,5	13,4	271
S33584	30x0,5	13,8	294
S33585	37x0,5	15,1	356
S33586	40x0,5	16,3	390
S33587	44x0,5	17,3	442
S33588	48x0,5	17,5	470
S33589	52x0,5	18,0	503
S33590	56x0,5	18,6	537
S33591	61x0,5	19,1	577

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33592	2x0,75	5,8	50
S33593	3x0,75	6,1	59
S33594	4x0,75	6,7	75
S33595	5x0,75	7,2	88
S33596	6x0,75	7,9	104
S33597	7x0,75	7,9	109
S33598	8x0,75	8,7	125
S33599	10x0,75	9,9	148
S33600	12x0,75	10,2	173
S33601	14x0,75	10,8	193
S33602	16x0,75	11,5	217
S33603	18x0,75	12,4	251
S33604	20x0,75	13,1	275
S33605	21x0,75	13,1	280
S33606	27x0,75	14,8	348
S33607	30x0,75	15,3	383
S33608	37x0,75	17,8	465
S33609	40x0,75	19,0	522
S33610	2x1,0	6,5	58
S33611	3x1,0	6,9	76
S33612	4x1,0	7,6	92
S33613	5x1,0	8,3	110
S33614	6x1,0	9,0	131

BIT LiHC11Y

Flexible, screened, halogen-free control cables with coloured conductors, 300/300 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33615	7x1,0	9,0	137
S33616	8x1,0	9,9	159
S33617	10x1,0	11,4	194
S33618	12x1,0	11,7	220
S33619	14x1,0	12,7	256
S33620	16x1,0	13,5	291
S33621	18x1,0	14,3	330
S33622	20x1,0	15,2	365
S33623	21x1,0	15,2	370
S33624	27x1,0	17,4	479
S33625	30x1,0	17,9	521
S33626	37x1,0	19,4	625
S33627	2x1,5	7,1	74
S33628	3x1,5	7,5	94
S33629	4x1,5	8,4	116
S33630	5x1,5	9,1	141
S33631	6x1,5	9,9	169
S33632	7x1,5	9,9	177
S33633	8x1,5	11,0	210
S33634	10x1,5	13,0	259
S33635	12x1,5	13,4	295

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33636	14x1,5	14,2	340
S33637	16x1,5	15,1	386
S33638	18x1,5	15,8	431
S33639	20x1,5	17,2	502
S33640	21x1,5	17,2	510
S33641	27x1,5	19,3	632
S33642	30x1,5	20,0	690
S33643	37x1,5	21,7	834
S33644	2x2,5	8,5	126
S33645	3x2,5	9,0	168
S33646	4x2,5	10,0	195
S33647	5x2,5	10,9	210
S33648	6x2,5	11,9	278
S33649	7x2,5	11,9	296
S33650	8x2,5	13,6	345
S33651	10x2,5	15,8	403
S33652	12x2,5	16,5	540
S33653	14x2,5	17,5	589
S33654	16x2,5	18,7	640
S33655	18x2,5	19,6	681
S33656	20x2,5	21,1	762
S33657	21x2,5	21,1	816

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33700	2x2x0,5	7,7	82
S33701	3x2x0,5	8,6	92
S33702	4x2x0,5	9,3	111
S33703	5x2x0,5	10,0	137
S33704	6x2x0,5	10,3	149
S33705	7x2x0,5	11,8	174
S33706	8x2x0,5	12,3	191
S33707	10x2x0,5	13,6	237
S33708	12x2x0,5	14,4	272
S33709	14x2x0,5	15,5	314
S33710	16x2x0,5	16,8	370
S33711	18x2x0,5	17,5	399
S33712	20x2x0,5	18,0	431

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S33713	24x2x0,5	18,7	499
S33714	2x2x0,75	8,3	97
S33715	3x2x0,75	9,3	112
S33716	4x2x0,75	10,1	141
S33717	5x2x0,75	11,1	177
S33718	7x2x0,75	13,2	228
S33719	10x2x0,75	14,8	297
S33720	12x2x0,75	16,0	349
S33721	14x2x0,75	17,1	410
S33722	16x2x0,75	18,5	476
S33723	18x2x0,75	19,3	512
S33724	2x2x1,0	9,5	121
S33725	3x2x1,0	10,8	150

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced



Chapter II

Control cables 300/500 V

BiT LiYY	24
BiT LiYCY	27
BiT LiHH	30
BiT LiHCH	33
BiT LiHC11Y	36
BiT 500 [®]	39
BiT 500 [®] C	42
BiT 500 [®] CY	45
BiT 500 [®] SY	47
BiT 500 [®] (St)	49
BiT 500 [®] 2(St)	52
BiT 500 [®] FR	54
BiT 500 [®] C FR	57
BiT 500 [®] (St) FR	60
BiT 500 [®] 2(St) FR	63
BiT 500 [®] OR	65
BiT 500 [®] BLACK	68
BiT 500 [®] C BLACK	71
BiT 500 [®] (St) BLACK	74
BiT 500 [®] 2(St) BLACK	77
BiT 500 [®] BLACK OR	79
BiT 500 [®] BLACK FR	82
BiT 500 [®] C BLACK FR	85
BiT 500 [®] (St) BLACK FR	88
BiT 500 [®] 2(St) BLACK FR	91
BiT 500 [®] PUR	93
BiT 500 [®] CPUR	95
BiT 500 [®] H	97
BiT 500 [®] (St)H	100
BiT 500 [®] (St)CH	103
BiT 500 [®] 2(St)H	106

On customer's request we can also produce following constructions:

BiT 500[®]C OR
BiT 500[®](St) OR
BiT 500[®]2(St) OR
BiT 500[®]C BLACK OR
BiT 500[®](St) BLACK OR
BiT 500[®]2(St) BLACK OR
BiT 500[®]CH

Flexible control cables with coloured conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_i/U_n = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 M Ω x km

Max. approximate capacitance: 150 pF/m

Approximate inductance: 0,65 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 7,5 x \varnothing
fixed installation: 4 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

PVC compound

Core identification:

colours as per DIN 47100

Core arrangement:

cores twisted together or pairs twisted together

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2); colour: grey

Application:

Cables designed for signalling control circuits, control circuits in industrial applications, in measurement technology, for analogue and digital signals transmission in electronic industrial and automatic control engineering systems, for fixed installation and mobile/portable devices. Suitable for usage in internal systems, in both dry and damp rooms. Core arrangement ensures asymmetry attenuation of 10 dB. In the environment with considerable electromagnetic interference we recommend using a screened type - BIT LiYCY. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S53600	2x0,5	5,0	36
S53601	3x0,5	5,3	44
S53602	4x0,5	5,7	52
S53603	5x0,5	6,2	63
S53605	7x0,5	7,0	81
S53606	8x0,5	7,7	94
S53607	10x0,5	9,4	129
S53608	12x0,5	9,4	138
S53609	14x0,5	9,8	154
S53610	16x0,5	10,3	174
S53611	18x0,5	10,9	192
S53720	19x0,5	10,9	196
S53613	21x0,5	11,6	221
S53709	25x0,5	13,1	265
S53615	27x0,5	13,1	273
S53616	30x0,5	13,7	304
S53711	34x0,5	14,8	345
S53618	37x0,5	14,8	360
S53619	40x0,5	15,3	385
S53721	42x0,5	16,9	430
S53712	50x0,5	17,6	490
S53722	56x0,5	18,3	545
S53625	61x0,5	18,9	580
S53626	2x0,75	5,4	45
S53627	3x0,75	5,7	54
S53628	4x0,75	6,2	66
S53629	5x0,75	7,0	83
S53630	6x0,75	7,6	97
S53631	7x0,75	7,6	103
S53632	8x0,75	8,3	119
S53633	10x0,75	10,2	164
S53634	12x0,75	10,2	175

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S53635	14x0,75	10,7	196
S53636	16x0,75	11,5	227
S53637	18x0,75	12,1	252
S53723	19x0,75	12,1	257
S53639	21x0,75	12,6	283
S53713	25x0,75	14,5	345
S53641	27x0,75	14,5	355
S53642	30x0,75	15,0	385
S53715	34x0,75	16,6	460
S53644	37x0,75	16,6	480
S53645	40x0,75	17,1	515
S53724	42x0,75	18,7	560
S53716	50x0,75	19,5	645
S53725	56x0,75	20,1	700
S53726	61x0,75	20,7	750
S53648	2x1,0	5,7	52
S53649	3x1,0	6,1	64
S53650	4x1,0	6,8	81
S53651	5x1,0	7,4	99
S53652	6x1,0	8,0	116
S53653	7x1,0	8,0	123
S53654	8x1,0	9,2	151
S53655	10x1,0	10,8	194
S53656	12x1,0	10,8	208
S53657	14x1,0	11,5	241
S53658	16x1,0	12,2	272
S53659	18x1,0	12,8	302
S53727	19x1,0	12,8	305
S53661	21x1,0	13,6	345
S53717	25x1,0	15,4	415
S53663	27x1,0	15,4	430
S53664	30x1,0	16,4	480

Flexible control cables with coloured conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S53719	34x1,0	17,6	555
S53666	37x1,0	17,6	575
S53667	40x1,0	18,4	630
S53728	42x1,0	19,9	675
S53729	50x1,0	20,7	775
S53730	56x1,0	21,6	860
S53731	61x1,0	22,2	920
S53670	2x1,5	6,7	73
S53671	3x1,5	7,1	90
S53672	4x1,5	7,8	112
S53673	5x1,5	8,5	135
S53674	6x1,5	9,6	167
S53675	7x1,5	9,6	178
S53676	8x1,5	10,6	207
S53677	10x1,5	12,7	272
S53678	12x1,5	12,7	293
S53679	14x1,5	13,5	335
S53680	16x1,5	14,3	380
S53681	18x1,5	15,0	420
S53732	19x1,5	15,0	435
S53683	21x1,5	16,2	490
S53733	25x1,5	18,5	600
S53685	27x1,5	18,5	620
S53686	30x1,5	19,1	680
S53734	34x1,5	20,6	780
S53688	37x1,5	20,6	810
S53689	40x1,5	21,6	885
S53735	42x1,5	23,3	950

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S53736	50x1,5	24,7	1120
S53737	56x1,5	25,5	1220
S53738	61x1,5	26,2	1310
S53692	2x2,5	7,8	104
S53693	3x2,5	8,3	130
S53694	4x2,5	9,5	171
S53695	5x2,5	10,3	206
S53696	6x2,5	11,5	249
S53697	7x2,5	11,5	266
S53699	10x2,5	15,2	400
S53700	12x2,5	15,2	435
S53701	14x2,5	16,3	510
S53702	16x2,5	17,2	575
S53703	18x2,5	18,4	650
S53705	21x2,5	19,3	735
S53706	25x2,5	22,1	895
S53739	30x2,5	22,9	1015
S53707	34x2,5	25,1	1195
S53740	37x2,5	25,1	1245
S53741	42x2,5	28,1	1435
S53708	50x2,5	29,3	1660
S53742	2x4,0	9,5	162
S53743	3x4,0	10,1	205
S53744	4x4,0	11,3	263
S53745	5x4,0	12,3	315
S53746	7x4,0	13,6	410
S53747	10x4,0	18,5	635
S53748	12x4,0	18,5	695

BIT LiYY

Flexible control cables with coloured conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4800	2x2x0,5	7,3	65
SB4801	3x2x0,5	8,2	74
SB4802	4x2x0,5	9,3	100
SB4803	5x2x0,5	10,0	125
SB4804	6x2x0,5	10,3	135
SB4805	7x2x0,5	11,8	161
SB4806	8x2x0,5	12,3	179
SB4807	10x2x0,5	13,2	213
SB4808	12x2x0,5	14,2	253
SB4809	14x2x0,5	15,1	285
SB4810	16x2x0,5	16,6	345
SB4811	18x2x0,5	17,3	370
SB4812	20x2x0,5	17,8	400
SB4813	24x2x0,5	18,5	470
SB4814	2x2x0,75	7,9	80
SB4815	3x2x0,75	9,3	101
SB4816	4x2x0,75	10,1	125
SB4817	5x2x0,75	10,9	157
SB4818	6x2x0,75	11,5	176
SB4819	7x2x0,75	12,8	203
SB4820	8x2x0,75	13,6	232
SB4821	10x2x0,75	14,6	275
SB4822	12x2x0,75	16,0	335
SB4823	14x2x0,75	16,9	380
SB4824	16x2x0,75	18,3	445
SB4825	18x2x0,75	19,1	480
SB4826	20x2x0,75	19,7	525
SB4827	24x2x0,75	20,3	605
SB4828	2x2x1,0	8,4	95
SB4829	3x2x1,0	9,9	119
SB4830	4x2x1,0	10,7	148
SB4831	5x2x1,0	11,8	191
SB4832	6x2x1,0	12,2	209

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4833	7x2x1,0	13,8	248
SB4834	8x2x1,0	14,5	275
SB4835	10x2x1,0	15,5	330
SB4836	12x2x1,0	17,0	400
SB4837	14x2x1,0	18,2	465
SB4838	16x2x1,0	19,5	530
SB4839	18x2x1,0	20,3	575
SB4840	20x2x1,0	21,0	630
SB4841	24x2x1,0	21,8	740
SB4842	2x2x1,5	10,1	135
SB4843	3x2x1,5	11,6	165
SB4844	4x2x1,5	12,6	206
SB4845	5x2x1,5	13,8	265
SB4846	6x2x1,5	14,3	290
SB4847	7x2x1,5	16,4	350
SB4848	8x2x1,5	17,2	390
SB4849	10x2x1,5	18,6	480
SB4850	12x2x1,5	19,9	560
SB4851	14x2x1,5	21,1	640
SB4852	16x2x1,5	22,8	745
SB4853	18x2x1,5	23,8	810
SB4854	20x2x1,5	25,0	910
SB4855	24x2x1,5	25,7	1055
SB4856	2x2x2,5	12,1	198
SB4857	3x2x2,5	13,8	241
SB4858	4x2x2,5	15,0	300
SB4859	5x2x2,5	16,6	395
SB4860	6x2x2,5	17,2	435
SB4861	7x2x2,5	19,6	515
SB4862	8x2x2,5	20,5	575
SB4863	10x2x2,5	22,2	710
SB4864	12x2x2,5	23,7	830
SB4865	14x2x2,5	25,7	975
SB4866	16x2x2,5	27,5	1115

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

Flexible, screened control cables with coloured conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_n/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 M Ω x km

Max. approximate capacitance:

Core/core: 150 pF/m

Core/screen: 270 pF/m

Approximate inductance: 0,65 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x \varnothing
 fixed installation: 5 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

colours as per DIN 47100

Core arrangement:

cores twisted together or pairs twisted together

Screen:

tinned copper wire braid, coverage $\geq 85\%$

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2); colour: grey

Application:

The cables are intended for signalling control circuits, control circuits in industrial applications, in measurement technology and for analogue and digital signals transmission in electronic industrial and automatic control engineering systems. For fixed installation and mobile/portable devices. Suitable for use indoors, in both dry and damp rooms. A common screen of tinned copper wire braid ensures very good protection against external electromagnetic fields (approximately 50 dB). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S53801	2x0,5	5,4	45
S53802	3x0,5	5,7	49
S53803	4x0,5	6,1	59
S53804	5x0,5	6,8	74
S53805	6x0,5	7,4	86
S53806	7x0,5	7,4	91
S53807	8x0,5	8,1	105
S53808	10x0,5	9,8	140
S53809	12x0,5	9,8	149
S53810	14x0,5	10,2	167
S53811	16x0,5	10,7	187
S53812	18x0,5	11,5	213
S53773	19x0,5	11,5	217
S53814	21x0,5	12,0	238
S53774	25x0,5	13,9	303
S53816	27x0,5	13,9	310
S53817	30x0,5	14,3	335
S53775	34x0,5	15,4	385
S53819	37x0,5	15,4	395
S53820	40x0,5	16,3	440
S53776	42x0,5	17,5	470
S53777	50x0,5	18,4	545
S53825	56x0,5	18,9	590
S53827	61x0,5	19,5	630
S53829	2x0,75	5,8	52
S53830	3x0,75	6,1	59
S53831	4x0,75	6,8	75
S53832	5x0,75	7,4	91
S53833	6x0,75	8,0	107
S53834	7x0,75	8,0	112
S53835	8x0,75	9,1	138

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S53836	10x0,75	10,6	174
S53837	12x0,75	10,6	185
S53838	14x0,75	11,3	215
S53839	16x0,75	11,9	241
S53840	18x0,75	12,5	268
S53778	19x0,75	12,5	274
S53842	21x0,75	13,2	310
S53844	25x0,75	15,1	380
S53845	27x0,75	15,1	390
S53846	30x0,75	16,0	440
S53847	34x0,75	17,2	505
S53849	37x0,75	17,2	520
S53850	40x0,75	17,7	555
S53779	42x0,75	19,3	605
S53780	50x0,75	20,1	690
S53781	56x0,75	20,7	750
S53782	61x0,75	21,5	815
S53851	2x1,0	6,1	58
S53852	3x1,0	6,4	68
S53853	4x1,0	7,2	87
S53854	5x1,0	7,8	106
S53855	6x1,0	8,4	125
S53856	7x1,0	8,4	132
S53857	8x1,0	9,6	162
S53858	10x1,0	11,4	212
S53859	12x1,0	11,4	225
S53860	14x1,0	11,9	254
S53861	16x1,0	12,8	300
S53862	18x1,0	13,6	335
S53918	19x1,0	13,6	345
S53864	21x1,0	14,2	375

BIT LiYCY

Flexible, screened control cables with coloured conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S53866	25x1,0	16,4	465
S53867	27x1,0	16,4	480
S53868	30x1,0	17,0	520
S53915	34x1,0	18,4	605
S53870	37x1,0	18,4	625
S53916	40x1,0	19,0	675
S53919	42x1,0	20,5	720
S53917	50x1,0	21,5	840
S53920	56x1,0	22,2	910
S53921	61x1,0	22,8	975
S53871	2x1,5	7,1	79
S53872	3x1,5	7,5	94
S53873	4x1,5	8,2	118
S53874	5x1,5	9,3	151
S53875	6x1,5	10,0	176
S53876	7x1,5	10,0	187
S53877	8x1,5	11,0	218
S53878	10x1,5	13,3	296
S53879	12x1,5	13,3	315
S53880	14x1,5	14,1	365
S53881	16x1,5	14,9	410
S53882	18x1,5	16,0	470
S53783	19x1,5	16,0	480
S53884	21x1,5	16,8	530
S53784	25x1,5	19,1	640
S53887	27x1,5	19,1	660
S53888	30x1,5	19,7	720
S53785	34x1,5	21,4	835
S53890	37x1,5	21,4	870

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S53786	40x1,5	22,2	935
S53787	42x1,5	23,9	1000
S53788	50x1,5	25,3	1175
S53789	56x1,5	26,1	1280
S53790	61x1,5	26,8	1375
S53891	2x2,5	8,2	106
S53892	3x2,5	9,1	139
S53893	4x2,5	9,9	174
S53894	5x2,5	10,7	211
S53895	6x2,5	11,9	258
S53896	7x2,5	11,9	274
S53898	10x2,5	16,2	440
S53899	12x2,5	16,2	475
S53900	14x2,5	16,9	535
S53901	16x2,5	17,8	605
S53902	18x2,5	19,0	685
S53904	21x2,5	19,9	775
S53905	25x2,5	22,7	935
S53791	30x2,5	23,5	1060
S53907	34x2,5	25,7	1245
S53792	37x2,5	25,7	1295
S53908	42x2,5	28,9	1500
S53912	50x2,5	29,9	1720
S53793	2x4,0	9,9	163
S53794	3x4,0	10,5	193
S53795	4x4,0	11,7	263
S53796	5x4,0	12,9	330
S53797	7x4,0	14,2	430
S53798	10x4,0	19,1	655
S53799	12x4,0	19,1	720

Flexible, screened control cables with coloured conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S53925	2x2x0,5	7,7	80
S53926	3x2x0,5	9,2	108
S53927	4x2x0,5	9,9	129
S53928	5x2x0,5	10,6	156
S53929	6x2x0,5	10,9	167
S53930	7x2x0,5	12,4	198
S53931	8x2x0,5	12,9	218
S53932	10x2x0,5	14,0	260
S53933	12x2x0,5	14,8	295
S53934	14x2x0,5	16,1	350
S53935	16x2x0,5	17,2	395
S53936	18x2x0,5	17,9	425
S53937	20x2x0,5	18,6	470
S53938	24x2x0,5	19,1	530
S53939	2x2x0,75	8,5	104
S53940	3x2x0,75	9,9	130
S53941	4x2x0,75	10,7	156
S53942	5x2x0,75	11,7	198
S53943	6x2x0,75	12,1	212
S53944	7x2x0,75	13,6	251
S53945	8x2x0,75	14,2	275
S53946	10x2x0,75	15,2	320
S53947	12x2x0,75	16,6	385
S53948	14x2x0,75	17,5	435
S53949	16x2x0,75	18,9	505
S53950	18x2x0,75	19,7	545
S53951	20x2x0,75	20,3	590
S53952	24x2x0,75	20,9	675
S53953	2x2x1,0	9,4	130
S53954	3x2x1,0	10,5	149
S53955	4x2x1,0	11,5	187
S53956	5x2x1,0	12,4	228
S53957	6x2x1,0	12,8	247

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S53958	7x2x1,0	14,4	290
S53959	8x2x1,0	15,1	320
S53960	10x2x1,0	16,5	395
S53961	12x2x1,0	17,6	455
S53962	14x2x1,0	18,8	525
S53963	16x2x1,0	20,1	595
S53964	18x2x1,0	20,9	645
S53965	20x2x1,0	21,8	710
S53966	24x2x1,0	22,4	815
S53967	2x2x1,5	10,7	166
S53968	3x2x1,5	12,2	202
S53969	4x2x1,5	13,2	246
S53970	5x2x1,5	14,4	310
S53971	6x2x1,5	14,9	335
S53972	7x2x1,5	17,0	405
S53973	8x2x1,5	17,8	445
S53974	10x2x1,5	19,2	540
S53975	12x2x1,5	20,5	620
S53976	14x2x1,5	21,9	715
S53977	16x2x1,5	23,4	820
S53978	18x2x1,5	24,8	910
S53979	20x2x1,5	25,6	990
S53980	24x2x1,5	26,3	1140
S53981	2x2x2,5	12,7	236
S53982	3x2x2,5	14,4	285
S53983	4x2x2,5	16,0	365
S53984	5x2x2,5	17,2	450
S53985	6x2x2,5	17,8	490
S53986	7x2x2,5	20,2	580
S53987	8x2x2,5	21,1	645
S53988	10x2x2,5	22,8	780
S53989	12x2x2,5	24,3	905
S53990	14x2x2,5	26,3	1060
S53991	16x2x2,5	28,1	1210

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

Flexible, halogen-free control cables with coloured conductors, 300/500 V



industrial application



internal application



EN 60332-1-2



EN 60332-3-24



oxygen index



halogen-free
EN 60754



low smoke emission
EN 61034



high flexibility

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage: 3000 V

Insulation resistance: 20 M Ω x km

Max. approximate capacitance: 150 pF/m

Approximate inductance: 0,65 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 7,5 x \varnothing
fixed installation: 4 x \varnothing

Design:

Conductors:

bare copper conductors class 5 acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

colours as per DIN 47100

Core arrangement:

cores twisted together or pairs twisted together

Outer sheath:

special halogen-free compound, self-extinguishing and highly flame retardant with LOI>29 (as per EN 60332-1-2 and EN 60332-3-24 cat. C); colour: grey, on customers's request black

Application:

Cables designed for signalling control circuits, control circuits in industrial applications, in measurement technology, for analogue and digital signals transmission in electronic industrial and automatic control engineering systems, for fixed installation and mobile/portable devices. Suitable for usage in internal systems, in both dry and damp rooms. Core arrangement ensures asymmetry attenuation of 10 dB. In an environment with considerable electromagnetic interference we recommend using a screened type - BIT LiHCH. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4900	2x0,5	5,0	36
SB4901	3x0,5	5,3	44
SB4902	4x0,5	5,7	52
SB4903	5x0,5	6,2	63
SB4904	7x0,5	7,0	81
SB4905	8x0,5	7,7	94
SB4906	10x0,5	9,4	129
SB4907	12x0,5	9,4	138
SB4908	14x0,5	9,8	154
SB4909	16x0,5	10,3	174
SB4910	18x0,5	10,9	192
SB4911	19x0,5	10,9	196
SB4912	21x0,5	11,6	221
SB4913	25x0,5	13,1	265
SB4914	27x0,5	13,1	273
SB4915	30x0,5	13,7	304
SB4916	34x0,5	14,8	345
SB4917	37x0,5	14,8	360
SB4918	40x0,5	15,3	385
SB4919	42x0,5	16,9	430
SB4920	50x0,5	17,6	490
SB4921	56x0,5	18,3	545
SB4922	61x0,5	18,9	580
SB4923	2x0,75	5,4	45
SB4924	3x0,75	5,7	54
SB4925	4x0,75	6,2	66

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4926	5x0,75	7,0	83
SB4927	6x0,75	7,6	97
SB4928	7x0,75	7,6	103
SB4929	8x0,75	8,3	119
SB4930	10x0,75	10,2	164
SB4931	12x0,75	10,2	175
SB4932	14x0,75	10,7	196
SB4933	16x0,75	11,5	227
SB4934	18x0,75	12,1	252
SB4935	19x0,75	12,1	257
SB4936	21x0,75	12,6	283
SB4937	25x0,75	14,5	345
SB4938	27x0,75	14,5	355
SB4939	30x0,75	15,0	385
SB4940	34x0,75	16,6	460
SB4941	37x0,75	16,6	480
SB4942	40x0,75	17,1	515
SB4943	42x0,75	18,7	560
SB4944	50x0,75	19,5	645
SB4945	56x0,75	20,1	700
SB4946	61x0,75	20,7	750
SB4947	2x1,0	5,7	52
SB4948	3x1,0	6,1	64
SB4949	4x1,0	6,8	81
SB4950	5x1,0	7,4	99
SB4951	6x1,0	8,0	116
SB4952	7x1,0	8,0	123

Flexible, halogen-free control cables with coloured conductors, 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4953	8x1,0	9,2	151
SB4954	10x1,0	10,8	194
SB4955	12x1,0	10,8	208
SB4956	14x1,0	11,5	241
SB4957	16x1,0	12,2	272
SB4958	18x1,0	12,8	302
SB4959	19x1,0	12,8	305
SB4960	21x1,0	13,6	345
SB4961	25x1,0	15,4	415
SB4962	27x1,0	15,4	430
SB4963	30x1,0	16,4	480
SB4964	34x1,0	17,6	555
SB4965	37x1,0	17,6	575
SB4966	40x1,0	18,4	630
SB4967	42x1,0	19,9	675
SB4968	50x1,0	20,7	775
SB4969	56x1,0	21,6	860
SB4970	61x1,0	22,2	920
SB4971	2x1,5	6,7	73
SB4972	3x1,5	7,1	90
SB4973	4x1,5	7,8	112
SB4974	5x1,5	8,5	135
SB4975	6x1,5	9,6	167
SB4976	7x1,5	9,6	178
SB4977	8x1,5	10,6	207
SB4978	10x1,5	12,7	272
SB4979	12x1,5	12,7	293
SB4980	14x1,5	13,5	335
SB4981	16x1,5	14,3	380
SB4982	18x1,5	15,0	420
SB4983	19x1,5	15,0	435
SB4984	21x1,5	16,2	490
SB4985	25x1,5	18,5	600
SB4986	27x1,5	18,5	620

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4987	30x1,5	19,1	680
SB4988	34x1,5	20,6	780
SB4989	37x1,5	20,6	810
SB4990	40x1,5	21,6	885
SB4991	42x1,5	23,3	950
SB4992	50x1,5	24,7	1120
SB4993	56x1,5	25,5	1220
SB4994	61x1,5	26,2	1310
SB4995	2x2,5	7,8	104
SB4996	3x2,5	8,3	130
SB4997	4x2,5	9,5	171
SB4998	5x2,5	10,3	206
SB4999	6x2,5	11,5	249
SB5000	7x2,5	11,5	266
SB5001	10x2,5	15,2	400
SB5002	12x2,5	15,2	435
SB5003	14x2,5	16,3	510
SB5004	16x2,5	17,2	575
SB5005	18x2,5	18,4	650
SB5006	21x2,5	19,3	735
SB5007	25x2,5	22,1	895
SB5008	30x2,5	22,9	1015
SB5009	34x2,5	25,1	1195
SB5010	37x2,5	25,1	1245
SB5011	42x2,5	28,1	1435
SB5012	50x2,5	29,3	1660
SB5013	2x4,0	9,5	162
SB5014	3x4,0	10,1	205
SB5015	4x4,0	11,3	263
SB5016	5x4,0	12,3	315
SB5017	7x4,0	13,6	410
SB5018	10x4,0	18,5	635
SB5019	12x4,0	18,5	695

BiT LiHH

Flexible, halogen-free control cables with coloured conductors, 300/500 V

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5021	2x2x0,5	7,3	65
SB5022	3x2x0,5	8,2	74
SB5023	4x2x0,5	9,3	100
SB5024	5x2x0,5	10,0	125
SB5025	6x2x0,5	10,3	135
SB5026	7x2x0,5	11,8	161
SB5027	8x2x0,5	12,3	179
SB5028	10x2x0,5	13,2	213
SB5029	12x2x0,5	14,2	253
SB5030	14x2x0,5	15,1	285
SB5031	16x2x0,5	16,6	345
SB5032	18x2x0,5	17,3	370
SB5033	20x2x0,5	17,8	400
SB5034	24x2x0,5	18,5	470
SB5035	2x2x0,75	7,9	80
SB5036	3x2x0,75	9,3	101
SB5037	4x2x0,75	10,1	125
SB5038	5x2x0,75	10,9	157
SB5039	6x2x0,75	11,5	176
SB5040	7x2x0,75	12,8	203
SB5041	8x2x0,75	13,6	232
SB5042	10x2x0,75	14,6	275
SB5043	12x2x0,75	16,0	335
SB5044	14x2x0,75	16,9	380
SB5045	16x2x0,75	18,3	445
SB5046	18x2x0,75	19,1	480
SB5047	20x2x0,75	19,7	525
SB5048	24x2x0,75	20,3	605
SB5049	2x2x1,0	8,4	95
SB5050	3x2x1,0	9,9	119
SB5051	4x2x1,0	10,7	148
SB5052	5x2x1,0	11,8	191
SB5053	6x2x1,0	12,2	209

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5054	7x2x1,0	13,8	248
SB5055	8x2x1,0	14,5	275
SB5056	10x2x1,0	15,5	330
SB5057	12x2x1,0	17,0	400
SB5058	14x2x1,0	18,2	465
SB5059	16x2x1,0	19,5	530
SB5060	18x2x1,0	20,3	575
SB5061	20x2x1,0	21,0	630
SB5062	24x2x1,0	21,8	740
SB5063	2x2x1,5	10,1	135
SB5064	3x2x1,5	11,6	165
SB5065	4x2x1,5	12,6	206
SB5066	5x2x1,5	13,8	265
SB5067	6x2x1,5	14,3	290
SB5068	7x2x1,5	16,4	350
SB5069	8x2x1,5	17,2	390
SB5070	10x2x1,5	18,6	480
SB5071	12x2x1,5	19,9	560
SB5072	14x2x1,5	21,1	640
SB5073	16x2x1,5	22,8	745
SB5074	18x2x1,5	23,8	810
SB5075	20x2x1,5	25,0	910
SB5076	24x2x1,5	25,7	1055
SB5077	2x2x2,5	12,1	198
SB5078	3x2x2,5	13,8	241
SB5079	4x2x2,5	15,0	300
SB5080	5x2x2,5	16,6	395
SB5081	6x2x2,5	17,2	435
SB5082	7x2x2,5	19,6	515
SB5083	8x2x2,5	20,5	575
SB5084	10x2x2,5	22,2	710
SB5085	12x2x2,5	23,7	830
SB5086	14x2x2,5	25,7	975
SB5087	16x2x2,5	27,5	1115

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiT LiHCH



Control cables 300/500 V

Flexible, screened, halogen-free control cables with coloured conductors, 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_n/U = 300/500$ V

Test voltage: 3000 V

Mechanical parameters:

Insulation resistance: 20 MΩ x km

Max. approximate capacitance:

Core/core: 150 pF/m

Core/screen: 270 pF/m

Approximate inductance: 0,65 mH/km

Min. bending radius:

flexible connections: 10 x Ø

fixed installation: 5 x Ø

Design:

Conductors:

bare copper conductors, class 5 acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

colours as per DIN 47100

Core arrangement:

cores twisted together or pairs twisted together

Screen:

tinned copper wire braid with coverage of ≥85%

Outer sheath:

special halogen-free compound, self-extinguishing

and highly flame retardant with LOI>29

(as per EN 60332-1-2, and EN 60332-3-24 cat. C);

colour: grey, on customer's request black

Application:

The cables are intended for signalling control circuits, control circuits in industrial applications, in measurement technology, for analogue and digital signals transmission in electronic industrial and automatic control engineering systems, for fixed installation and mobile/portable devices. Suitable for use indoors, in both dry and damp rooms. A common screen of tinned copper wire braid ensures very good protection against external electromagnetic fields (approximately 50 dB). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5100	2x0,5	5,4	45
SB5101	3x0,5	5,7	49
SB5102	4x0,5	6,1	59
SB5103	5x0,5	6,8	74
SB5104	6x0,5	7,4	86
SB5105	7x0,5	7,4	91
SB5106	8x0,5	8,1	105
SB5107	10x0,5	9,8	140
SB5108	12x0,5	9,8	149
SB5109	14x0,5	10,2	167
SB5110	16x0,5	10,7	187
SB5111	18x0,5	11,5	213
SB5112	19x0,5	11,5	217
SB5113	21x0,5	12,0	238
SB5114	25x0,5	13,9	303
SB5115	27x0,5	13,9	310
SB5116	30x0,5	14,3	335
SB5117	34x0,5	15,4	385
SB5118	37x0,5	15,4	395
SB5119	40x0,5	16,3	440
SB5120	42x0,5	17,5	470
SB5121	50x0,5	18,4	545
SB5122	56x0,5	18,9	590
SB5123	61x0,5	19,5	630

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5124	2x0,75	5,8	52
SB5125	3x0,75	6,1	59
SB5126	4x0,75	6,8	75
SB5127	5x0,75	7,4	91
SB5128	6x0,75	8,0	107
SB5129	7x0,75	8,0	112
SB5130	8x0,75	9,1	138
SB5131	10x0,75	10,6	174
SB5132	12x0,75	10,6	185
SB5133	14x0,75	11,3	215
SB5134	16x0,75	11,9	241
SB5135	18x0,75	12,5	268
SB5136	19x0,75	12,5	274
SB5137	21x0,75	13,2	310
SB5138	25x0,75	15,1	380
SB5139	27x0,75	15,1	390
SB5140	30x0,75	16,0	440
SB5141	34x0,75	17,2	505
SB5142	37x0,75	17,2	520
SB5143	40x0,75	17,7	555
SB5144	42x0,75	19,3	605
SB5145	50x0,75	20,1	690
SB5146	56x0,75	20,7	750
SB5147	61x0,75	21,5	815

BIT LiHCH

Flexible, screened, halogen-free control cables with coloured conductors, 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5148	2x1,0	6,1	58
SB5149	3x1,0	6,4	68
SB5150	4x1,0	7,2	87
SB5151	5x1,0	7,8	106
SB5152	6x1,0	8,4	125
SB5153	7x1,0	8,4	132
SB5154	8x1,0	9,6	162
SB5155	10x1,0	11,4	212
SB5156	12x1,0	11,4	225
SB5157	14x1,0	11,9	254
SB5158	16x1,0	12,8	300
SB5159	18x1,0	13,6	335
SB5160	19x1,0	13,6	345
SB5161	21x1,0	14,2	375
SB5162	25x1,0	16,4	465
SB5163	27x1,0	16,4	480
SB5164	30x1,0	17,0	520
SB5165	34x1,0	18,4	605
SB5166	37x1,0	18,4	625
SB5167	40x1,0	19,0	675
SB5168	42x1,0	20,5	720
SB5169	50x1,0	21,5	840
SB5170	56x1,0	22,2	910
SB5171	61x1,0	22,8	975
SB5172	2x1,5	7,1	79
SB5173	3x1,5	7,5	94
SB5174	4x1,5	8,2	118
SB5175	5x1,5	9,3	151
SB5176	6x1,5	10,0	176
SB5177	7x1,5	10,0	187
SB5178	8x1,5	11,0	218
SB5179	10x1,5	13,3	296
SB5180	12x1,5	13,3	315
SB5181	14x1,5	14,1	365
SB5182	16x1,5	14,9	410
SB5183	18x1,5	16,0	470

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5184	19x1,5	16,0	480
SB5185	21x1,5	16,8	530
SB5186	25x1,5	19,1	640
SB5187	27x1,5	19,1	660
SB5188	30x1,5	19,7	720
SB5189	34x1,5	21,4	835
SB5190	37x1,5	21,4	870
SB5191	40x1,5	22,2	935
SB5192	42x1,5	23,9	1000
SB5193	50x1,5	25,3	1175
SB5194	56x1,5	26,1	1280
SB5195	61x1,5	26,8	1375
SB5196	2x2,5	8,2	106
SB5197	3x2,5	9,1	139
SB5198	4x2,5	9,9	174
SB5199	5x2,5	10,7	211
SB5200	6x2,5	11,9	258
SB5201	7x2,5	11,9	274
SB5202	10x2,5	16,2	440
SB5203	12x2,5	16,2	475
SB5204	14x2,5	16,9	535
SB5205	16x2,5	17,8	605
SB5206	18x2,5	19,0	685
SB5207	21x2,5	19,9	775
SB5208	25x2,5	22,7	935
SB5209	30x2,5	23,5	1060
SB5210	34x2,5	25,7	1245
SB5211	37x2,5	25,7	1295
SB5212	42x2,5	28,9	1500
SB5213	50x2,5	29,9	1720
SB5214	2x4,0	9,9	163
SB5215	3x4,0	10,5	193
SB5216	4x4,0	11,7	263
SB5217	5x4,0	12,9	330
SB5218	7x4,0	14,2	430
SB5219	10x4,0	19,1	655
SB5220	12x4,0	19,1	720

BIT LIHCH

Flexible, screened, halogen-free control cables with coloured conductors, 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5222	2x2x0,5	7,7	80
SB5223	3x2x0,5	9,2	108
SB5224	4x2x0,5	9,9	129
SB5225	5x2x0,5	10,6	156
SB5226	6x2x0,5	10,9	167
SB5227	7x2x0,5	12,4	198
SB5228	8x2x0,5	12,9	218
SB5229	10x2x0,5	14,0	260
SB5230	12x2x0,5	14,8	295
SB5231	14x2x0,5	16,1	350
SB5232	16x2x0,5	17,2	395
SB5233	18x2x0,5	17,9	425
SB5234	20x2x0,5	18,6	470
SB5235	24x2x0,5	19,1	530
SB5236	2x2x0,75	8,5	104
SB5237	3x2x0,75	9,9	130
SB5238	4x2x0,75	10,7	156
SB5239	5x2x0,75	11,7	198
SB5240	6x2x0,75	12,1	212
SB5241	7x2x0,75	13,6	251
SB5242	8x2x0,75	14,2	275
SB5243	10x2x0,75	15,2	320
SB5244	12x2x0,75	16,6	385
SB5245	14x2x0,75	17,5	435
SB5246	16x2x0,75	18,9	505
SB5247	18x2x0,75	19,7	545
SB5248	20x2x0,75	20,3	590
SB5249	24x2x0,75	20,9	675
SB5250	2x2x1,0	9,4	130
SB5251	3x2x1,0	10,5	149
SB5252	4x2x1,0	11,5	187
SB5253	5x2x1,0	12,4	228
SB5254	6x2x1,0	12,8	247

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5255	7x2x1,0	14,4	290
SB5256	8x2x1,0	15,1	320
SB5257	10x2x1,0	16,5	395
SB5258	12x2x1,0	17,6	455
SB5259	14x2x1,0	18,8	525
SB5260	16x2x1,0	20,1	595
SB5261	18x2x1,0	20,9	645
SB5262	20x2x1,0	21,8	710
SB5263	24x2x1,0	22,4	815
SB5264	2x2x1,5	10,7	166
SB5265	3x2x1,5	12,2	202
SB5266	4x2x1,5	13,2	246
SB5267	5x2x1,5	14,4	310
SB5268	6x2x1,5	14,9	335
SB5269	7x2x1,5	17,0	405
SB5270	8x2x1,5	17,8	445
SB5271	10x2x1,5	19,2	540
SB5272	12x2x1,5	20,5	620
SB5273	14x2x1,5	21,9	715
SB5274	16x2x1,5	23,4	820
SB5275	18x2x1,5	24,8	910
SB5276	20x2x1,5	25,6	990
SB5277	24x2x1,5	26,3	1140
SB5278	2x2x2,5	12,7	236
SB5279	3x2x2,5	14,4	285
SB5280	4x2x2,5	16,0	365
SB5281	5x2x2,5	17,2	450
SB5282	6x2x2,5	17,8	490
SB5283	7x2x2,5	20,2	580
SB5284	8x2x2,5	21,1	645
SB5285	10x2x2,5	22,8	780
SB5286	12x2x2,5	24,3	905
SB5287	14x2x2,5	26,3	1060
SB5288	16x2x2,5	28,1	1210

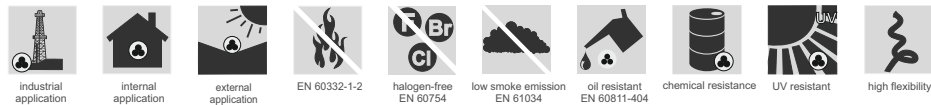
*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

BIT LiHC11Y



Flexible, screened, halogen-free, PUR sheathed control cables with coloured conductors, 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage: 3000 V

Insulation resistance: 20 M Ω x km

Max. approximate capacitance:

Core/core: 150 pF/m

Core/screen: 270 pF/m

Approximate inductance: 0,65 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x \varnothing
fixed installation: 5 x \varnothing

Design:

Conductors:

bare copper conductors class 5 acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

colours as per DIN 47100

Core arrangement:

cores twisted together or pairs twisted together
tinned copper wire braid with coverage of $\geq 85\%$
special PUR compound, oil resistant (EN 60811-404),
resistant to hydrocarbons, industrial coolants and UV
radiation flame retardant and halogen free (as per
EN 60332-1-2, EN 60754); colour: grey

Screen:

Outer sheath:

Application:

Cables are intended for signalling control circuits, control circuits in industrial applications, in measurement technology, for analogue and digital signals transmission in electronic industrial and automatic control engineering systems, for fixed installation and mobile/portable devices. A common screen of tinned copper wire braid ensures very good protection against external electromagnetic fields (approximately 50 dB). Suitable for use indoors, in both dry and damp rooms. LiHC11Y cable can also be installed outdoors – special outer sheath compound (PUR) ensures UV resistance and increased mechanical protection. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5300	2x0,5	5,4	43
SB5301	3x0,5	5,7	48
SB5302	4x0,5	6,1	57
SB5303	5x0,5	6,8	72
SB5304	6x0,5	7,4	84
SB5305	7x0,5	7,4	88
SB5306	8x0,5	8,1	101
SB5307	10x0,5	9,8	136
SB5308	12x0,5	9,8	144
SB5309	14x0,5	10,2	162
SB5310	16x0,5	10,7	182
SB5311	18x0,5	11,5	207
SB5312	19x0,5	11,5	211
SB5313	21x0,5	12,0	231
SB5314	25x0,5	13,9	295
SB5315	27x0,5	13,9	300
SB5316	30x0,5	14,3	325
SB5317	34x0,5	15,4	375
SB5318	37x0,5	15,4	385
SB5319	40x0,5	16,3	430
SB5320	42x0,5	17,5	460
SB5321	50x0,5	18,2	530
SB5322	56x0,5	18,9	575
SB5323	61x0,5	19,5	615

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5324	2x0,75	5,8	50
SB5325	3x0,75	6,1	57
SB5326	4x0,75	6,8	73
SB5327	5x0,75	7,4	88
SB5328	6x0,75	8,0	104
SB5329	7x0,75	8,0	109
SB5330	8x0,75	9,1	133
SB5331	10x0,75	10,6	170
SB5332	12x0,75	10,6	181
SB5333	14x0,75	11,3	209
SB5334	16x0,75	11,9	235
SB5335	18x0,75	12,5	260
SB5336	19x0,75	12,5	265
SB5337	21x0,75	13,2	305
SB5338	25x0,75	15,1	370
SB5339	27x0,75	15,1	380
SB5340	30x0,75	16,0	425
SB5341	34x0,75	17,2	490
SB5342	37x0,75	17,2	505
SB5343	40x0,75	17,7	545
SB5344	42x0,75	19,3	590
SB5345	50x0,75	20,1	675
SB5346	56x0,75	20,7	735
SB5347	61x0,75	21,5	795

BiT LiHC11Y

Flexible, screened, halogen-free, PUR sheathed control cables with coloured conductors, 300/500 V

Control cables 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5348	2x1,0	6,1	56
SB5349	3x1,0	6,4	66
SB5350	4x1,0	7,2	85
SB5351	5x1,0	7,8	103
SB5352	6x1,0	8,4	122
SB5353	7x1,0	8,4	129
SB5354	8x1,0	9,6	156
SB5355	10x1,0	11,4	205
SB5356	12x1,0	11,4	219
SB5357	14x1,0	11,9	247
SB5358	16x1,0	12,8	290
SB5359	18x1,0	13,6	325
SB5360	19x1,0	13,6	335
SB5361	21x1,0	14,2	365
SB5362	25x1,0	16,4	450
SB5363	27x1,0	16,4	465
SB5364	30x1,0	17,0	510
SB5365	34x1,0	18,4	590
SB5366	37x1,0	18,4	610
SB5367	40x1,0	19,0	660
SB5368	42x1,0	20,5	705
SB5369	50x1,0	21,5	820
SB5370	56x1,0	22,2	890
SB5371	61x1,0	22,8	955
SB5372	2x1,5	7,1	76
SB5373	3x1,5	7,5	91
SB5374	4x1,5	8,2	115
SB5375	5x1,5	9,3	145
SB5376	6x1,5	10,0	172
SB5377	7x1,5	10,0	182
SB5378	8x1,5	11,0	212
SB5379	10x1,5	13,3	290
SB5380	12x1,5	13,3	310
SB5381	14x1,5	14,1	355
SB5382	16x1,5	14,9	400
SB5383	18x1,5	16,0	460

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5384	19x1,5	16,0	470
SB5385	21x1,5	16,8	515
SB5386	25x1,5	19,1	625
SB5387	27x1,5	19,1	645
SB5388	30x1,5	19,7	705
SB5389	34x1,5	21,4	820
SB5390	37x1,5	21,4	850
SB5391	40x1,5	22,2	915
SB5392	42x1,5	23,9	980
SB5393	50x1,5	25,3	1150
SB5394	56x1,5	26,1	1255
SB5395	61x1,5	26,8	1345
SB5396	2x2,5	8,2	104
SB5397	3x2,5	9,1	134
SB5398	4x2,5	9,9	169
SB5399	5x2,5	10,7	206
SB5400	6x2,5	11,9	252
SB5401	7x2,5	11,9	265
SB5402	10x2,5	16,2	430
SB5403	12x2,5	16,2	465
SB5404	14x2,5	16,9	525
SB5405	16x2,5	17,8	595
SB5406	18x2,5	19,0	670
SB5407	21x2,5	19,9	755
SB5408	25x2,5	22,7	920
SB5409	30x2,5	23,5	1040
SB5410	34x2,5	25,7	1220
SB5411	37x2,5	25,7	1270
SB5412	42x2,5	28,7	1465
SB5413	50x2,5	29,9	1695
SB5414	2x4,0	9,9	159
SB5415	3x4,0	10,5	197
SB5416	4x4,0	11,7	255
SB5417	5x4,0	12,9	325
SB5418	7x4,0	14,2	420
SB5419	10x4,0	19,1	645
SB5420	12x4,0	19,1	705

BIT LiHC11Y

Flexible, screened, halogen-free, PUR sheathed control cables with coloured conductors,
300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5422	2x2x0,5	7,7	77
SB5423	3x2x0,5	9,2	104
SB5424	4x2x0,5	9,9	124
SB5425	5x2x0,5	10,6	151
SB5426	6x2x0,5	10,9	161
SB5427	7x2x0,5	12,4	191
SB5428	8x2x0,5	12,9	211
SB5429	10x2x0,5	14,0	253
SB5430	12x2x0,5	14,8	285
SB5431	14x2x0,5	16,1	335
SB5432	16x2x0,5	17,2	385
SB5433	18x2x0,5	17,9	410
SB5434	20x2x0,5	18,6	455
SB5435	24x2x0,5	19,1	515
SB5436	2x2x0,75	8,5	90
SB5437	3x2x0,75	9,9	125
SB5438	4x2x0,75	10,7	151
SB5439	5x2x0,75	11,7	191
SB5440	6x2x0,75	12,1	206
SB5441	7x2x0,75	13,6	242
SB5442	8x2x0,75	14,2	265
SB5443	10x2x0,75	15,2	310
SB5444	12x2x0,75	16,6	375
SB5445	14x2x0,75	17,5	420
SB5446	16x2x0,75	18,9	480
SB5447	18x2x0,75	19,7	535
SB5448	20x2x0,75	20,3	570
SB5449	24x2x0,75	20,9	655
SB5450	2x2x1,0	9,4	126
SB5451	3x2x1,0	10,5	144
SB5452	4x2x1,0	11,5	181
SB5453	5x2x1,0	12,4	221
SB5454	6x2x1,0	12,8	240
SB5455	7x2x1,0	14,4	280

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB5456	8x2x1,0	15,1	310
SB5457	10x2x1,0	16,5	380
SB5458	12x2x1,0	17,6	440
SB5459	14x2x1,0	18,8	505
SB5460	16x2x1,0	20,1	575
SB5461	18x2x1,0	20,9	625
SB5462	20x2x1,0	21,8	690
SB5463	24x2x1,0	22,4	795
SB5464	2x2x1,5	10,7	161
SB5465	3x2x1,5	12,2	195
SB5466	4x2x1,5	13,2	239
SB5467	5x2x1,5	14,4	300
SB5468	6x2x1,5	14,9	325
SB5469	7x2x1,5	17,0	390
SB5470	8x2x1,5	17,8	430
SB5471	10x2x1,5	19,2	520
SB5472	12x2x1,5	20,5	605
SB5473	14x2x1,5	21,9	700
SB5474	16x2x1,5	23,4	795
SB5475	18x2x1,5	24,8	885
SB5476	20x2x1,5	25,6	965
SB5477	24x2x1,5	26,3	1110
SB5478	2x2x2,5	12,7	229
SB5479	3x2x2,5	14,4	275
SB5480	4x2x2,5	16,0	350
SB5481	5x2x2,5	17,2	435
SB5482	6x2x2,5	17,8	480
SB5483	7x2x2,5	20,2	560
SB5484	8x2x2,5	21,1	625
SB5485	10x2x2,5	22,8	760
SB5486	12x2x2,5	24,3	885
SB5487	14x2x2,5	26,3	1030
SB5488	16x2x2,5	28,1	1180

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

Flexible control cables with number coded conductors, rated 300/500 V



Industrial application



Internal application



EN 60332-1-2



high flexibility

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C
 occasional flexing: -15 °C* to 80 °C

Electrical parameters:

Operating voltage: U₀/U = 300/500 V
 Test voltage (50Hz): 3000 V
 Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: 7,5 x Ø
 fixed installation: 4 x Ø

*minimum temperature for occasional flexing with bending radius not smaller than 15 x D. Bending test at low temperature (-15 °C acc. to EN 60811-504).

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2); colour: grey

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. High flexibility of BiT 500[®] cable enables easy and fast connections and ensures their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54400	2x0,5	5,0	36
S54401	3G0,5	5,3	44
S54402	3x0,5	5,3	44
S54403	4G0,5	5,8	52
S54404	4x0,5	5,8	52
S54405	5G0,5	6,3	62
S54406	5x0,5	6,3	62
S54407	6G0,5	7,0	74
S54408	7G0,5	7,0	78
S54409	7x0,5	7,0	78
S54410	8G0,5	7,7	92
S54411	8x0,5	7,7	92
S54412	10G0,5	9,4	126
S54413	12G0,5	9,4	135
S54414	12x0,5	9,4	135
S54415	14G0,5	9,8	150
S54416	16G0,5	10,4	170
S54417	18G0,5	10,9	185
S54418	19G0,5	10,9	190
S54420	21G0,5	11,6	215
S54505	25G0,5	13,1	255
S54422	27G0,5	13,1	265
S54423	30G0,5	13,8	290
S54506	34G0,5	14,8	335

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54424	37G0,5	14,8	345
S54507	40G0,5	15,3	370
S54508	42G0,5	16,9	415
S54509	50G0,5	17,6	475
S54510	56G0,5	18,4	525
S54511	61G0,5	18,9	560
S54425	2x0,75	5,4	45
S54426	3G0,75	5,7	54
S54427	3x0,75	5,7	54
S54428	4G0,75	6,3	64
S54429	4x0,75	6,3	64
S54430	5G0,75	7,0	80
S54431	5x0,75	7,0	80
S54432	6G0,75	7,6	94
S54433	6x0,75	7,6	94
S54434	7G0,75	7,6	100
S54435	7x0,75	7,6	100
S54436	8G0,75	8,4	116
S54437	8x0,75	8,4	116
S54438	10G0,75	10,2	158
S54439	12G0,75	10,2	168
S54440	12x0,75	10,2	168
S54441	14G0,75	10,7	190
S54442	16G0,75	11,5	220

Flexible control cables with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54443	18G0,75	12,1	245
S54444	19G0,75	12,1	250
S54446	21G0,75	12,7	275
S54512	25G0,75	14,5	335
S54513	27G0,75	14,5	345
S54514	30G0,75	15,0	375
S54515	34G0,75	16,6	450
S54516	37G0,75	16,6	465
S54517	40G0,75	17,2	500
S54518	42G0,75	18,7	545
S54519	50G0,75	19,5	625
S54520	56G0,75	20,1	675
S54521	61G0,75	20,7	725
S54448	2x1,0	5,7	52
S54449	3G1,0	6,1	64
S54450	3x1,0	6,1	64
S54451	4G1,0	6,8	80
S54452	4x1,0	6,8	80
S54453	5G1,0	7,4	96
S54454	5x1,0	7,4	96
S54455	6G1,0	8,0	112
S54456	6x1,0	8,0	112
S54457	7G1,0	8,0	118
S54458	7x1,0	8,0	118
S54459	8G1,0	9,3	148
S54460	10G1,0	10,9	188
S54461	10x1,0	10,9	188
S54462	12G1,0	10,9	204
S54463	12x1,0	10,9	204
S54464	14G1,0	11,6	235
S54465	16G1,0	12,2	264
S54466	18G1,0	12,8	294
S54467	18x1,0	12,8	294
S54468	19G1,0	12,8	300
S54471	21G1,0	13,7	336
S54522	25G1,0	15,5	405
S54523	27G1,0	15,5	415
S54524	30G1,0	16,4	470
S54525	34G1,0	17,6	540
S54526	37G1,0	17,6	560
S54527	40G1,0	18,5	610
S54528	42G1,0	19,9	655
S54529	50G1,0	20,8	755
S54530	56G1,0	21,6	830
S54531	61G1,0	22,2	890
S54473	2x1,5	6,7	71
S54474	3G1,5	7,1	87
S54475	3x1,5	7,1	87
S54476	4G1,5	7,8	110
S54477	4x1,5	7,8	110
S54478	5G1,5	8,5	130
S54479	5x1,5	8,5	130
S54480	6G1,5	9,6	162
S54532	6x1,5	9,6	162

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54481	7G1,5	9,6	172
S54482	7x1,5	9,6	172
S54483	8G1,5	10,6	202
S54484	10G1,5	12,7	265
S54533	10x1,5	12,7	265
S54485	12G1,5	12,7	285
S54486	12x1,5	12,7	285
S54534	14G1,5	13,5	325
S54535	16G1,5	14,3	370
S54536	18G1,5	15,0	410
S54537	19G1,5	15,0	420
S54538	21G1,5	16,2	475
S54539	25G1,5	18,5	580
S54540	27G1,5	18,5	600
S54541	30G1,5	19,2	655
S54542	34G1,5	20,6	755
S54543	37G1,5	20,6	785
S54544	40G1,5	21,6	855
S54545	42G1,5	23,3	920
S54546	50G1,5	24,7	1080
S54547	56G1,5	25,5	1180
S54548	61G1,5	26,2	1270
S54487	2x2,5	7,8	102
S54488	3G2,5	8,3	126
S54489	3x2,5	8,3	126
S54490	4G2,5	9,5	166
S54491	4x2,5	9,5	166
S54492	5G2,5	10,4	200
S54493	5x2,5	10,4	200
S54549	6x2,5	11,5	240
S54494	6G2,5	11,5	240
S54495	7G2,5	11,5	260
S54496	7x2,5	11,5	260
S54498	10G2,5	15,2	390
S54499	12G2,5	15,2	425
S54500	12x2,5	15,2	425
S54550	14G2,5	16,4	495
S54551	16G2,5	17,3	560
S54552	18G2,5	18,4	630
S54553	21G2,5	19,3	710
S54554	25G2,5	22,1	870
S54555	30G2,5	22,9	985
S54556	34G2,5	25,1	1160
S54557	37G2,5	25,1	1210
S54558	42G2,5	28,1	1390
S54559	50G2,5	29,4	1610
S54560	2x4,0	9,3	152
S54561	3G4,0	10,3	202
S54562	3x4,0	10,3	202
S54563	4G4,0	11,3	255
S54564	5G4,0	12,6	310
S54565	7G4,0	13,7	395
S54566	10G4,0	18,7	615
S54567	12G4,0	18,7	675

Flexible control cables with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54568	2x2x0,5	7,3	63
S54569	3x2x0,5	8,2	72
S54570	4x2x0,5	9,3	97
S54571	5x2x0,5	10,0	122
S54572	6x2x0,5	10,4	130
S54573	7x2x0,5	11,8	156
S54574	8x2x0,5	12,3	172
S54575	10x2x0,5	13,2	205
S54576	12x2x0,5	14,3	245
S54577	14x2x0,5	15,1	275
S54578	16x2x0,5	16,6	335
S54579	18x2x0,5	17,3	360
S54580	20x2x0,5	17,8	390
S54581	24x2x0,5	18,5	455
S54582	2x2x0,75	8,0	80
S54583	3x2x0,75	9,4	98
S54584	4x2x0,75	10,1	122
S54585	5x2x0,75	10,9	152
S54586	6x2x0,75	11,5	170
S54587	7x2x0,75	12,9	196
S54588	8x2x0,75	13,7	225
S54589	10x2x0,75	14,6	270
S54590	12x2x0,75	16,0	325
S54591	14x2x0,75	17,0	370
S54592	16x2x0,75	18,4	435
S54593	18x2x0,75	19,1	470
S54594	20x2x0,75	19,7	510
S54595	24x2x0,75	20,3	590
S54596	2x2x1,0	8,5	92
S54597	3x2x1,0	9,9	116
S54598	4x2x1,0	10,8	142
S54599	5x2x1,0	11,8	184
S54600	6x2x1,0	12,2	202

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54601	7x2x1,0	13,9	240
S54602	8x2x1,0	14,5	270
S54603	10x2x1,0	15,6	320
S54604	12x2x1,0	17,0	390
S54605	14x2x1,0	18,3	450
S54606	16x2x1,0	19,5	515
S54607	18x2x1,0	20,4	560
S54608	20x2x1,0	21,0	610
S54609	24x2x1,0	21,8	720
S54610	2x2x1,5	10,1	132
S54611	3x2x1,5	11,6	160
S54612	4x2x1,5	12,6	198
S54613	5x2x1,5	13,8	258
S54614	6x2x1,5	14,3	280
S54615	7x2x1,5	16,4	340
S54616	8x2x1,5	17,2	380
S54617	10x2x1,5	18,6	465
S54618	12x2x1,5	19,9	540
S54619	14x2x1,5	21,1	620
S54620	16x2x1,5	22,8	720
S54621	18x2x1,5	23,8	785
S54622	20x2x1,5	25,0	880
S54623	24x2x1,5	25,7	1020
S54624	2x2x2,5	12,1	192
S54625	3x2x2,5	13,8	235
S54626	4x2x2,5	15,1	295
S54627	5x2x2,5	16,7	385
S54628	6x2x2,5	17,3	425
S54629	7x2x2,5	19,6	500
S54630	8x2x2,5	20,5	560
S54631	10x2x2,5	22,3	690
S54632	12x2x2,5	23,8	805
S54633	14x2x2,5	25,7	945
S54634	16x2x2,5	27,5	1085

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500°C



Flexible, screened control cables with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 5 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective
earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Screen:

tinned copper wire braid, coverage ≥ 85%

Outer sheath:

PVC compound, oil resistant (see table of chemical
resistance), self-extinguishing and flame retardant
(acc. to EN 60332-1-2); colour: grey

Application:

Flexible power and control cables designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field (screen attenuation ca. 50 dB). Cables are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. High flexibility of BiT 500°C cable simplifies installation whereas compounds used enable easy and fast connections and ensure their high durability. Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4020	2x0,5	5,4	44
SB4021	3G0,5	5,7	48
SB4022	3x0,5	5,7	48
SB4023	4G0,5	6,2	58
SB4024	4x0,5	6,2	58
SB4025	5G0,5	6,9	72
SB4026	5x0,5	6,9	72
SB4027	6G0,5	7,4	84
SB4028	7G0,5	7,4	88
SB4029	7x0,5	7,4	88
SB4030	8G0,5	8,3	110
SB4031	8x0,5	8,3	110
SB4032	10G0,5	10,0	145
SB4033	12G0,5	10,0	155
SB4034	12x0,5	10,0	155
SB4035	14G0,5	10,4	170
SB4036	16G0,5	11,0	190
SB4037	18G0,5	11,7	220
SB4038	19G0,5	11,8	220
SB4039	21G0,5	12,2	240

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4040	25G0,5	13,9	295
SB4041	27G0,5	13,9	300
SB4042	30G0,5	14,4	325
SB4043	34G0,5	15,4	370
SB4044	37G0,5	15,4	385
SB4045	40G0,5	16,3	425
SB4046	42G0,5	17,5	455
SB4047	50G0,5	18,2	525
SB4048	56G0,5	19,0	570
SB4049	61G0,5	19,5	610
SB4050	2x0,75	5,8	52
SB4051	3G0,75	6,1	58
SB4052	3x0,75	6,1	58
SB4053	4G0,75	6,9	74
SB4054	4x0,75	6,9	74
SB4055	5G0,75	7,4	88
SB4056	5x0,75	7,4	88
SB4057	6G0,75	8,2	112
SB4058	6x0,75	8,2	112
SB4059	7G0,75	8,2	118

BIT 500[®]C

Flexible, screened control cables with number coded conductors, rated 300/500 V

Control cables 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4060	7x0,75	8,2	118
SB4061	8G0,75	9,4	142
SB4062	8x0,75	9,4	142
SB4063	10G0,75	10,8	180
SB4064	12G0,75	10,6	190
SB4065	12x0,75	10,6	190
SB4066	14G0,75	11,5	220
SB4067	16G0,75	12,1	245
SB4068	18G0,75	12,7	275
SB4069	19G0,75	12,7	280
SB4070	21G0,75	13,3	305
SB4071	25G0,75	15,1	370
SB4072	27G0,75	15,1	380
SB4073	30G0,75	16,0	425
SB4074	34G0,75	17,2	490
SB4075	37G0,75	17,2	505
SB4076	40G0,75	17,8	540
SB4077	42G0,75	19,3	590
SB4078	50G0,75	20,1	670
SB4079	56G0,75	20,7	725
SB4080	61G0,75	21,5	790
SB4081	2x1,0	6,1	57
SB4082	3G1,0	6,5	69
SB4083	3x1,0	6,5	69
SB4084	4G1,0	7,0	84
SB4085	4x1,0	7,0	84
SB4086	5G1,0	8,0	111
SB4087	5x1,0	8,0	111
SB4088	6G1,0	8,6	129
SB4089	6x1,0	8,6	129
SB4090	7G1,0	8,6	138
SB4091	7x1,0	8,6	138
SB4092	8G1,0	9,9	165
SB4093	10G1,0	11,5	215
SB4094	10x1,0	11,5	215
SB4095	12G1,0	11,5	230
SB4096	12x1,0	11,5	230
SB4097	14G1,0	12,2	260
SB4098	16G1,0	12,8	290
SB4099	18G1,0	13,6	330
SB4100	18x1,0	13,6	330
SB4101	19G1,0	13,6	335
SB4102	21G1,0	14,3	365
SB4103	25G1,0	16,5	455
SB4104	27G1,0	16,5	465
SB4105	30G1,0	17,0	505
SB4106	34G1,0	18,4	590
SB4107	37G1,0	18,4	610
SB4108	40G1,0	19,1	655
SB4109	42G1,0	20,5	700
SB4110	50G1,0	21,6	815
SB4111	56G1,0	22,2	885
SB4112	61G1,0	22,8	950
SB4113	2x1,5	7,1	88
SB4114	3G1,5	7,5	99
SB4115	3x1,5	7,5	99
SB4116	4G1,5	8,4	122
SB4117	4x1,5	8,4	122

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4118	5G1,5	9,5	156
SB4119	5x1,5	9,5	156
SB4120	6G1,5	10,2	182
SB4121	6x1,5	10,2	182
SB4122	7G1,5	10,2	192
SB4123	7x1,5	10,2	192
SB4124	8G1,5	11,0	220
SB4125	10G1,5	13,3	290
SB4126	10x1,5	13,3	290
SB4127	12G1,5	13,3	310
SB4128	12x1,5	13,3	310
SB4129	14G1,5	14,1	355
SB4130	16G1,5	14,9	410
SB4131	18G1,5	16,0	455
SB4132	19G1,5	16,0	465
SB4133	21G1,5	16,8	515
SB4134	25G1,5	19,1	620
SB4135	27G1,5	19,1	640
SB4136	30G1,5	19,8	700
SB4137	34G1,5	21,4	810
SB4138	37G1,5	21,4	840
SB4139	40G1,5	22,2	910
SB4140	42G1,5	23,9	970
SB4141	50G1,5	25,3	1140
SB4142	56G1,5	26,1	1240
SB4143	61G1,5	26,8	1330
SB4144	2x2,5	8,4	112
SB4145	3G2,5	9,3	144
SB4146	3x2,5	9,3	144
SB4147	4G2,5	10,1	180
SB4148	4x2,5	10,1	180
SB4149	5G2,5	11,0	216
SB4150	5x2,5	11,0	216
SB4151	6G2,5	12,1	265
SB4152	6x2,5	12,1	265
SB4153	7G2,5	12,1	280
SB4154	7x2,5	12,1	280
SB4155	10G2,5	16,2	430
SB4156	12G2,5	16,2	465
SB4157	12x2,5	16,2	465
SB4158	14G2,5	17,0	525
SB4159	16G2,5	17,9	590
SB4160	18G2,5	19,0	665
SB4161	21G2,5	19,9	750
SB4162	25G2,5	22,7	910
SB4163	30G2,5	23,5	1030
SB4164	34G2,5	25,7	1210
SB4165	37G2,5	25,7	1260
SB4166	42G2,5	28,9	1470
SB4167	50G2,5	30,2	1700
SB4168	2x4,0	10,3	170
SB4169	3G4,0	10,9	200
SB4170	3x4,0	10,9	200
SB4171	4G4,0	12,1	270
SB4172	5G4,0	13,2	325
SB4173	7G4,0	14,5	425
SB4174	10G4,0	19,5	645
SB4175	12G4,0	19,5	705

BIT 500[®]C

Flexible, screened control cables with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4176	2x2x0,5	7,7	80
SB4177	3x2x0,5	9,2	105
SB4178	4x2x0,5	9,9	125
SB4179	5x2x0,5	10,6	155
SB4180	6x2x0,5	11,0	165
SB4181	7x2x0,5	12,4	195
SB4182	8x2x0,5	12,9	210
SB4183	10x2x0,5	14,0	255
SB4184	12x2x0,5	14,9	290
SB4185	14x2x0,5	16,1	340
SB4186	16x2x0,5	17,2	385
SB4187	18x2x0,5	17,9	415
SB4188	20x2x0,5	18,6	455
SB4189	24x2x0,5	19,1	515
SB4190	2x2x0,75	8,6	102
SB4191	3x2x0,75	10,0	126
SB4192	4x2x0,75	10,7	152
SB4193	5x2x0,75	11,7	192
SB4194	6x2x0,75	12,1	205
SB4195	7x2x0,75	13,7	245
SB4196	8x2x0,75	14,3	270
SB4197	10x2x0,75	15,2	315
SB4198	12x2x0,75	16,6	375
SB4199	14x2x0,75	17,6	425
SB4200	16x2x0,75	19,0	490
SB4201	18x2x0,75	19,7	530
SB4202	20x2x0,75	20,3	570
SB4203	24x2x0,75	20,9	655
SB4204	2x2x1,0	9,5	126
SB4205	3x2x1,0	10,5	146
SB4206	4x2x1,0	11,6	182
SB4207	5x2x1,0	12,4	225
SB4208	6x2x1,0	12,8	240
SB4209	7x2x1,0	14,5	285

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4210	8x2x1,0	15,1	315
SB4211	10x2x1,0	16,6	385
SB4212	12x2x1,0	17,6	445
SB4213	14x2x1,0	18,9	510
SB4214	16x2x1,0	20,1	580
SB4215	18x2x1,0	21,0	625
SB4216	20x2x1,0	21,8	690
SB4217	24x2x1,0	22,4	790
SB4218	2x2x1,5	10,7	162
SB4219	3x2x1,5	12,2	196
SB4220	4x2x1,5	13,2	240
SB4221	5x2x1,5	14,4	300
SB4222	6x2x1,5	14,9	325
SB4223	7x2x1,5	17,0	395
SB4224	8x2x1,5	17,8	435
SB4225	10x2x1,5	19,2	525
SB4226	12x2x1,5	20,5	605
SB4227	14x2x1,5	21,9	695
SB4228	16x2x1,5	23,4	795
SB4229	18x2x1,5	24,8	885
SB4230	20x2x1,5	25,6	960
SB4231	24x2x1,5	26,3	1105
SB4232	2x2x2,5	12,7	230
SB4233	3x2x2,5	14,4	280
SB4234	4x2x2,5	16,1	355
SB4235	5x2x2,5	17,3	440
SB4236	6x2x2,5	17,9	480
SB4237	7x2x2,5	20,2	565
SB4238	8x2x2,5	21,1	625
SB4239	10x2x2,5	22,9	760
SB4240	12x2x2,5	24,4	880
SB4241	14x2x2,5	26,3	1030
SB4242	16x2x2,5	28,1	1175

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x - cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BITNER® CY



Control cables 300/500 V

Flexible, screened control cables with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:
Operating temperature:
 fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C

Electrical parameters:
Operating voltage: $U_0/U = 300/500$ V
Test voltage (50 Hz): 3000 V
Insulation resistance: 20 MΩ x km

Mechanical parameters:
Min. bending radius:
 flexible connections: 10 x Ø
 fixed installation: 5 x Ø

Design:

Conductors: bare copper conductors, multi-stranded class 5 acc. to EN 60228
Insulation: PVC compound
Core identification: black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)
Core arrangement: cores twisted together or pairs twisted together
Inner sheath: PVC compound
Screen: tinned copper wire braid, coverage ≥ 85%
Outer sheath: PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2); colour: transparent

Application:

Flexible power and control cables designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field especially in industrial environment. Reciprocal connection of screen to earth ensures full electromagnetic compatibility (EMC). Cables are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. High flexibility of BIT 500°CY cable simplifies installation and compounds used enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54300	2x0,5	7,1	80
S54301	3G0,5	7,4	87
S54302	4G0,5	7,8	98
S54303	5G0,5	8,3	113
S54304	6G0,5	9,3	135
S54305	7G0,5	9,3	139
S54306	8G0,5	10,0	157
S54307	10G0,5	11,0	183
S54308	12G0,5	11,5	204
S54309	14G0,5	11,9	222
S54310	16G0,5	12,4	245
S54311	18G0,5	13,0	266
S54312	19G0,5	13,0	270
S54314	21G0,5	13,7	299
S54260	25G0,5	14,9	336
S54316	27G0,5	15,2	359
S54317	30G0,5	16,0	399
S54318	37G0,5	17,1	461
S54319	2x0,75	7,5	90
S54320	3G0,75	7,8	100
S54321	4G0,75	8,3	115
S54322	5G0,75	9,3	141
S54323	6G0,75	9,9	160
S54324	7G0,75	9,9	164
S54325	8G0,75	10,6	187
S54326	10G0,75	12,0	224
S54327	12G0,75	12,3	246
S54328	14G0,75	12,8	269

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54329	16G0,75	13,6	304
S54330	18G0,75	14,2	332
S54331	19G0,75	14,2	336
S54333	21G0,75	14,7	364
S54275	25G0,75	16,5	425
S54335	2x1,0	7,8	99
S54336	3G1,0	8,1	113
S54337	4G1,0	9,1	137
S54338	5G1,0	9,7	159
S54339	6G1,0	10,3	182
S54340	7G1,0	10,3	186
S54341	8G1,0	11,3	216
S54342	10G1,0	12,6	256
S54343	12G1,0	12,9	281
S54344	14G1,0	13,6	316
S54345	16G1,0	14,3	350
S54346	18G1,0	14,9	385
S54347	19G1,0	14,9	390
S54349	21G1,0	15,9	437
S54290	25G1,0	17,4	494
S54351	2x1,5	8,5	121
S54352	3G1,5	9,3	147
S54353	4G1,5	9,9	171
S54354	5G1,5	10,6	201
S54355	6G1,5	11,6	235
S54356	7G1,5	11,6	243
S54357	8G1,5	12,5	277
S54358	10G1,5	14,2	336

BiT 500[®] CY

Flexible, screened control cables with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54359	2x2,5	14,6	371
S54360	3G2,5	10,0	170
S54361	4G2,5	10,5	199
S54362	5G2,5	11,5	238
S54363	12G1,5	12,3	280

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54364	6G2,5	13,2	325
S54365	7G2,5	13,2	338
S54367	10G2,5	16,8	487
S54368	12G2,5	17,3	542

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BITNER® 500[®]SY



Control cables 300/500 V

Flexible, control cables with number coded conductors and steel wire braid, rated 300/500 V



Technical data:

Thermal parameters:
Operating temperature:
 fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C

Electrical parameters:
Operating voltage: $U_n/U = 300/500$ V
Test voltage (50 Hz): 3000 V
Insulation resistance: 20 M Ω x km

Mechanical parameters:

Min. bending radius:
 flexible connections: 12 x \varnothing
 fixed installation: 6 x \varnothing

Design:

Conductors: bare copper conductors, multi-stranded class 5 acc. to EN 60228
Insulation: PVC compound
Core identification: black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)
Core arrangement: cores twisted together
Inner sheath: PVC compound, grey or white
Screen: galvanized steel wire braid
Outer sheath: PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2); colour: transparent

Application:

Flexible power and control cables designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. Steel wire braid and special reinforcing inner sheath make this cable more resistant to mechanical damages keeping its flexibility. Cables are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. BIT 500[®]SY cables are dedicated for applications in harsh conditions of industrial environment. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S56800	2x0,5	7,3	84
S56801	3G0,5	7,6	92
S56802	4G0,5	8,1	106
S56803	5G0,5	8,5	118
S56804	6G0,5	9,5	141
S56805	7G0,5	9,5	144
S56806	8G0,5	10,2	160
S56807	10G0,5	11,7	205
S56808	12G0,5	11,7	213
S56809	14G0,5	12,1	232
S56810	16G0,5	12,6	254
S56811	18G0,5	13,2	276
S56812	19G0,5	13,2	280
S56813	2x0,75	7,7	94
S56814	3G0,75	8,0	108
S56815	4G0,75	8,6	122
S56816	5G0,75	9,5	147
S56817	6G0,75	10,1	166
S56818	7G0,75	10,1	171
S56819	8G0,75	10,8	194
S56820	10G0,75	12,5	246
S56821	12G0,75	12,5	256
S56822	14G0,75	13,0	280
S56823	16G0,75	13,8	314
S56824	18G0,75	14,4	343
S56825	19G0,75	14,4	348
S56826	2x1,0	8,0	106
S56827	3G1,0	8,3	119

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S56828	4G1,0	9,9	166
S56829	5G1,0	9,9	166
S56830	6G1,0	10,5	188
S56831	7G1,0	10,5	194
S56832	8G1,0	11,5	227
S56833	10G1,0	13,1	280
S56834	12G1,0	13,1	293
S56835	14G1,0	13,8	328
S56836	16G1,0	14,5	364
S56837	18G1,0	16,5	462
S56838	19G1,0	15,1	404
S56839	2x1,5	9,2	137
S56840	3G1,5	9,6	157
S56841	4G1,5	11,0	192
S56842	5G1,5	11,0	210
S56843	6G1,5	11,9	245
S56844	7G1,5	11,9	255
S56845	8G1,5	12,9	292
S56846	10G1,5	15,0	369
S56847	12G1,5	15,0	389
S56848	14G1,5	16,0	444
S56849	16G1,5	16,8	493
S56850	18G1,5	17,5	541
S56851	19G1,5	17,5	551
S56852	2x2,5	10,3	178
S56853	3G2,5	10,8	206
S56854	4G2,5	11,9	249
S56855	5G2,5	12,6	289

BiT 500[®]SY

Flexible, control cables with number coded conductors and steel wire braid, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S56856	6G2,5	13,8	339
S56857	7G2,5	13,8	354
S56859	10G2,5	17,7	526
S56860	12G2,5	17,7	557

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S56861	14G2,5	18,6	627
S56862	16G2,5	19,5	698
S56863	18G2,5	20,9	794
S56864	19G2,5	20,9	809

*Outer diameter tolerance: +/- 5%;

Cable Factory BITNER reserves the right to modify the specifications without prior notice;

G - cables with green/yellow earthing conductor;

x- cables without green/yellow earthing conductor.

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®](St)



Control cables 300/500 V

Flexible, screened control cables with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

fixed installation: 5 x Ø
flexible connections: 10 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors

Core arrangement:

cores twisted together or pairs twisted together

Screen:

aluminum backed polyester tape with tinned copper drain wire

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2); colour: grey

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Common screen improves protection of transmitted signals against external electromagnetic field. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Insulation compounds and conductor construction of BiT 500[®](St) cable enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0250	2x0,5	5,2	40
SB0251	3G0,5	5,5	44
SB0252	3x0,5	5,5	44
SB0253	4G0,5	6,0	52
SB0254	4x0,5	6,0	52
SB0255	5G0,5	6,5	64
SB0256	5x0,5	6,5	64
SB0257	6G0,5	7,2	76
SB0258	7G0,5	7,2	80
SB0259	7x0,5	7,2	80
SB0260	8G0,5	8,1	94
SB0261	8x0,5	8,1	94
SB0262	10G0,5	9,8	126
SB0263	12G0,5	9,8	134
SB0264	12x0,5	9,8	134
SB0265	14G0,5	10,2	150
SB0266	16G0,5	10,8	168
SB0267	18G0,5	11,5	192
SB0268	19G0,5	11,5	196
SB0269	21G0,5	12,0	215
SB0270	25G0,5	13,7	260
SB0271	27G0,5	13,7	270
SB0272	30G0,5	14,2	295
SB0273	34G0,5	15,2	335
SB0274	37G0,5	15,2	345
SB0275	40G0,5	16,1	390
SB0276	42G0,5	17,3	415
SB0277	50G0,5	18,2	485
SB0278	56G0,5	18,8	525
SB0279	61G0,5	19,3	560
SB0280	2x0,75	5,6	48
SB0281	3G0,75	5,9	54

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0282	3x0,75	5,9	54
SB0283	4G0,75	6,5	66
SB0284	4x0,75	6,5	66
SB0285	5G0,75	7,2	81
SB0286	5x0,75	7,2	81
SB0287	6G0,75	7,8	96
SB0288	6x0,75	7,8	96
SB0289	7G0,75	7,8	102
SB0290	7x0,75	7,8	102
SB0291	8G0,75	9,2	126
SB0292	8x0,75	9,2	126
SB0293	10G0,75	10,6	159
SB0294	12G0,75	10,6	168
SB0295	12x0,75	10,6	168
SB0296	14G0,75	11,3	195
SB0297	16G0,75	11,9	220
SB0298	18G0,75	12,5	245
SB0299	19G0,75	12,5	250
SB0300	21G0,75	13,1	275
SB0301	25G0,75	14,9	335
SB0302	27G0,75	14,9	345
SB0303	30G0,75	15,4	375
SB0304	34G0,75	17,0	450
SB0305	37G0,75	17,0	465
SB0306	40G0,75	17,6	500
SB0307	42G0,75	19,1	540
SB0308	50G0,75	19,9	620
SB0309	56G0,75	20,5	675
SB0310	61G0,75	21,1	725
SB0311	2x1,0	5,9	54
SB0312	3G1,0	6,3	64
SB0313	3x1,0	6,3	64

BiT 500[®](St)

Flexible, screened control cables with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0314	4G1,0	7,0	80
SB0315	4x1,0	7,0	80
SB0316	5G1,0	7,6	98
SB0317	5x1,0	7,6	98
SB0318	6G1,0	8,2	114
SB0319	6x1,0	8,2	114
SB0320	7G1,0	8,2	120
SB0321	7x1,0	8,2	120
SB0322	8G1,0	9,7	148
SB0323	10G1,0	11,5	194
SB0324	10x1,0	11,5	194
SB0325	12G1,0	11,5	210
SB0326	12x1,0	11,5	210
SB0327	14G1,0	12,0	235
SB0328	16G1,0	12,6	265
SB0329	18G1,0	13,2	295
SB0330	18x1,0	13,2	295
SB0331	19G1,0	13,2	300
SB0332	21G1,0	14,1	335
SB0333	25G1,0	16,3	415
SB0334	27G1,0	16,3	430
SB0335	30G1,0	16,8	470
SB0336	34G1,0	18,2	550
SB0337	37G1,0	18,2	565
SB0338	40G1,0	18,9	610
SB0339	42G1,0	20,3	650
SB0340	50G1,0	21,2	750
SB0341	56G1,0	22,0	830
SB0342	61G1,0	22,6	890
SB0343	2x1,5	6,9	74
SB0344	3G1,5	7,3	86
SB0345	3x1,5	7,3	86
SB0346	4G1,5	8,0	108
SB0347	4x1,5	8,0	108
SB0348	5G1,5	9,1	138
SB0349	5x1,5	9,1	138
SB0350	6G1,5	9,8	162
SB0351	6x1,5	9,8	162
SB0352	7G1,5	9,8	172
SB0353	7x1,5	9,8	172
SB0354	8G1,5	11,0	200
SB0355	10G1,5	13,1	260
SB0356	10x1,5	13,1	260
SB0357	12G1,5	13,1	280
SB0358	12x1,5	13,1	280
SB0359	14G1,5	13,9	325

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0360	16G1,5	14,7	365
SB0361	18G1,5	15,4	410
SB0362	19G1,5	15,4	420
SB0363	21G1,5	16,6	475
SB0364	25G1,5	18,9	575
SB0365	27G1,5	18,9	595
SB0366	30G1,5	19,6	650
SB0367	34G1,5	21,0	750
SB0368	37G1,5	21,0	780
SB0369	40G1,5	22,0	850
SB0370	42G1,5	23,7	910
SB0371	50G1,5	25,1	1080
SB0372	56G1,5	25,9	1180
SB0373	61G1,5	26,6	1260
SB0374	2x2,5	8,0	96
SB0375	3G2,5	8,5	118
SB0376	3x2,5	8,5	118
SB0377	4G2,5	9,7	160
SB0378	4x2,5	9,7	160
SB0379	5G2,5	10,6	192
SB0380	5x2,5	10,6	192
SB0381	6G2,5	11,9	240
SB0382	6x2,5	11,9	240
SB0383	7G2,5	11,9	255
SB0384	7x2,5	11,9	255
SB0385	10G2,5	16,0	395
SB0386	12G2,5	16,0	430
SB0387	12x2,5	16,0	430
SB0388	14G2,5	16,8	485
SB0389	16G2,5	17,7	550
SB0390	18G2,5	18,8	625
SB0391	21G2,5	19,7	705
SB0392	25G2,5	22,5	855
SB0393	30G2,5	23,3	970
SB0394	34G2,5	25,5	1150
SB0395	37G2,5	25,5	1190
SB0396	42G2,5	28,5	1370
SB0397	50G2,5	29,8	1590
SB0398	2x4,0	9,9	150
SB0399	3G4,0	10,5	190
SB0400	3x4,0	10,5	190
SB0401	4G4,0	11,7	240
SB0402	5G4,0	12,7	300
SB0403	7G4,0	14,0	390
SB0404	10G4,0	18,9	600
SB0405	12G4,0	18,9	660

BiT 500[®](St)

Flexible, screened control cables with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0406	2x2x0,5	7,7	70
SB0407	3x2x0,5	8,6	80
SB0408	4x2x0,5	9,7	106
SB0409	5x2x0,5	10,4	130
SB0410	6x2x0,5	10,8	138
SB0411	7x2x0,5	12,2	166
SB0412	8x2x0,5	12,7	182
SB0413	10x2x0,5	13,8	220
SB0414	12x2x0,5	14,7	255
SB0415	14x2x0,5	15,5	290
SB0416	16x2x0,5	17,0	345
SB0417	18x2x0,5	17,7	370
SB0418	20x2x0,5	18,4	410
SB0419	24x2x0,5	18,9	470
SB0420	2x2x0,75	8,4	86
SB0421	3x2x0,75	9,8	106
SB0422	4x2x0,75	10,5	130
SB0423	5x2x0,75	11,5	168
SB0424	6x2x0,75	11,9	180
SB0425	7x2x0,75	13,3	205
SB0426	8x2x0,75	14,1	235
SB0427	10x2x0,75	15,0	280
SB0428	12x2x0,75	16,4	340
SB0429	14x2x0,75	17,4	380
SB0430	16x2x0,75	18,8	445
SB0431	18x2x0,75	19,5	480
SB0432	20x2x0,75	20,1	520
SB0433	24x2x0,75	20,7	600
SB0434	2x2x1,0	9,3	110
SB0435	3x2x1,0	10,3	126
SB0436	4x2x1,0	11,2	154
SB0437	5x2x1,0	12,2	196
SB0438	6x2x1,0	12,6	214

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0439	7x2x1,0	14,3	255
SB0440	8x2x1,0	14,9	280
SB0441	10x2x1,0	16,4	350
SB0442	12x2x1,0	17,4	405
SB0443	14x2x1,0	18,7	465
SB0444	16x2x1,0	19,9	530
SB0445	18x2x1,0	20,8	575
SB0446	20x2x1,0	21,6	635
SB0447	24x2x1,0	22,2	735
SB0448	2x2x1,5	10,5	142
SB0449	3x2x1,5	12,0	172
SB0450	4x2x1,5	13,0	210
SB0451	5x2x1,5	14,2	270
SB0452	6x2x1,5	14,7	295
SB0453	7x2x1,5	16,8	355
SB0454	8x2x1,5	17,6	395
SB0455	10x2x1,5	19,0	480
SB0456	12x2x1,5	20,3	555
SB0457	14x2x1,5	21,7	645
SB0458	16x2x1,5	23,2	735
SB0459	18x2x1,5	24,2	800
SB0460	20x2x1,5	25,4	895
SB0461	24x2x1,5	26,1	1035
SB0462	2x2x2,5	12,5	205
SB0463	3x2x2,5	14,2	245
SB0464	4x2x2,5	15,5	305
SB0465	5x2x2,5	17,1	400
SB0466	6x2x2,5	17,7	440
SB0467	7x2x2,5	20,0	515
SB0468	8x2x2,5	20,9	575
SB0469	10x2x2,5	22,7	705
SB0470	12x2x2,5	24,2	820
SB0471	14x2x2,5	26,1	960
SB0472	16x2x2,5	27,9	1100

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®]2(St)



Flexible, individually and collectively screened, paired control cables with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_i/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

fixed installation: 5 x Ø
flexible connections: 10 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5

acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors

Core arrangement:

twisted screened pairs

Individual screen:

aluminum backed polyester tape with tinned copper drain

wire underneath each pair

Collective screen:

aluminum backed polyester tape with tinned copper drain

wire

Outer sheath:

PVC compound, oil resistant (see table of chemical

resistance), self-extinguishing and flame retardant

(acc. to EN 60332-1-2); colour: grey

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Double screening improves protection of transmitted signals against external electromagnetic field. Individual screening of pairs decreases signal interferences from adjacent pairs. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Insulation compounds and conductor construction of BIT 500[®]2(St) cable enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0500	2x2x0,5	7,7	82	SB0528	2x2x1,0	9,3	126
SB0501	3x2x0,5	8,6	96	SB0529	3x2x1,0	10,3	150
SB0502	4x2x0,5	9,7	128	SB0530	4x2x1,0	11,2	186
SB0503	5x2x0,5	10,4	158	SB0531	5x2x1,0	12,2	240
SB0504	6x2x0,5	10,8	172	SB0532	6x2x1,0	12,6	265
SB0505	7x2x0,5	12,2	205	SB0533	7x2x1,0	14,3	310
SB0506	8x2x0,5	12,7	230	SB0534	8x2x1,0	14,9	345
SB0507	10x2x0,5	13,8	280	SB0535	10x2x1,0	16,4	430
SB0508	12x2x0,5	14,7	325	SB0536	12x2x1,0	17,4	500
SB0509	14x2x0,5	15,5	365	SB0537	14x2x1,0	18,7	580
SB0510	16x2x0,5	17,0	435	SB0538	16x2x1,0	19,9	660
SB0511	18x2x0,5	17,7	470	SB0539	18x2x1,0	20,8	720
SB0512	20x2x0,5	18,4	525	SB0540	20x2x1,0	21,6	800
SB0513	24x2x0,5	18,9	605	SB0541	24x2x1,0	22,2	930
SB0514	2x2x0,75	8,4	98	SB0542	2x2x1,5	10,5	158
SB0515	3x2x0,75	9,8	124	SB0543	3x2x1,5	12,0	196
SB0516	4x2x0,75	10,5	154	SB0544	4x2x1,5	13,0	245
SB0517	5x2x0,75	11,5	196	SB0545	5x2x1,5	14,2	310
SB0518	6x2x0,75	11,9	215	SB0546	6x2x1,5	14,7	345
SB0519	7x2x0,75	13,3	250	SB0547	7x2x1,5	16,8	415
SB0520	8x2x0,75	14,1	285	SB0548	8x2x1,5	17,6	460
SB0521	10x2x0,75	15,0	340	SB0549	10x2x1,5	19,0	560
SB0522	12x2x0,75	16,4	410	SB0550	12x2x1,5	20,3	655
SB0523	14x2x0,75	17,4	465	SB0551	14x2x1,5	21,7	760
SB0524	16x2x0,75	18,8	540	SB0552	16x2x1,5	23,2	870
SB0525	18x2x0,75	19,5	590	SB0553	18x2x1,5	24,2	945
SB0526	20x2x0,75	20,1	640	SB0554	20x2x1,5	25,4	1060
SB0527	24x2x0,75	20,7	745	SB0555	24x2x1,5	26,1	1240

BiT 500[®]2(St)

Flexible, individually and collectively screened, paired control cables with number coded conductors, rated 300/500 V

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0556	2x2x2,5	12,5	220
SB0557	3x2x2,5	14,2	275
SB0558	4x2x2,5	15,5	340
SB0559	5x2x2,5	17,1	445
SB0560	6x2x2,5	17,7	490
SB0561	7x2x2,5	20,0	580

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0562	8x2x2,5	20,9	645
SB0563	10x2x2,5	22,7	790
SB0564	12x2x2,5	24,2	925
SB0565	14x2x2,5	26,1	1090
SB0566	16x2x2,5	27,9	1240

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced;

BITNER BiT 500[®]FR



Flexible control cables with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C
occasional flexing: -15 °C* to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V
Test voltage (50 Hz): 3000 V
Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: 7,5 x Ø
fixed installation: 4 x Ø

*minimum temperature for occasional flexing with bending radius not smaller than 15 x D. Bending test at low temperature (-15 °C acc. to EN 60811-504).

Design:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together
PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24 cat. C);
colour: grey

Outer sheath:

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. High flexibility of BIT 500[®]FR cable enables easy and fast connections and ensures their high durability. Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S58855	2x0,5	5,0	36
S58856	3G0,5	5,3	43
S58857	3x0,5	5,3	43
S58858	4G0,5	5,8	51
S58859	4x0,5	5,8	51
S58860	5G0,5	6,3	62
S58861	5x0,5	6,3	62
S58862	6G0,5	7,0	75
S58863	7G0,5	7,0	79
S58864	7x0,5	7,0	79
S58865	8G0,5	7,7	93
S58866	8x0,5	7,7	93
S58867	10G0,5	9,4	126
S58868	12G0,5	9,4	135
S58869	12x0,5	9,4	135
S58870	14G0,5	9,8	150
S58871	16G0,5	10,4	168
S58872	18G0,5	10,9	186
S58873	19G0,5	10,9	189
S58874	21G0,5	11,6	213
S58875	25G0,5	13,1	255
S58876	27G0,5	13,1	264
S58877	30G0,5	13,8	294
S58878	34G0,5	14,8	335
S58879	37G0,5	14,8	350
S58880	40G0,5	15,3	375
S58881	42G0,5	16,9	420
S58882	50G0,5	17,6	475
S58883	56G0,5	18,4	525
S58884	61G0,5	18,9	560

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S58885	2x0,75	5,4	45
S58886	3G0,75	5,7	54
S58887	3x0,75	5,7	54
S58888	4G0,75	6,3	64
S58889	4x0,75	6,3	64
S58890	5G0,75	7,0	82
S58891	5x0,75	7,0	82
S58892	6G0,75	7,6	96
S58893	6x0,75	7,6	96
S58894	7G0,75	7,6	100
S58895	7x0,75	7,6	100
S58896	8G0,75	8,4	120
S58897	8x0,75	8,4	120
S58898	10G0,75	10,2	160
S58899	12G0,75	10,2	170
S58900	12x0,75	10,2	170
S58901	14G0,75	10,7	190
S58902	16G0,75	11,5	220
S58903	18G0,75	12,1	245
S58904	19G0,75	12,1	250
S58905	21G0,75	12,7	275
S58906	25G0,75	14,5	335
S58907	27G0,75	14,5	345
S58908	30G0,75	15,0	380
S58909	34G0,75	16,6	450
S58910	37G0,75	16,6	465
S58911	40G0,75	17,2	500
S58912	42G0,75	18,7	550
S58913	50G0,75	19,5	625
S58914	56G0,75	20,1	680

BIT 500[®]FR

Flexible control cables with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S58915	61G0,75	20,7	730
S58916	2x1,0	5,7	52
S58917	3G1,0	6,1	64
S58918	3x1,0	6,1	64
S58919	4G1,0	6,8	80
S58920	4x1,0	6,8	80
S58921	5G1,0	7,4	96
S58922	5x1,0	7,4	96
S58923	6G1,0	8,0	114
S58924	6x1,0	8,0	114
S58925	7G1,0	8,0	120
S58926	7x1,0	8,0	120
S58927	8G1,0	9,3	150
S58928	10G1,0	10,9	190
S58929	10x1,0	10,9	190
S58930	12G1,0	10,9	205
S58931	12x1,0	10,9	205
S58932	14G1,0	11,6	235
S58933	16G1,0	12,2	265
S58934	18G1,0	12,8	295
S58935	18x1,0	12,8	295
S58936	19G1,0	12,8	300
S58937	21G1,0	13,7	335
S58938	25G1,0	15,5	405
S58939	27G1,0	15,5	415
S58940	30G1,0	16,4	470
S58941	34G1,0	17,6	540
S58942	37G1,0	17,6	560
S58943	40G1,0	18,5	610
S58944	42G1,0	19,9	660
S58945	50G1,0	20,8	755
S58946	56G1,0	21,6	835
S58947	61G1,0	22,2	895
S58948	2x1,5	6,7	72
S58949	3G1,5	7,1	88
S58950	3x1,5	7,1	88
S58951	4G1,5	7,8	109
S58952	4x1,5	7,8	109
S58953	5G1,5	8,5	131
S58954	5x1,5	8,5	131
S58955	6G1,5	9,6	163
S58956	6x1,5	9,6	163
S58957	7G1,5	9,6	172
S58958	7x1,5	9,6	172
S58959	8G1,5	10,6	205
S58960	10G1,5	12,7	265
S58961	10x1,5	12,7	265
S58962	12G1,5	12,7	285

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S58963	12x1,5	12,7	285
S58964	14G1,5	13,5	330
S58965	16G1,5	14,3	370
S58966	18G1,5	15,0	410
S58967	19G1,5	15,0	420
S58968	21G1,5	16,2	483
S58969	25G1,5	18,5	590
S58970	27G1,5	18,5	610
S58971	30G1,5	19,2	670
S58972	34G1,5	20,6	765
S58973	37G1,5	20,6	790
S58974	40G1,5	21,6	860
S58975	42G1,5	23,3	924
S58976	50G1,5	24,7	1090
S58977	56G1,5	25,5	1190
S58978	61G1,5	26,2	1270
S58979	2x2,5	7,8	102
S58980	3G2,5	8,3	128
S58981	3x2,5	8,3	128
S58982	4G2,5	9,5	168
S58983	4x2,5	9,5	168
S58984	5G2,5	10,4	200
S58985	5x2,5	10,4	200
S58986	6x2,5	11,5	245
S58987	6G2,5	11,5	245
S58988	7G2,5	11,5	260
S58989	7x2,5	11,5	260
S58990	10G2,5	15,2	395
S58991	12G2,5	15,2	425
S58992	12x2,5	15,2	425
S58993	14G2,5	16,4	495
S58994	16G2,5	17,3	560
S58995	18G2,5	18,4	635
S58996	21G2,5	19,3	715
S58997	25G2,5	22,1	870
S58998	30G2,5	22,9	985
S58999	34G2,5	25,1	1160
S59000	37G2,5	25,1	1210
S59001	42G2,5	28,1	1400
S59002	50G2,5	29,4	1620
S59003	2x4,0	9,3	152
S59004	3G4,0	10,3	202
S59005	3x4,0	10,3	202
S59006	4G4,0	11,3	255
S59007	5G4,0	12,6	310
S59008	7G4,0	13,7	395
S59009	10G4,0	18,7	615
S59010	12G4,0	18,7	675

BiT 500[®]FR

Flexible control cables with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59011	2x2x0,5	7,3	65
S59012	3x2x0,5	8,2	70
S59013	4x2x0,5	9,3	98
S59014	5x2x0,5	10,0	120
S59015	6x2x0,5	10,4	130
S59016	7x2x0,5	11,8	156
S59017	8x2x0,5	12,3	172
S59018	10x2x0,5	13,2	205
S59019	12x2x0,5	14,3	245
S59020	14x2x0,5	15,1	275
S59021	16x2x0,5	16,6	335
S59022	18x2x0,5	17,3	360
S59023	20x2x0,5	17,8	395
S59024	24x2x0,5	18,5	455
S59025	2x2x0,75	8,0	78
S59026	3x2x0,75	9,4	100
S59027	4x2x0,75	10,1	122
S59028	5x2x0,75	10,9	152
S59029	6x2x0,75	11,5	170
S59030	7x2x0,75	12,9	196
S59031	8x2x0,75	13,7	225
S59032	10x2x0,75	14,6	270
S59033	12x2x0,75	16,0	325
S59034	14x2x0,75	17,0	370
S59035	16x2x0,75	18,4	435
S59036	18x2x0,75	19,1	470
S59037	20x2x0,75	19,7	515
S59038	24x2x0,75	20,3	595
S59039	2x2x1,0	8,5	92
S59040	3x2x1,0	9,9	116
S59041	4x2x1,0	10,8	145
S59042	5x2x1,0	11,8	184
S59043	6x2x1,0	12,2	202

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59044	7x2x1,0	13,9	240
S59045	8x2x1,0	14,5	270
S59046	10x2x1,0	15,6	320
S59047	12x2x1,0	17,0	390
S59048	14x2x1,0	18,3	450
S59049	16x2x1,0	19,5	515
S59050	18x2x1,0	20,4	560
S59051	20x2x1,0	21,0	615
S59052	24x2x1,0	21,8	725
S59053	2x2x1,5	10,1	132
S59054	3x2x1,5	11,6	167
S59055	4x2x1,5	12,6	198
S59056	5x2x1,5	13,8	258
S59057	6x2x1,5	14,3	280
S59058	7x2x1,5	16,4	340
S59059	8x2x1,5	17,2	380
S59060	10x2x1,5	18,6	465
S59061	12x2x1,5	19,9	550
S59062	14x2x1,5	21,1	625
S59063	16x2x1,5	22,8	725
S59064	18x2x1,5	23,8	780
S59065	20x2x1,5	25,0	885
S59066	24x2x1,5	25,7	1030
S59067	2x2x2,5	12,1	195
S59068	3x2x2,5	13,8	235
S59069	4x2x2,5	15,1	305
S59070	5x2x2,5	16,7	385
S59071	6x2x2,5	17,3	425
S59072	7x2x2,5	19,6	505
S59073	8x2x2,5	20,5	560
S59074	10x2x2,5	22,3	695
S59075	12x2x2,5	23,8	810
S59076	14x2x2,5	25,7	950
S59077	16x2x2,5	27,5	1096

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BITNER® BIT 500°C FR

RoHS 2015/863/EU
 CE
 LVD 2014/35/EU
 CPR
 CPR 305/2011
 24 months warranty

Control cables 300/500 V

Flexible, highly flame retardant, screened control cables with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V
 Test voltage (50 Hz): 3000 V
 Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
 fixed installation: 5 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Screen:

tinned copper wire braid, coverage ≥85%

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24 cat. C); colour: grey

Application:

Flexible power and control cables designed for operation in control and protective devices as well as in control circuits. Suitable also for power supply to low power portable and mobile devices. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field (screen attenuation ca. 50 dB). Cables are suitable for fixed installations, for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. High flexibility of BIT 500°C FR cable simplifies installation and compounds used enable easy and fast connections and ensure their high durability. Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1300	2x0,5	5,4	44
SB1301	3G0,5	5,7	48
SB1302	3x0,5	5,7	48
SB1303	4G0,5	6,2	58
SB1304	4x0,5	6,2	58
SB1305	5G0,5	6,9	72
SB1306	5x0,5	6,9	72
SB1307	6G0,5	7,4	84
SB1308	7G0,5	7,4	88
SB1309	7x0,5	7,4	88
SB1310	8G0,5	8,3	110
SB1311	8x0,5	8,3	110
SB1312	10G0,5	10,0	145
SB1313	12G0,5	10,0	155
SB1314	12x0,5	10,0	155
SB1315	14G0,5	10,4	170
SB1316	16G0,5	11,0	190
SB1317	18G0,5	11,7	220
SB1318	19G0,5	11,8	220
SB1319	21G0,5	12,2	240
SB1320	25G0,5	13,9	295
SB1321	27G0,5	13,9	300
SB1322	30G0,5	14,4	325
SB1323	34G0,5	15,4	370
SB1324	37G0,5	15,4	385
SB1325	40G0,5	16,3	425

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1326	42G0,5	17,5	455
SB1327	50G0,5	18,2	525
SB1328	56G0,5	19,0	570
SB1329	61G0,5	19,5	610
SB1330	2x0,75	5,8	52
SB1331	3G0,75	6,1	58
SB1332	3x0,75	6,1	58
SB1333	4G0,75	6,9	74
SB1334	4x0,75	6,9	74
SB1335	5G0,75	7,4	88
SB1336	5x0,75	7,4	88
SB1337	6G0,75	8,2	112
SB1338	6x0,75	8,2	112
SB1339	7G0,75	8,2	118
SB1340	7x0,75	8,2	118
SB1341	8G0,75	9,4	142
SB1342	8x0,75	9,4	142
SB1343	10G0,75	10,8	180
SB1344	12G0,75	10,6	190
SB1345	12x0,75	10,6	190
SB1346	14G0,75	11,5	220
SB1347	16G0,75	12,1	245
SB1348	18G0,75	12,7	275
SB1349	19G0,75	12,7	280
SB1350	21G0,75	13,3	305
SB1351	25G0,75	15,1	370

BIT 500[®]C FR

Flexible, highly flame retardant, screened control cables with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1352	27G0,75	15,1	380
SB1353	30G0,75	16,0	425
SB1354	34G0,75	17,2	490
SB1355	37G0,75	17,2	505
SB1356	40G0,75	17,8	540
SB1357	42G0,75	19,3	590
SB1358	50G0,75	20,1	670
SB1359	56G0,75	20,7	725
SB1360	61G0,75	21,5	790
SB1361	2x1,0	6,1	57
SB1362	3G1,0	6,5	69
SB1363	3x1,0	6,5	69
SB1364	4G1,0	7,0	84
SB1365	4x1,0	7,0	84
SB1366	5G1,0	8,0	111
SB1367	5x1,0	8,0	111
SB1368	6G1,0	8,6	129
SB1369	6x1,0	8,6	129
SB1370	7G1,0	8,6	138
SB1371	7x1,0	8,6	138
SB1372	8G1,0	9,9	165
SB1373	10G1,0	11,5	215
SB1374	10x1,0	11,5	215
SB1375	12G1,0	11,5	230
SB1376	12x1,0	11,5	230
SB1377	14G1,0	12,2	260
SB1378	16G1,0	12,8	290
SB1379	18G1,0	13,6	330
SB1380	18x1,0	13,6	330
SB1381	19G1,0	13,6	335
SB1382	21G1,0	14,3	365
SB1383	25G1,0	16,5	455
SB1384	27G1,0	16,5	465
SB1385	30G1,0	17,0	505
SB1386	34G1,0	18,4	590
SB1387	37G1,0	18,4	610
SB1388	40G1,0	19,1	655
SB1389	42G1,0	20,5	700
SB1390	50G1,0	21,6	815
SB1391	56G1,0	22,2	885
SB1392	61G1,0	22,8	950
SB1393	2x1,5	7,1	88
SB1394	3G1,5	7,5	99
SB1395	3x1,5	7,5	99
SB1396	4G1,5	8,4	122
SB1397	4x1,5	8,4	122
SB1398	5G1,5	9,5	156
SB1399	5x1,5	9,5	156
SB1400	6G1,5	10,2	182
SB1401	6x1,5	10,2	182
SB1402	7G1,5	10,2	192
SB1403	7x1,5	10,2	192

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1404	8G1,5	11,0	220
SB1405	10G1,5	13,3	290
SB1406	10x1,5	13,3	290
SB1407	12G1,5	13,3	310
SB1408	12x1,5	13,3	310
SB1409	14G1,5	14,1	355
SB1410	16G1,5	14,9	410
SB1411	18G1,5	16,0	455
SB1412	19G1,5	16,0	465
SB1413	21G1,5	16,8	515
SB1414	25G1,5	19,1	620
SB1415	27G1,5	19,1	640
SB1416	30G1,5	19,8	700
SB1417	34G1,5	21,4	810
SB1418	37G1,5	21,4	840
SB1419	40G1,5	22,2	910
SB1420	42G1,5	23,9	970
SB1421	50G1,5	25,3	1140
SB1422	56G1,5	26,1	1240
SB1423	61G1,5	26,8	1330
SB1424	2x2,5	8,4	112
SB1425	3G2,5	9,3	144
SB1426	3x2,5	9,3	144
SB1427	4G2,5	10,1	180
SB1428	4x2,5	10,1	180
SB1429	5G2,5	11,0	216
SB1430	5x2,5	11,0	216
SB1431	6G2,5	12,1	265
SB1432	6x2,5	12,1	265
SB1433	7G2,5	12,1	280
SB1434	7x2,5	12,1	280
SB1435	10G2,5	16,2	430
SB1436	12G2,5	16,2	465
SB1437	12x2,5	16,2	465
SB1438	14G2,5	17,0	525
SB1439	16G2,5	17,9	590
SB1440	18G2,5	19,0	665
SB1441	21G2,5	19,9	750
SB1442	25G2,5	22,7	910
SB1443	30G2,5	23,5	1030
SB1444	34G2,5	25,7	1210
SB1445	37G2,5	25,7	1260
SB1446	42G2,5	28,9	1470
SB1447	50G2,5	30,2	1700
SB1448	2x4,0	10,3	170
SB1449	3G4,0	10,9	200
SB1450	3x4,0	10,9	200
SB1451	4G4,0	12,1	270
SB1452	5G4,0	13,2	325
SB1453	7G4,0	14,5	425
SB1454	10G4,0	19,5	645
SB1455	12G4,0	19,5	705

BIT 500[®]C FR

Flexible, highly flame retardant, screened control cables with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1456	2x2x0,5	7,7	80
SB1457	3x2x0,5	9,2	105
SB1458	4x2x0,5	9,9	125
SB1459	5x2x0,5	10,6	155
SB1460	6x2x0,5	11,0	165
SB1461	7x2x0,5	12,4	195
SB1462	8x2x0,5	12,9	210
SB1463	10x2x0,5	14,0	255
SB1464	12x2x0,5	14,9	290
SB1465	14x2x0,5	16,1	340
SB1466	16x2x0,5	17,2	385
SB1467	18x2x0,5	17,9	415
SB1468	20x2x0,5	18,6	455
SB1469	24x2x0,5	19,1	515
SB1470	2x2x0,75	8,6	102
SB1471	3x2x0,75	10,0	126
SB1472	4x2x0,75	10,7	152
SB1473	5x2x0,75	11,7	192
SB1474	6x2x0,75	12,1	205
SB1475	7x2x0,75	13,7	245
SB1476	8x2x0,75	14,3	270
SB1477	10x2x0,75	15,2	315
SB1478	12x2x0,75	16,6	375
SB1479	14x2x0,75	17,6	425
SB1480	16x2x0,75	19,0	490
SB1481	18x2x0,75	19,7	530
SB1482	20x2x0,75	20,3	570
SB1483	24x2x0,75	20,9	655
SB1484	2x2x1,0	9,5	126
SB1485	3x2x1,0	10,5	146
SB1486	4x2x1,0	11,6	182
SB1487	5x2x1,0	12,4	225
SB1488	6x2x1,0	12,8	240
SB1489	7x2x1,0	14,5	285

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1490	8x2x1,0	15,1	315
SB1491	10x2x1,0	16,6	385
SB1492	12x2x1,0	17,6	445
SB1493	14x2x1,0	18,9	510
SB1494	16x2x1,0	20,1	580
SB1495	18x2x1,0	21,0	625
SB1496	20x2x1,0	21,8	690
SB1497	24x2x1,0	22,4	790
SB1498	2x2x1,5	10,7	162
SB1499	3x2x1,5	12,2	196
SB1500	4x2x1,5	13,2	240
SB1501	5x2x1,5	14,4	300
SB1502	6x2x1,5	14,9	325
SB1503	7x2x1,5	17,0	395
SB1504	8x2x1,5	17,8	435
SB1505	10x2x1,5	19,2	525
SB1506	12x2x1,5	20,5	605
SB1507	14x2x1,5	21,9	695
SB1508	16x2x1,5	23,4	795
SB1509	18x2x1,5	24,8	885
SB1510	20x2x1,5	25,6	960
SB1511	24x2x1,5	26,3	1105
SB1512	2x2x2,5	12,7	230
SB1513	3x2x2,5	14,4	280
SB1514	4x2x2,5	16,1	355
SB1515	5x2x2,5	17,3	440
SB1516	6x2x2,5	17,9	480
SB1517	7x2x2,5	20,2	565
SB1518	8x2x2,5	21,1	625
SB1519	10x2x2,5	22,9	760
SB1520	12x2x2,5	24,4	880
SB1521	14x2x2,5	26,3	1030
SB1522	16x2x2,5	28,1	1175

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®](St) FR

Flexible, screened and highly flame retardant control cables with number coded conductors, rated 300/500 V



industrial application



internal application



EN 60332-1-2



EN 60332-3-24



oxygen index



high flexibility

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

fixed installation: 5 x Ø
flexible connections: 10 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

pairs twisted together or cores twisted together

Screen:

aluminum backed polyester tape with tinned copper drain wire underneath

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24 cat. C); colour: grey

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Common screen improves protection of transmitted signals against external electromagnetic field. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Insulation materials and conductor construction of BiT 500[®](St) FR cable enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0600	2x0,5	5,2	40	SB0630	2x0,75	5,6	48
SB0601	3G0,5	5,5	45	SB0631	3G0,75	5,9	54
SB0602	3x0,5	5,5	45	SB0632	3x0,75	5,9	54
SB0603	4G0,5	6,0	52	SB0633	4G0,75	6,5	66
SB0604	4x0,5	6,0	52	SB0634	4x0,75	6,5	66
SB0605	5G0,5	6,5	64	SB0635	5G0,75	7,2	81
SB0606	5x0,5	6,5	64	SB0636	5x0,75	7,2	81
SB0607	6G0,5	7,2	76	SB0637	6G0,75	7,8	96
SB0608	7G0,5	7,2	80	SB0638	6x0,75	7,8	96
SB0609	7x0,5	7,2	80	SB0639	7G0,75	7,8	102
SB0610	8G0,5	8,2	95	SB0640	7x0,75	7,8	102
SB0611	8x0,5	8,2	95	SB0641	8G0,75	9,2	126
SB0612	10G0,5	9,8	126	SB0642	8x0,75	9,2	126
SB0613	12G0,5	9,8	134	SB0643	10G0,75	10,6	159
SB0614	12x0,5	9,8	134	SB0644	12G0,75	10,6	168
SB0615	14G0,5	10,2	150	SB0645	12x0,75	10,6	168
SB0616	16G0,5	10,8	168	SB0646	14G0,75	11,3	195
SB0617	18G0,5	11,5	192	SB0647	16G0,75	11,9	220
SB0618	19G0,5	11,5	196	SB0648	18G0,75	12,5	245
SB0619	21G0,5	12,0	215	SB0649	19G0,75	12,5	250
SB0620	25G0,5	13,7	260	SB0650	21G0,75	13,1	275
SB0621	27G0,5	13,7	270	SB0651	25G0,75	14,9	335
SB0622	30G0,5	14,2	295	SB0652	27G0,75	14,9	345
SB0623	34G0,5	15,2	335	SB0653	30G0,75	15,4	375
SB0624	37G0,5	15,2	345	SB0654	34G0,75	17,0	450
SB0625	40G0,5	16,1	390	SB0655	37G0,75	17,0	465
SB0626	42G0,5	17,3	415	SB0656	40G0,75	17,6	500
SB0627	50G0,5	18,2	485	SB0657	42G0,75	19,1	540
SB0628	56G0,5	18,8	525	SB0658	50G0,75	19,9	620
SB0629	61G0,5	19,3	560	SB0659	56G0,75	20,5	675

BiT 500[®](St) FR

Flexible, screened and highly flame retardant control cables with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0660	61G0,75	21,1	725
SB0661	2x1,0	5,9	54
SB0662	3G1,0	6,3	64
SB0663	3x1,0	6,3	64
SB0664	4G1,0	7,0	80
SB0665	4x1,0	7,0	80
SB0666	5G1,0	7,6	98
SB0667	5x1,0	7,6	98
SB0668	6G1,0	8,2	114
SB0669	6x1,0	8,2	114
SB0670	7G1,0	8,2	120
SB0671	7x1,0	8,2	120
SB0672	8G1,0	9,7	148
SB0673	10G1,0	11,5	194
SB0674	10x1,0	11,5	194
SB0675	12G1,0	11,5	210
SB0676	12x1,0	11,5	210
SB0677	14G1,0	12,0	235
SB0678	16G1,0	12,6	265
SB0679	18G1,0	13,2	295
SB0680	18x1,0	13,2	295
SB0681	19G1,0	13,2	300
SB0682	21G1,0	14,1	335
SB0683	25G1,0	16,3	415
SB0684	27G1,0	16,3	430
SB0685	30G1,0	16,8	470
SB0686	34G1,0	18,2	550
SB0687	37G1,0	18,2	565
SB0688	40G1,0	18,9	610
SB0689	42G1,0	20,3	650
SB0690	50G1,0	21,2	750
SB0691	56G1,0	22,0	830
SB0692	61G1,0	22,6	890
SB0693	2x1,5	6,9	74
SB0694	3G1,5	7,3	86
SB0695	3x1,5	7,3	86
SB0696	4G1,5	8,0	108
SB0697	4x1,5	8,0	108
SB0698	5G1,5	9,1	138
SB0699	5x1,5	9,1	138
SB0700	6G1,5	9,8	162
SB0701	6x1,5	9,8	162
SB0702	7G1,5	9,8	172
SB0703	7x1,5	9,8	172
SB0704	8G1,5	11,0	200
SB0705	10G1,5	13,1	260
SB0706	10x1,5	13,1	260
SB0707	12G1,5	13,1	280

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0708	12x1,5	13,1	280
SB0709	14G1,5	13,9	325
SB0710	16G1,5	14,7	365
SB0711	18G1,5	15,4	410
SB0712	19G1,5	15,4	420
SB0713	21G1,5	16,6	475
SB0714	25G1,5	18,9	575
SB0715	27G1,5	18,9	595
SB0716	30G1,5	19,6	650
SB0717	34G1,5	21,0	750
SB0718	37G1,5	21,0	780
SB0719	40G1,5	22,0	850
SB0720	42G1,5	23,7	910
SB0721	50G1,5	25,1	1080
SB0722	56G1,5	25,9	1180
SB0723	61G1,5	26,6	1260
SB0724	2x2,5	8,0	96
SB0725	3G2,5	8,5	118
SB0726	3x2,5	8,5	118
SB0727	4G2,5	9,7	160
SB0728	4x2,5	9,7	160
SB0729	5G2,5	10,6	192
SB0730	5x2,5	10,6	192
SB0731	6G2,5	11,9	240
SB0732	6x2,5	11,9	240
SB0733	7G2,5	11,9	255
SB0734	7x2,5	11,9	255
SB0735	10G2,5	16,0	395
SB0736	12G2,5	16,0	430
SB0737	12x2,5	16,0	430
SB0738	14G2,5	16,8	485
SB0739	16G2,5	17,7	550
SB0740	18G2,5	18,8	625
SB0741	21G2,5	19,7	705
SB0742	25G2,5	22,5	855
SB0743	30G2,5	23,3	970
SB0744	34G2,5	25,5	1150
SB0745	37G2,5	25,5	1190
SB0746	42G2,5	28,5	1370
SB0747	50G2,5	29,8	1590
SB0748	2x4,0	9,9	150
SB0749	3G4,0	10,5	190
SB0750	3x4,0	10,5	190
SB0751	4G4,0	11,7	240
SB0752	5G4,0	12,7	300
SB0753	7G4,0	14,0	390
SB0754	10G4,0	18,9	600
SB0755	12G4,0	18,9	660

BiT 500[®] (St) FR

Flexible, screened and highly flame retardant control cables with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0756	2x2x0,5	7,7	70
SB0757	3x2x0,5	8,6	80
SB0758	4x2x0,5	9,7	106
SB0759	5x2x0,5	10,4	130
SB0760	6x2x0,5	10,8	138
SB0761	7x2x0,5	12,2	166
SB0762	8x2x0,5	12,7	182
SB0763	10x2x0,5	13,8	220
SB0764	12x2x0,5	14,7	255
SB0765	14x2x0,5	15,5	290
SB0766	16x2x0,5	17,0	345
SB0767	18x2x0,5	17,7	370
SB0768	20x2x0,5	18,4	410
SB0769	24x2x0,5	18,9	470
SB0770	2x2x0,75	8,4	86
SB0771	3x2x0,75	9,8	106
SB0772	4x2x0,75	10,5	130
SB0773	5x2x0,75	11,5	168
SB0774	6x2x0,75	11,9	180
SB0775	7x2x0,75	13,3	205
SB0776	8x2x0,75	14,1	235
SB0777	10x2x0,75	15,0	280
SB0778	12x2x0,75	16,4	340
SB0779	14x2x0,75	17,4	380
SB0780	16x2x0,75	18,8	445
SB0781	18x2x0,75	19,5	480
SB0782	20x2x0,75	20,1	520
SB0783	24x2x0,75	20,7	600
SB0784	2x2x1,0	9,3	110
SB0785	3x2x1,0	10,3	126
SB0786	4x2x1,0	11,2	154
SB0787	5x2x1,0	12,2	196
SB0788	6x2x1,0	12,6	214

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0789	7x2x1,0	14,3	255
SB0790	8x2x1,0	14,9	280
SB0791	10x2x1,0	16,4	350
SB0792	12x2x1,0	17,4	405
SB0793	14x2x1,0	18,7	465
SB0794	16x2x1,0	19,9	530
SB0795	18x2x1,0	20,8	575
SB0796	20x2x1,0	21,6	635
SB0797	24x2x1,0	22,2	735
SB0798	2x2x1,5	10,5	142
SB0799	3x2x1,5	12,0	172
SB0800	4x2x1,5	13,0	210
SB0801	5x2x1,5	14,2	270
SB0802	6x2x1,5	14,7	295
SB0803	7x2x1,5	16,8	355
SB0804	8x2x1,5	17,6	395
SB0805	10x2x1,5	19,0	480
SB0806	12x2x1,5	20,3	555
SB0807	14x2x1,5	21,7	645
SB0808	16x2x1,5	23,2	735
SB0809	18x2x1,5	24,2	800
SB0810	20x2x1,5	25,4	895
SB0811	24x2x1,5	26,1	1035
SB0812	2x2x2,5	12,5	205
SB0813	3x2x2,5	14,2	245
SB0814	4x2x2,5	15,5	305
SB0815	5x2x2,5	17,1	400
SB0816	6x2x2,5	17,7	440
SB0817	7x2x2,5	20,0	515
SB0818	8x2x2,5	20,9	575
SB0819	10x2x2,5	22,7	705
SB0820	12x2x2,5	24,2	820
SB0821	14x2x2,5	26,1	960
SB0822	16x2x2,5	27,9	1100

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x - cables without green/yellow earthing conductor

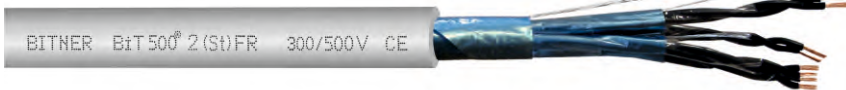
Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®] 2(St) FR

RoHS 2015/863/EU
 CE
 LVD 2014/35/EU
 CPR
 CPR 305/2011
 24 months warranty

Control cables 300/500 V

Flexible, individually and collectively screened paired control cables, highly flame retardant, with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

fixed installation: 5 x Ø
 flexible connections: 10 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors

Core arrangement:

twisted screened pairs

Individual screen:

aluminum backed polyester tape with tinned copper drain wire underneath each pair

Collective screen:

aluminum backed polyester tape with tinned copper drain wire

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24 cat. C); colour: grey

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Individual screening of pairs decreases signal interferences from adjacent pairs. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Insulation compounds and conductor construction of BiT 500[®] 2(St) FR cable enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0850	2x2x0,5	7,7	82
SB0851	3x2x0,5	8,6	96
SB0852	4x2x0,5	9,7	128
SB0853	5x2x0,5	10,4	158
SB0854	6x2x0,5	10,8	172
SB0855	7x2x0,5	12,2	205
SB0856	8x2x0,5	12,7	230
SB0857	10x2x0,5	13,8	280
SB0858	12x2x0,5	14,7	325
SB0859	14x2x0,5	15,5	365
SB0860	16x2x0,5	17,0	435
SB0861	18x2x0,5	17,7	470
SB0862	20x2x0,5	18,4	525
SB0863	24x2x0,5	18,9	605
SB0864	2x2x0,75	8,4	98
SB0865	3x2x0,75	9,8	124
SB0866	4x2x0,75	10,5	154
SB0867	5x2x0,75	11,5	196
SB0868	6x2x0,75	11,9	215
SB0869	7x2x0,75	13,3	250
SB0870	8x2x0,75	14,1	285
SB0871	10x2x0,75	15,0	340
SB0872	12x2x0,75	16,4	410
SB0873	14x2x0,75	17,4	465

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0874	16x2x0,75	18,8	540
SB0875	18x2x0,75	19,5	590
SB0876	20x2x0,75	20,1	640
SB0877	24x2x0,75	20,7	745
SB0878	2x2x1,0	9,3	126
SB0879	3x2x1,0	10,3	150
SB0880	4x2x1,0	11,2	186
SB0881	5x2x1,0	12,2	240
SB0882	6x2x1,0	12,6	265
SB0883	7x2x1,0	14,3	310
SB0884	8x2x1,0	14,9	345
SB0885	10x2x1,0	16,4	430
SB0886	12x2x1,0	17,4	500
SB0887	14x2x1,0	18,7	580
SB0888	16x2x1,0	19,9	660
SB0889	18x2x1,0	20,8	720
SB0890	20x2x1,0	21,6	800
SB0891	24x2x1,0	22,2	930
SB0892	2x2x1,5	10,5	158
SB0893	3x2x1,5	12,0	196
SB0894	4x2x1,5	13,0	245
SB0895	5x2x1,5	14,2	310
SB0896	6x2x1,5	14,7	345
SB0897	7x2x1,5	16,8	415

BiT 500[®] 2(St) FR

Flexible, paired control cables, individually and collectively screened, highly flame retardant, with number coded conductors, rated 300/500 V

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0898	8x2x1,5	17,6	460
SB0899	10x2x1,5	19,0	560
SB0900	12x2x1,5	20,3	655
SB0901	14x2x1,5	21,7	760
SB0902	16x2x1,5	23,2	870
SB0903	18x2x1,5	24,2	945
SB0904	20x2x1,5	25,4	1060
SB0905	24x2x1,5	26,1	1240
SB0906	2x2x2,5	12,5	220
SB0907	3x2x2,5	14,2	275

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0908	4x2x2,5	15,5	340
SB0909	5x2x2,5	17,1	445
SB0910	6x2x2,5	17,7	490
SB0911	7x2x2,5	20,0	580
SB0912	8x2x2,5	20,9	645
SB0913	10x2x2,5	22,7	790
SB0914	12x2x2,5	24,2	925
SB0915	14x2x2,5	26,1	1090
SB0916	16x2x2,5	27,9	1240

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

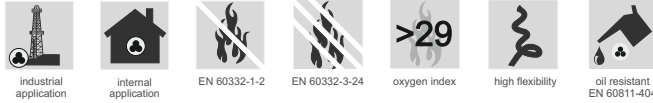
Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] BiT 500[®] OR



Control cables 300/500 V

Flexible, highly flame retardant, oil resistant control cables with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C
occasional flexing: -15 °C* to 80 °C

Electrical parameters:

Operating voltage: $U_i/U = 300/500$ V
Test voltage (50Hz): 3000 V
Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: $7,5 \times \varnothing$
fixed installation: $4 \times \varnothing$

**minimum temperature for occasional flexing with bending radius not smaller than $15 \times D$. Bending test at low temperature (-15 °C acc. to EN 60811-504).*

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Outer sheath:

PVC compound, oil resistant (EN 60811-404), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24 cat. C); colour: grey

Application:

Flexible power and control cables designed for operation in control and protective devices as well as in control circuits. Suitable also for power supply to low power portable and mobile devices. Designed especially for installations in industrial areas with increased fire safety requirements (limited flame propagation) and in places exposed to oil or industrial coolants. Cables are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. High flexibility of BIT 500[®]OR cable simplifies installation and compounds used enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0001	2x0,5	5,0	37
SB0002	3G0,5	5,3	44
SB0003	3x0,5	5,3	44
SB0004	4G0,5	5,8	51
SB0005	4x0,5	5,8	51
SB0006	5G0,5	6,3	62
SB0007	5x0,5	6,3	62
SB0008	6G0,5	7,1	75
SB0009	7G0,5	7,1	80
SB0010	7x0,5	7,1	80
SB0011	8G0,5	7,7	95
SB0012	8x0,5	7,7	95
SB0013	10G0,5	9,4	126
SB0014	12G0,5	9,4	135
SB0015	12x0,5	9,4	135
SB0016	14G0,5	9,8	150
SB0017	16G0,5	10,4	169
SB0018	18G0,5	10,9	169
SB0019	19G0,5	10,9	189
SB0020	21G0,5	11,6	213
SB0021	25G0,5	13,1	255
SB0022	27G0,5	13,1	264
SB0023	30G0,5	13,8	294
SB0024	34G0,5	14,8	335
SB0025	37G0,5	14,8	350

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0026	40G0,5	15,3	375
SB0027	42G0,5	16,9	420
SB0028	50G0,5	17,6	475
SB0029	56G0,5	18,4	525
SB0030	61G0,5	18,9	560
SB0031	2x0,75	5,4	45
SB0032	3G0,75	5,7	55
SB0033	3x0,75	5,7	55
SB0034	4G0,75	6,3	64
SB0035	4x0,75	6,3	64
SB0036	5G0,75	7,0	82
SB0037	5x0,75	7,0	82
SB0038	6G0,75	7,6	96
SB0039	6x0,75	7,6	96
SB0040	7G0,75	7,6	104
SB0041	7x0,75	7,6	104
SB0042	8G0,75	8,4	120
SB0043	8x0,75	8,4	120
SB0044	10G0,75	10,2	160
SB0045	12G0,75	10,2	170
SB0046	12x0,75	10,2	170
SB0047	14G0,75	10,7	190
SB0048	16G0,75	11,5	220
SB0049	18G0,75	12,1	245
SB0050	19G0,75	12,1	250

BiT 500[®] OR

Flexible, highly flame retardant, oil resistant control cables with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0051	21G0,75	12,7	275
SB0052	25G0,75	14,5	335
SB0053	27G0,75	14,5	345
SB0054	30G0,75	15,0	380
SB0055	34G0,75	16,6	450
SB0056	37G0,75	16,6	467
SB0057	40G0,75	17,2	500
SB0058	42G0,75	18,7	550
SB0059	50G0,75	19,5	625
SB0060	56G0,75	20,1	680
SB0061	61G0,75	20,7	730
SB0062	2x1,0	5,7	52
SB0063	3G1,0	6,1	64
SB0064	3x1,0	6,1	64
SB0065	4G1,0	6,8	80
SB0066	4x1,0	6,8	80
SB0067	5G1,0	7,4	96
SB0068	5x1,0	7,4	96
SB0069	6G1,0	8,1	114
SB0070	6x1,0	8,1	114
SB0071	7G1,0	8,1	122
SB0072	7x1,0	8,1	122
SB0073	8G1,0	9,3	150
SB0074	10G1,0	10,9	190
SB0075	10x1,0	10,9	190
SB0076	12G1,0	10,9	205
SB0077	12x1,0	10,9	205
SB0078	14G1,0	11,6	235
SB0079	16G1,0	12,2	265
SB0080	18G1,0	12,8	295
SB0081	18x1,0	12,8	295
SB0082	19G1,0	12,8	300
SB0083	21G1,0	13,7	335
SB0084	25G1,0	15,5	405
SB0085	27G1,0	15,5	415
SB0086	30G1,0	16,4	470
SB0087	34G1,0	17,6	540
SB0088	37G1,0	17,6	560
SB0089	40G1,0	18,5	610
SB0090	42G1,0	19,9	660
SB0091	50G1,0	20,8	755
SB0092	56G1,0	21,6	835
SB0093	61G1,0	22,2	895
SB0094	2x1,5	6,7	72
SB0095	3G1,5	7,1	88
SB0096	3x1,5	7,1	88
SB0097	4G1,5	7,8	109
SB0098	4x1,5	7,8	109
SB0099	5G1,5	8,5	131
SB0100	5x1,5	8,5	131
SB0101	6G1,5	9,6	163
SB0102	6x1,5	9,6	163
SB0103	7G1,5	9,6	172

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0104	7x1,5	9,6	172
SB0105	8G1,5	10,6	205
SB0106	10G1,5	12,7	265
SB0107	10x1,5	12,7	265
SB0108	12G1,5	12,7	285
SB0109	12x1,5	12,7	285
SB0110	14G1,5	13,5	330
SB0111	16G1,5	14,3	370
SB0112	18G1,5	15,0	410
SB0113	19G1,5	15,0	420
SB0114	21G1,5	16,2	483
SB0115	25G1,5	18,5	590
SB0116	27G1,5	18,5	610
SB0117	30G1,5	19,2	670
SB0118	34G1,5	20,6	765
SB0119	37G1,5	20,6	790
SB0120	40G1,5	21,6	860
SB0121	42G1,5	23,3	924
SB0122	50G1,5	24,7	1090
SB0123	56G1,5	25,5	1190
SB0124	61G1,5	26,2	1270
SB0125	2x2,5	7,8	102
SB0126	3G2,5	8,3	128
SB0127	3x2,5	8,3	128
SB0128	4G2,5	9,5	168
SB0129	4x2,5	9,5	168
SB0130	5G2,5	10,4	200
SB0131	5x2,5	10,4	200
SB0132	6x2,5	11,5	245
SB0133	6G2,5	11,5	245
SB0134	7G2,5	11,5	260
SB0135	7x2,5	11,5	260
SB0136	10G2,5	15,2	395
SB0137	12G2,5	15,2	425
SB0138	12x2,5	15,2	425
SB0139	14G2,5	16,4	495
SB0140	16G2,5	17,3	560
SB0141	18G2,5	18,4	635
SB0142	21G2,5	19,3	715
SB0143	25G2,5	22,1	870
SB0144	30G2,5	22,9	985
SB0145	34G2,5	25,1	1160
SB0146	37G2,5	25,1	1210
SB0147	42G2,5	28,1	1400
SB0148	50G2,5	29,4	1620
SB0149	2x4,0	9,3	152
SB0150	3G4,0	10,3	202
SB0151	3x4,0	10,3	202
SB0152	4G4,0	11,3	255
SB0153	5G4,0	12,6	310
SB0154	7G4,0	13,7	395
SB0155	10G4,0	18,7	615
SB0156	12G4,0	18,7	675

BIT 500[®]OR

Flexible, highly flame retardant, oil resistant control cables with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0157	2x2x0,5	7,3	64
SB0158	3x2x0,5	8,2	70
SB0159	4x2x0,5	9,3	100
SB0160	5x2x0,5	10,0	120
SB0161	6x2x0,5	10,4	130
SB0162	7x2x0,5	11,8	156
SB0163	8x2x0,5	12,3	172
SB0164	10x2x0,5	13,2	205
SB0165	12x2x0,5	14,3	245
SB0166	14x2x0,5	15,1	275
SB0167	16x2x0,5	16,6	335
SB0168	18x2x0,5	17,3	360
SB0169	20x2x0,5	17,8	395
SB0170	24x2x0,5	18,5	455
SB0171	2x2x0,75	8,0	78
SB0172	3x2x0,75	9,4	100
SB0173	4x2x0,75	10,1	122
SB0174	5x2x0,75	10,9	152
SB0175	6x2x0,75	11,5	170
SB0176	7x2x0,75	12,9	196
SB0177	8x2x0,75	13,7	225
SB0178	10x2x0,75	14,6	270
SB0179	12x2x0,75	16,0	325
SB0180	14x2x0,75	17,0	370
SB0181	16x2x0,75	18,4	435
SB0182	18x2x0,75	19,1	470
SB0183	20x2x0,75	19,7	515
SB0184	24x2x0,75	20,3	595
SB0185	2x2x1,0	8,5	92
SB0186	3x2x1,0	9,9	116
SB0187	4x2x1,0	10,8	145
SB0188	5x2x1,0	11,8	184
SB0189	6x2x1,0	12,2	202

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB0190	7x2x1,0	13,9	240
SB0191	8x2x1,0	14,5	270
SB0192	10x2x1,0	15,6	320
SB0193	12x2x1,0	17,0	390
SB0194	14x2x1,0	18,3	450
SB0195	16x2x1,0	19,5	515
SB0196	18x2x1,0	20,4	560
SB0197	20x2x1,0	21,0	615
SB0198	24x2x1,0	21,8	725
SB0199	2x2x1,5	10,1	132
SB0200	3x2x1,5	11,6	167
SB0201	4x2x1,5	12,6	198
SB0202	5x2x1,5	13,8	258
SB0203	6x2x1,5	14,3	280
SB0204	7x2x1,5	16,4	340
SB0205	8x2x1,5	17,2	380
SB0206	10x2x1,5	18,6	465
SB0207	12x2x1,5	19,9	550
SB0208	14x2x1,5	21,1	625
SB0209	16x2x1,5	22,8	725
SB0210	18x2x1,5	23,8	780
SB0211	20x2x1,5	25,0	885
SB0212	24x2x1,5	25,7	1030
SB0213	2x2x2,5	12,1	195
SB0214	3x2x2,5	13,8	235
SB0215	4x2x2,5	15,1	305
SB0216	5x2x2,5	16,7	385
SB0217	6x2x2,5	17,3	425
SB0218	7x2x2,5	19,6	505
SB0219	8x2x2,5	20,5	560
SB0220	10x2x2,5	22,3	695
SB0221	12x2x2,5	23,8	810
SB0222	14x2x2,5	25,7	945
SB0223	16x2x2,5	27,5	1010

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®] BLACK

Flexible control cables for outdoor applications with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C
occasional flexing: -15 °C* to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V
Test voltage (50 Hz): 3000 V
Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: $10 \times \varnothing$
fixed installation: $5 \times \varnothing$

*minimum temperature for occasional flexing with bending radius not smaller than $15 \times \varnothing$. Bending test at low temperature (-15 °C acc. to EN 60811-504).

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2), UV resistant, colour: black

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Insulation, sheathing compounds and conductor construction of BiT 500[®]BLACK cables enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S58300	2x0,5	6,8	62
S58301	3G0,5	7,1	70
S58302	3x0,5	7,1	70
S58303	4G0,5	7,6	80
S58304	4x0,5	7,6	80
S58305	5G0,5	8,1	92
S58306	5x0,5	8,1	92
S58307	6G0,5	8,6	105
S58308	7G0,5	8,6	110
S58309	7x0,5	8,6	110
S58310	8G0,5	9,3	125
S58311	8x0,5	9,3	125
S58312	10G0,5	10,6	155
S58313	12G0,5	10,6	165
S58314	12x0,5	10,6	165
S58315	14G0,5	11,0	180
S58316	16G0,5	11,6	200
S58317	18G0,5	12,1	220
S58318	19G0,5	12,1	220
S58320	21G0,5	12,6	240
S58321	25G0,5	14,1	285
S58408	27G0,5	14,1	295
S58322	30G0,5	14,6	320
S58409	34G0,5	15,6	365
S58410	37G0,5	15,6	375
S58411	40G0,5	16,1	400

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S58412	42G0,5	17,9	455
S58413	50G0,5	18,6	515
S58414	56G0,5	19,4	570
S58415	61G0,5	19,9	605
S58324	2x0,75	7,2	70
S58325	3G0,75	7,5	82
S58326	3x0,75	7,5	82
S58327	4G0,75	8,1	94
S58328	4x0,75	8,1	94
S58329	5G0,75	8,6	110
S58330	5x0,75	8,6	110
S58331	6G0,75	9,2	126
S58332	6x0,75	9,2	126
S58333	7G0,75	9,2	132
S58334	7x0,75	9,2	132
S58335	8G0,75	10,0	152
S58336	8x0,75	10,0	152
S58337	10G0,75	11,4	188
S58338	12G0,75	11,4	200
S58339	12x0,75	11,4	200
S58340	14G0,75	11,9	225
S58341	16G0,75	12,5	250
S58342	18G0,75	13,1	275
S58343	19G0,75	13,1	280
S58345	21G0,75	13,7	305
S58346	25G0,75	15,3	365

BIT 500[®] BLACK

Flexible control cables for outdoor applications with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S58416	27G0,75	15,3	375
S58417	30G0,75	15,8	405
S58418	34G0,75	17,6	490
S58419	37G0,75	17,6	505
S58420	40G0,75	18,2	540
S58421	42G0,75	19,7	590
S58422	50G0,75	20,5	670
S58423	56G0,75	21,1	725
S58424	61G0,75	21,7	775
S58347	2x1,0	7,5	80
S58348	3G1,0	7,9	92
S58349	3x1,0	7,9	92
S58350	4G1,0	8,4	108
S58351	4x1,0	8,4	108
S58352	5G1,0	9,0	126
S58353	5x1,0	9,0	126
S58354	6G1,0	9,6	146
S58355	6x1,0	9,6	146
S58356	7G1,0	9,6	152
S58357	7x1,0	9,6	152
S58358	8G1,0	10,5	155
S58359	10G1,0	12,1	220
S58360	10x1,0	12,1	220
S58361	12G1,0	12,1	235
S58362	12x1,0	12,1	235
S58363	14G1,0	12,6	260
S58364	16G1,0	13,2	295
S58365	18G1,0	13,8	325
S58366	18x1,0	13,8	325
S58367	19G1,0	13,8	330
S58370	21G1,0	14,5	360
S58371	25G1,0	16,3	430
S58425	27G1,0	16,3	445
S58372	30G1,0	17,4	510
S58373	34G1,0	18,6	580
S58374	37G1,0	18,6	600
S58375	40G1,0	19,5	655
S58376	42G1,0	20,9	705
S58377	50G1,0	21,8	805
S58378	56G1,0	22,8	895
S58379	61G1,0	23,4	955
S58380	2x1,5	8,3	100
S58381	3G1,5	8,7	118
S58382	3x1,5	8,7	118
S58383	4G1,5	9,4	142
S58384	4x1,5	9,4	142
S58385	5G1,5	10,1	166
S58386	5x1,5	10,1	166
S58387	6G1,5	10,8	190
S58426	6x1,5	10,8	190
S58388	7G1,5	10,8	200
S58389	7x1,5	10,8	200
S58390	8G1,5	11,8	235
S58391	10G1,5	13,7	295
S58427	10x1,5	13,7	295
S58392	12G1,5	13,7	315
S58393	12x1,5	13,7	315
S58428	14G1,5	14,3	355
S58429	16G1,5	15,1	395
S58430	18G1,5	15,8	440
S58431	19G1,5	15,8	450
S58432	21G1,5	17,2	515

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S58433	25G1,5	19,5	625
S58434	27G1,5	19,5	645
S58435	30G1,5	20,2	705
S58436	34G1,5	21,6	805
S58437	37G1,5	21,6	835
S58438	40G1,5	22,8	920
S58439	42G1,5	24,5	985
S58440	50G1,5	26,1	1170
S58441	56G1,5	26,9	1270
S58442	61G1,5	27,6	1360
S58394	2x2,5	9,4	134
S58395	3G2,5	9,9	160
S58396	3x2,5	9,9	160
S58397	4G2,5	10,7	194
S58398	4x2,5	10,7	194
S58399	5G2,5	11,6	230
S58400	5x2,5	11,6	230
S58401	6G2,5	12,5	270
S58443	6x2,5	12,5	270
S58402	7G2,5	12,5	285
S58403	7x2,5	12,5	285
S58405	10G2,5	16,0	420
S58406	12G2,5	16,0	450
S58407	12x2,5	16,0	450
S58444	14G2,5	17,4	535
S58445	16G2,5	18,3	600
S58446	18G2,5	19,4	675
S58447	21G2,5	20,3	760
S58448	25G2,5	23,3	930
S58449	30G2,5	24,1	1050
S58450	34G2,5	26,5	1240
S58451	37G2,5	26,5	1290
S58452	42G2,5	29,5	1490
S58453	50G2,5	30,8	1710
S58454	2x4,0	11,1	194
S58455	3G4,0	11,7	240
S58456	3x4,0	11,7	240
S58457	4G4,0	12,8	290
S58458	5G4,0	13,9	350
S58459	7G4,0	15,0	435
S58460	10G4,0	20,3	680
S58461	12G4,0	20,3	740
S58462	2x6,0	11,7	240
S58463	3G6,0	12,4	300
S58464	3x6,0	12,4	300
S58465	4G6,0	13,6	380
S58466	5G6,0	14,7	455
S58467	7G6,0	15,9	575
S58468	2x10	13,9	365
S58469	3G10	14,7	460
S58470	3x10	14,7	460
S58471	4G10	16,9	605
S58472	5G10	18,3	730
S58473	7G10	20,0	940
S58474	2x16	15,7	505
S58475	3G16	17,3	675
S58476	3x16	17,3	675
S58477	4G16	19,3	865
S58478	5G16	20,9	1050
S58479	2x25	20,1	750
S58480	3G25	21,3	1040
S58481	3x25	21,3	1040
S58482	4G25	24,1	1340

BiT 500[®] BLACK

Flexible control cables for outdoor applications with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S58483	5G25	26,7	1650
S58484	2x35	22,5	980
S58485	3G35	23,9	1350
S58486	3x35	23,9	1350
S58487	4G35	27,2	1750
S58488	5G35	29,4	2110
S58489	2x50	27,1	1490
S58490	3G50	28,8	1940

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S58491	3x50	28,8	1940
S58492	4G50	32,3	2480
S58493	5G50	35,0	3100
S58494	2x70	30,7	2030
S58495	3G70	32,9	2080
S58496	3x70	32,9	2080
S58497	4G70	37,1	3470
S58498	5G70	40,5	4240

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59390	2x2x0,5	8,9	94
S59391	3x2x0,5	9,8	106
S59392	4x2x0,5	10,5	126
S59393	5x2x0,5	11,2	152
S59394	6x2x0,5	11,6	160
S59395	7x2x0,5	12,8	184
S59396	8x2x0,5	13,3	205
S59397	10x2x0,5	14,2	240
S59398	12x2x0,5	15,1	270
S59399	14x2x0,5	15,9	305
S59400	16x2x0,5	17,6	375
S59401	18x2x0,5	18,3	400
S59402	20x2x0,5	18,8	430
S59403	24x2x0,5	19,5	500
S59404	2x2x0,75	9,6	110
S59405	3x2x0,75	10,6	130
S59406	4x2x0,75	11,3	155
S59407	5x2x0,75	12,1	185
S59408	6x2x0,75	12,5	200
S59409	7x2x0,75	13,9	230
S59410	8x2x0,75	14,5	250
S59411	10x2x0,75	15,4	295
S59412	12x2x0,75	17,0	365
S59413	14x2x0,75	18,0	410
S59414	16x2x0,75	19,4	475
S59415	18x2x0,75	20,1	515
S59416	20x2x0,75	20,7	555
S59417	24x2x0,75	21,3	635
S59418	2x2x1,0	10,1	128
S59419	3x2x1,0	11,1	144
S59420	4x2x1,0	12,0	174
S59421	5x2x1,0	12,8	215
S59422	6x2x1,0	13,2	235
S59423	7x2x1,0	14,7	270

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59424	8x2x1,0	15,3	295
S59425	10x2x1,0	16,4	350
S59426	12x2x1,0	18,0	430
S59427	14x2x1,0	19,3	495
S59428	16x2x1,0	20,5	565
S59429	18x2x1,0	21,4	610
S59430	20x2x1,0	22,0	660
S59431	24x2x1,0	23,0	780
S59432	2x2x1,5	11,3	162
S59433	3x2x1,5	12,6	188
S59434	4x2x1,5	13,6	230
S59435	5x2x1,5	14,6	285
S59436	6x2x1,5	15,1	310
S59437	7x2x1,5	17,4	380
S59438	8x2x1,5	18,2	420
S59439	10x2x1,5	19,6	510
S59440	12x2x1,5	20,9	590
S59441	14x2x1,5	22,1	670
S59442	16x2x1,5	24,0	785
S59443	18x2x1,5	25,0	850
S59444	20x2x1,5	26,4	965
S59445	24x2x1,5	27,1	1110
S59446	2x2x2,5	13,1	225
S59447	3x2x2,5	14,6	260
S59448	4x2x2,5	15,9	325
S59449	5x2x2,5	17,7	430
S59450	6x2x2,5	18,3	470
S59451	7x2x2,5	20,6	550
S59452	8x2x2,5	21,5	610
S59453	10x2x2,5	23,5	750
S59454	12x2x2,5	25,0	875
S59455	14x2x2,5	27,1	1030
S59456	16x2x2,5	28,9	1180

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserve the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®]C BLACK



Control cables 300/500 V

Flexible, screened control cables for outdoor applications, with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_i/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 5 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Screen:

inven copper wire braid, coverage ≥85%

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2), UV resistant; colour: black

Application:

Flexible power and control cables designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field (screen attenuation ca. 50 dB). Cables are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Insulation, sheathing compounds and conductor construction of BiT 500°C BLACK cables enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3170	2x0,5	7,2	72
SB3171	3G0,5	7,5	76
SB3172	3x0,5	7,5	76
SB3173	4G0,5	8,0	88
SB3174	4x0,5	8,0	88
SB3175	5G0,5	8,5	102
SB3176	5x0,5	8,5	102
SB3177	6G0,5	9,0	114
SB3178	7G0,5	9,0	118
SB3179	7x0,5	9,0	118
SB3180	8G0,5	9,9	144
SB3181	8x0,5	9,9	144
SB3182	10G0,5	11,2	176
SB3183	12G0,5	11,2	184
SB3184	12x0,5	11,2	184
SB3185	14G0,5	11,6	205
SB3186	16G0,5	12,2	225
SB3187	18G0,5	12,7	245
SB3188	19G0,5	12,5	250
SB3189	21G0,5	13,2	270
SB3190	25G0,5	14,7	320
SB3191	27G0,5	14,7	330

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3192	30G0,5	15,2	355
SB3193	34G0,5	16,2	400
SB3194	37G0,5	16,2	415
SB3195	40G0,5	17,3	465
SB3196	42G0,5	18,5	500
SB3197	50G0,5	19,2	570
SB3198	56G0,5	20,0	615
SB3199	61G0,5	20,5	655
SB3200	2x0,75	7,6	80
SB3201	3G0,75	7,9	88
SB3202	3x0,75	7,9	88
SB3203	4G0,75	8,5	102
SB3204	4x0,75	8,5	102
SB3205	5G0,75	9,0	120
SB3206	5x0,75	9,0	120
SB3207	6G0,75	9,8	146
SB3208	6x0,75	9,8	146
SB3209	7G0,75	9,8	150
SB3210	7x0,75	9,8	150
SB3211	8G0,75	10,6	170
SB3212	8x0,75	10,6	170
SB3213	10G0,75	12,0	215

BiT 500[®] C BLACK

Flexible, screened control cables for outdoor applications, with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3214	12G0,75	11,8	220
SB3215	12x0,75	11,8	220
SB3216	14G0,75	12,5	250
SB3217	16G0,75	13,1	275
SB3218	18G0,75	13,7	305
SB3219	19G0,75	13,7	310
SB3220	21G0,75	14,3	335
SB3221	25G0,75	15,9	400
SB3222	27G0,75	15,9	410
SB3223	30G0,75	17,0	465
SB3224	34G0,75	18,2	530
SB3225	37G0,75	18,2	545
SB3226	40G0,75	18,8	585
SB3227	42G0,75	20,3	635
SB3228	50G0,75	21,1	720
SB3229	56G0,75	21,7	775
SB3230	61G0,75	22,7	850
SB3231	2x1,0	7,9	88
SB3232	3G1,0	8,3	98
SB3233	3x1,0	8,3	98
SB3234	4G1,0	8,6	114
SB3235	4x1,0	8,6	114
SB3236	5G1,0	9,6	144
SB3237	5x1,0	9,6	144
SB3238	6G1,0	10,2	166
SB3239	6x1,0	10,2	166
SB3240	7G1,0	10,2	172
SB3241	7x1,0	10,2	172
SB3242	8G1,0	11,1	196
SB3243	10G1,0	12,5	245
SB3244	10x1,0	12,5	245
SB3245	12G1,0	12,5	260
SB3246	12x1,0	12,5	260
SB3247	14G1,0	13,2	290
SB3248	16G1,0	13,8	320
SB3249	18G1,0	14,4	355
SB3250	18x1,0	14,4	355
SB3251	19G1,0	14,4	360
SB3252	21G1,0	15,1	395
SB3253	25G1,0	17,5	495
SB3254	27G1,0	17,5	505
SB3255	30G1,0	18,0	550
SB3256	34G1,0	19,4	635
SB3257	37G1,0	19,4	655
SB3258	40G1,0	20,1	700
SB3259	42G1,0	21,5	750
SB3260	50G1,0	22,8	875
SB3261	56G1,0	23,4	945
SB3262	61G1,0	24,0	1010
SB3263	2x1,5	8,7	108
SB3264	3G1,5	9,1	122
SB3265	3x1,5	9,1	122
SB3266	4G1,5	10,0	156
SB3267	4x1,5	10,0	156
SB3268	5G1,5	10,7	184
SB3269	5x1,5	10,7	184

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3270	6G1,5	11,4	215
SB3271	6x1,5	11,4	215
SB3272	7G1,5	11,4	225
SB3273	7x1,5	11,4	225
SB3274	8G1,5	12,2	255
SB3275	10G1,5	14,3	320
SB3276	10x1,5	14,3	320
SB3277	12G1,5	14,3	340
SB3278	12x1,5	14,3	340
SB3279	14G1,5	14,9	380
SB3280	16G1,5	15,7	430
SB3281	18G1,5	17,0	495
SB3282	19G1,5	17,0	505
SB3283	21G1,5	17,8	555
SB3284	25G1,5	20,1	665
SB3285	27G1,5	20,1	685
SB3286	30G1,5	20,8	745
SB3287	34G1,5	22,6	875
SB3288	37G1,5	22,6	905
SB3289	40G1,5	23,4	970
SB3290	42G1,5	25,1	1040
SB3291	50G1,5	26,7	1230
SB3292	56G1,5	27,5	1330
SB3293	61G1,5	28,2	1420
SB3294	2x2,5	10,0	146
SB3295	3G2,5	10,5	172
SB3296	3x2,5	10,5	172
SB3297	4G2,5	11,3	210
SB3298	4x2,5	11,3	210
SB3299	5G2,5	12,2	250
SB3300	5x2,5	12,2	250
SB3301	6G2,5	13,1	290
SB3302	6 x2,5	13,1	290
SB3303	7G2,5	13,1	310
SB3304	7x2,5	13,1	310
SB3305	10G2,5	17,2	470
SB3306	12G2,5	17,2	500
SB3307	12x2,5	17,2	500
SB3308	14G2,5	18,0	565
SB3309	16G2,5	18,9	635
SB3310	18G2,5	20,0	715
SB3311	21G2,5	20,9	800
SB3312	25G2,5	23,9	975
SB3313	30G2,5	24,7	1100
SB3314	34G2,5	27,1	1300
SB3315	37G2,5	27,1	1340
SB3316	42G2,5	30,3	1570
SB3317	50G2,5	31,6	1800
SB3318	2x4,0	11,5	205
SB3319	3G4,0	12,1	235
SB3320	3x4,0	12,1	235
SB3321	4G4,0	13,1	300
SB3322	5G4,0	14,2	360
SB3323	7G4,0	15,3	450
SB3324	10G4,0	20,5	695
SB3325	12G4,0	20,5	755

BIT 500[®]C BLACK

Flexible, screened control cables for outdoor applications, with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3326	2x2x0,5	9,3	110
SB3327	3x2x0,5	10,4	134
SB3328	4x2x0,5	11,1	154
SB3329	5x2x0,5	11,8	184
SB3330	6x2x0,5	12,2	194
SB3331	7x2x0,5	13,4	225
SB3332	8x2x0,5	13,9	245
SB3333	10x2x0,5	14,8	280
SB3334	12x2x0,5	15,7	320
SB3335	14x2x0,5	17,1	380
SB3336	16x2x0,5	18,2	425
SB3337	18x2x0,5	18,9	455
SB3338	20x2x0,5	19,6	500
SB3339	24x2x0,5	20,1	560
SB3340	2x2x0,75	10,2	138
SB3341	3x2x0,75	11,2	156
SB3342	4x2x0,75	11,9	184
SB3343	5x2x0,75	12,7	225
SB3344	6x2x0,75	13,1	235
SB3345	7x2x0,75	14,5	270
SB3346	8x2x0,75	15,1	295
SB3347	10x2x0,75	16,0	345
SB3348	12x2x0,75	17,6	415
SB3349	14x2x0,75	18,6	465
SB3350	16x2x0,75	20,0	535
SB3351	18x2x0,75	20,7	575
SB3352	20x2x0,75	21,3	620
SB3353	24x2x0,75	21,9	705
SB3354	2x2x1,0	10,7	155
SB3355	3x2x1,0	11,7	180
SB3356	4x2x1,0	12,6	210
SB3357	5x2x1,0	13,4	255
SB3358	6x2x1,0	13,8	270
SB3359	7x2x1,0	15,3	315

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3360	8x2x1,0	15,9	345
SB3361	10x2x1,0	17,6	425
SB3362	12x2x1,0	18,6	485
SB3363	14x2x1,0	19,9	555
SB3364	16x2x1,0	21,1	625
SB3365	18x2x1,0	22,0	675
SB3366	20x2x1,0	23,0	750
SB3367	24x2x1,0	23,6	855
SB3368	2x2x1,5	11,9	194
SB3369	3x2x1,5	13,2	225
SB3370	4x2x1,5	14,2	270
SB3371	5x2x1,5	15,2	330
SB3372	6x2x1,5	15,7	355
SB3373	7x2x1,5	18,0	435
SB3374	8x2x1,5	18,8	480
SB3375	10x2x1,5	20,2	570
SB3376	12x2x1,5	21,5	655
SB3377	14x2x1,5	23,1	760
SB3378	16x2x1,5	24,6	860
SB3379	18x2x1,5	26,2	970
SB3380	20x2x1,5	27,0	1050
SB3381	24x2x1,5	27,7	1200
SB3382	2x2x2,5	13,7	260
SB3383	3x2x2,5	15,2	305
SB3384	4x2x2,5	17,1	395
SB3385	5x2x2,5	18,3	480
SB3386	6x2x2,5	18,9	525
SB3387	7x2x2,5	21,2	615
SB3388	8x2x2,5	22,1	680
SB3389	10x2x2,5	24,1	825
SB3390	12x2x2,5	25,6	950
SB3391	14x2x2,5	27,7	1120
SB3392	16x2x2,5	29,5	1270

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x - cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®] (St) BLACK

Flexible, screened control cables for outdoor applications, with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

fixed installation: 10 x Ø
flexible connections: 6 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors

Core arrangement:

cores twisted together or pairs twisted together

Screen:

aluminum backed polyester tape with tinned copper drain wire

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2), UV resistant; colour: black

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Common screen improves protection of transmitted signals against external electromagnetic field. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation. Outer sheath is UV resistant. **Designed for direct burial in ground.** Insulation materials and conductor construction in BiT 500[®] (St) BLACK cables enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59078	2x0,5	7,0	66
S59079	3G0,5	7,3	70
S59080	3x0,5	7,3	70
S59081	4G0,5	7,8	82
S59082	4x0,5	7,8	82
S59083	5G0,5	8,3	94
S59084	5x0,5	8,3	94
S59085	6G0,5	8,8	106
S59086	7G0,5	8,8	110
S59087	7x0,5	8,8	110
S59088	8G0,5	9,7	126
S59089	8x0,5	9,7	126
S59090	10G0,5	11,0	154
S59091	12G0,5	11,0	162
S59092	12x0,5	11,0	162
S59093	14G0,5	11,4	180
S59094	16G0,5	12,0	200
S59095	18G0,5	12,5	220
S59096	19G0,5	12,5	225
S59097	21G0,5	13,0	245
S59098	25G0,5	14,5	290
S59099	27G0,5	14,5	295
S59100	30G0,5	15,0	320
S59101	34G0,5	16,0	365
S59102	37G0,5	16,0	375
S59103	40G0,5	17,1	425

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59104	42G0,5	18,3	455
S59105	50G0,5	19,2	525
S59106	56G0,5	19,8	570
S59107	61G0,5	20,3	605
S59108	2x0,75	7,4	74
S59109	3G0,75	7,7	82
S59110	3x0,75	7,7	82
S59111	4G0,75	8,3	96
S59112	4x0,75	8,3	96
S59113	5G0,75	8,8	112
S59114	5x0,75	8,8	112
S59115	6G0,75	9,4	128
S59116	6x0,75	9,4	128
S59117	7G0,75	9,4	132
S59118	7x0,75	9,4	132
S59119	8G0,75	10,4	152
S59120	8x0,75	10,4	152
S59121	10G0,75	11,8	188
S59122	12G0,75	11,8	198
S59123	12x0,75	11,8	198
S59124	14G0,75	12,3	225
S59125	16G0,75	12,9	250
S59126	18G0,75	13,5	275
S59127	19G0,75	13,5	280
S59128	21G0,75	14,1	305
S59129	25G0,75	15,7	365

BIT 500[®] (St) BLACK

Flexible, screened control cables for outdoor applications, with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59130	27G0,75	15,7	375
S59131	30G0,75	16,2	405
S59132	34G0,75	18,0	490
S59133	37G0,75	18,0	505
S59134	40G0,75	18,6	540
S59135	42G0,75	20,1	590
S59136	50G0,75	20,9	670
S59137	56G0,75	21,5	725
S59138	61G0,75	22,1	775
S59139	2x1,0	7,7	84
S59140	3G1,0	8,1	94
S59141	3x1,0	8,1	94
S59142	4G1,0	8,6	110
S59143	4x1,0	8,6	110
S59144	5G1,0	9,2	128
S59145	5x1,0	9,2	128
S59146	6G1,0	9,8	148
S59147	6x1,0	9,8	148
S59148	7G1,0	9,8	154
S59149	7x1,0	9,8	154
S59150	8G1,0	10,9	178
S59151	10G1,0	12,5	225
S59152	10x1,0	12,5	225
S59153	12G1,0	12,5	235
S59154	12x1,0	12,5	235
S59155	14G1,0	13,0	265
S59156	16G1,0	13,6	295
S59157	18G1,0	14,2	325
S59158	18x1,0	14,2	325
S59159	19G1,0	14,2	330
S59160	21G1,0	14,9	365
S59161	25G1,0	17,3	455
S59162	27G1,0	17,3	470
S59163	30G1,0	17,8	510
S59164	34G1,0	19,2	590
S59165	37G1,0	19,2	610
S59166	40G1,0	19,9	655
S59167	42G1,0	21,3	700
S59168	50G1,0	22,2	805
S59169	56G1,0	23,2	895
S59170	61G1,0	23,8	955
S59171	2x1,5	8,5	102
S59172	3G1,5	8,9	116
S59173	3x1,5	8,9	116
S59174	4G1,5	9,6	140
S59175	4x1,5	9,6	140
S59176	5G1,5	10,3	164
S59177	5x1,5	10,3	164
S59178	6G1,5	11,2	192
S59179	6x1,5	11,2	192
S59180	7G1,5	11,2	205
S59181	7x1,5	11,2	205

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59182	8G1,5	12,2	235
S59183	10G1,5	14,1	290
S59184	10x1,5	14,1	290
S59185	12G1,5	14,1	310
S59186	12x1,5	14,1	310
S59187	14G1,5	14,7	350
S59188	16G1,5	15,5	395
S59189	18G1,5	16,2	435
S59190	19G1,5	16,2	445
S59191	21G1,5	17,6	515
S59192	25G1,5	19,9	620
S59193	27G1,5	19,9	640
S59194	30G1,5	20,6	700
S59195	34G1,5	22,0	800
S59196	37G1,5	22,0	830
S59197	40G1,5	23,2	915
S59198	42G1,5	24,9	980
S59199	50G1,5	26,5	1160
S59200	56G1,5	27,3	1260
S59201	61G1,5	28,0	1350
S59202	2x2,5	9,6	130
S59203	3G2,5	10,1	154
S59204	3x2,5	10,1	154
S59205	4G2,5	10,9	188
S59206	4x2,5	10,9	188
S59207	5G2,5	11,8	225
S59208	5x2,5	11,8	225
S59209	6G2,5	12,9	270
S59210	6x2,5	12,9	270
S59211	7G2,5	12,9	285
S59212	7x2,5	12,9	285
S59213	10G2,5	17,0	435
S59214	12G2,5	17,0	465
S59215	12x2,5	17,0	465
S59216	14G2,5	17,8	525
S59217	16G2,5	18,7	590
S59218	18G2,5	19,8	670
S59219	21G2,5	20,7	750
S59220	25G2,5	23,7	920
S59221	30G2,5	24,5	1040
S59222	34G2,5	26,9	1230
S59223	37G2,5	26,9	1280
S59224	42G2,5	29,9	1470
S59225	50G2,5	31,2	1690
S59226	2x4,0	11,1	180
S59227	3G4,0	11,7	220
S59228	3x4,0	11,7	220
S59229	4G4,0	12,7	275
S59230	5G4,0	13,7	330
S59231	7G4,0	14,8	415
S59232	10G4,0	19,9	645
S59233	12G4,0	19,9	700

BiT 500[®] (St) BLACK

Flexible, screened control cables for outdoor applications, with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59234	2x2x0,5	9,3	102
S59235	3x2x0,5	10,2	116
S59236	4x2x0,5	10,9	134
S59237	5x2x0,5	11,6	160
S59238	6x2x0,5	12,0	170
S59239	7x2x0,5	13,2	194
S59240	8x2x0,5	13,7	215
S59241	10x2x0,5	14,6	250
S59242	12x2x0,5	15,5	285
S59243	14x2x0,5	16,3	320
S59244	16x2x0,5	18,0	385
S59245	18x2x0,5	18,7	415
S59246	20x2x0,5	19,4	455
S59247	24x2x0,5	19,9	515
S59248	2x2x0,75	10,0	120
S59249	3x2x0,75	11,0	136
S59250	4x2x0,75	11,7	160
S59251	5x2x0,75	12,5	196
S59252	6x2x0,75	12,9	210
S59253	7x2x0,75	14,3	240
S59254	8x2x0,75	14,9	265
S59255	10x2x0,75	15,8	310
S59256	12x2x0,75	17,4	380
S59257	14x2x0,75	18,4	425
S59258	16x2x0,75	19,8	490
S59259	18x2x0,75	20,5	525
S59260	20x2x0,75	21,1	570
S59261	24x2x0,75	21,7	650
S59262	2x2x1,0	10,5	138
S59263	3x2x1,0	11,5	156
S59264	4x2x1,0	12,4	188
S59265	5x2x1,0	13,2	230
S59266	6x2x1,0	13,6	245
S59267	7x2x1,0	15,1	280

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59268	8x2x1,0	15,7	310
S59269	10x2x1,0	17,4	390
S59270	12x2x1,0	18,4	445
S59271	14x2x1,0	19,7	510
S59272	16x2x1,0	20,9	580
S59273	18x2x1,0	21,8	625
S59274	20x2x1,0	22,8	700
S59275	24x2x1,0	23,4	800
S59276	2x2x1,5	11,7	174
S59277	3x2x1,5	13,0	200
S59278	4x2x1,5	14,0	245
S59279	5x2x1,5	15,0	300
S59280	6x2x1,5	15,5	325
S59281	7x2x1,5	17,8	395
S59282	8x2x1,5	18,6	435
S59283	10x2x1,5	20,0	525
S59284	12x2x1,5	21,3	605
S59285	14x2x1,5	22,9	705
S59286	16x2x1,5	24,4	805
S59287	18x2x1,5	25,4	870
S59288	20x2x1,5	26,8	980
S59289	24x2x1,5	27,5	1130
S59290	2x2x2,5	13,5	235
S59291	3x2x2,5	15,0	275
S59292	4x2x2,5	16,3	335
S59293	5x2x2,5	18,1	440
S59294	6x2x2,5	18,7	485
S59295	7x2x2,5	21,0	565
S59296	8x2x2,5	21,9	625
S59297	10x2x2,5	23,9	770
S59298	12x2x2,5	25,4	890
S59299	14x2x2,5	27,5	1050
S59300	16x2x2,5	29,3	1200

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x - cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®]2(St) BLACK



Control cables 300/500 V

Flexible individually and collectively screened paired control cables for outdoor applications, with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

fixed installation: 12 x Ø
flexible connections: 6 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors

Core arrangement:

screened pairs twisted together
aluminum backed polyester tape with tinned copper drain wire underneath each pair

Individual screen:

Collective screen:

aluminum backed polyester tape with tinned copper drain wire

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2), UV resistant; colour: black

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Individual screening of pairs decreases signal interferences from adjacent pairs. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation. Outer sheath is UV resistant. **Designed for direct burial in ground.** Insulation compounds and conductor construction of BiT 500[®]2(St) BLACK cables enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2900	2x2x0,5	9,3	114
SB2901	3x2x0,5	10,2	132
SB2902	4x2x0,5	10,9	158
SB2903	5x2x0,5	11,6	188
SB2904	6x2x0,5	12,0	204
SB2905	7x2x0,5	13,2	235
SB2906	8x2x0,5	13,7	260
SB2907	10x2x0,5	14,6	305
SB2908	12x2x0,5	15,5	350
SB2909	14x2x0,5	16,3	395
SB2910	16x2x0,5	18,0	475
SB2911	18x2x0,5	18,7	515
SB2912	20x2x0,5	19,4	570
SB2913	24x2x0,5	19,9	650
SB2914	2x2x0,75	10,0	132
SB2915	3x2x0,75	11,0	154
SB2916	4x2x0,75	11,7	184
SB2917	5x2x0,75	12,5	226
SB2918	6x2x0,75	12,9	245
SB2919	7x2x0,75	14,3	280
SB2920	8x2x0,75	14,9	310
SB2921	10x2x0,75	15,8	370
SB2922	12x2x0,75	17,4	450
SB2923	14x2x0,75	18,4	510
SB2924	16x2x0,75	19,8	585
SB2925	18x2x0,75	20,5	635

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2926	20x2x0,75	21,1	690
SB2927	24x2x0,75	21,7	795
SB2928	2x2x1,0	10,5	154
SB2929	3x2x1,0	11,5	180
SB2930	4x2x1,0	12,4	220
SB2931	5x2x1,0	13,2	270
SB2932	6x2x1,0	13,6	295
SB2933	7x2x1,0	15,1	335
SB2934	8x2x1,0	15,7	375
SB2935	10x2x1,0	17,4	470
SB2936	12x2x1,0	18,4	540
SB2937	14x2x1,0	19,7	625
SB2938	16x2x1,0	20,9	710
SB2939	18x2x1,0	21,8	770
SB2940	20x2x1,0	22,8	860
SB2941	24x2x1,0	23,4	995
SB2942	2x2x1,5	11,7	190
SB2943	3x2x1,5	13,0	226
SB2944	4x2x1,5	14,0	275
SB2945	5x2x1,5	15,0	340
SB2946	6x2x1,5	15,5	375
SB2947	7x2x1,5	17,8	455
SB2948	8x2x1,5	18,6	505
SB2949	10x2x1,5	20,0	610
SB2950	12x2x1,5	21,3	705
SB2951	14x2x1,5	22,9	820

BiT 500[®] 2(St) BLACK

Flexible individually and collectively screened paired control cables for outdoor applications, with number coded conductors, rated 300/500 V

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2952	16x2x1,5	24,4	935
SB2953	18x2x1,5	25,4	1015
SB2954	20x2x1,5	26,8	1150
SB2955	24x2x1,5	27,5	1330
SB2956	2x2x2,5	13,5	255
SB2957	3x2x2,5	15,0	300
SB2958	4x2x2,5	16,3	370
SB2959	5x2x2,5	18,1	485

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2960	6x2x2,5	18,7	535
SB2961	7x2x2,5	21,0	625
SB2962	8x2x2,5	21,9	695
SB2963	10x2x2,5	23,9	855
SB2964	12x2x2,5	25,4	995
SB2965	14x2x2,5	27,5	1170
SB2966	16x2x2,5	29,3	1340

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] BiT 500[®] BLACK OR



Control cables 300/500 V

Flexible, highly flame retardant, oil resistant control cables for outdoor applications with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C
occasional flexing: -15 °C* to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage: 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 5 x Ø

**minimum temperature for occasional flexing with bending radius not smaller than 15 x D. Bending test at low temperature (-15 °C acc. to EN 60811-504).*

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together PVC compound, oil resistant (EN 60811-2-1), self-extinguishing and flame retardant

Outer sheath:

(acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant; colour: black

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation) and in places exposed to oil or industrial coolants. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Wide spectrum of resistance to environmental conditions allows to install BIT 500[®]BLACK OR cables in vast range of industrial applications. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2100	2x0,5	6,8	62
SB2101	3G0,5	7,1	70
SB2102	3x0,5	7,1	70
SB2103	4G0,5	7,6	80
SB2104	4x0,5	7,6	80
SB2105	5G0,5	8,1	92
SB2106	5x0,5	8,1	92
SB2107	6G0,5	8,6	105
SB2108	7G0,5	8,6	110
SB2109	7x0,5	8,6	110
SB2110	8G0,5	9,4	125
SB2111	8x0,5	9,4	125
SB2112	10G0,5	10,6	155
SB2113	12G0,5	10,6	165
SB2114	12x0,5	10,6	165
SB2115	14G0,5	11,0	180
SB2116	16G0,5	11,6	200
SB2117	18G0,5	12,1	220
SB2118	19G0,5	12,1	220
SB2119	21G0,5	12,6	240
SB2120	25G0,5	14,1	285
SB2121	27G0,5	14,1	295
SB2122	30G0,5	14,6	320
SB2123	34G0,5	15,6	365
SB2124	37G0,5	15,6	375

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2125	40G0,5	16,1	400
SB2126	42G0,5	17,9	455
SB2127	50G0,5	18,6	515
SB2128	56G0,5	19,4	570
SB2129	61G0,5	19,9	605
SB2130	2x0,75	7,2	70
SB2131	3G0,75	7,5	82
SB2132	3x0,75	7,5	82
SB2133	4G0,75	8,1	94
SB2134	4x0,75	8,1	94
SB2135	5G0,75	8,6	110
SB2136	5x0,75	8,6	110
SB2137	6G0,75	9,2	126
SB2138	6x0,75	9,2	126
SB2139	7G0,75	9,2	132
SB2140	7x0,75	9,2	132
SB2141	8G0,75	10,0	152
SB2142	8x0,75	10,0	152
SB2143	10G0,75	11,4	188
SB2144	12G0,75	11,4	200
SB2145	12x0,75	11,4	200
SB2146	14G0,75	11,9	225
SB2147	16G0,75	12,5	250
SB2148	18G0,75	13,1	275
SB2149	19G0,75	13,1	280

BIT 500[®] BLACK OR

Flexible, highly flame retardant, oil resistant control cables for outdoor applications with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2150	21G0,75	13,7	305
SB2151	25G0,75	15,3	365
SB2152	27G0,75	15,3	375
SB2153	30G0,75	15,8	405
SB2154	34G0,75	17,6	490
SB2155	37G0,75	17,6	505
SB2156	40G0,75	18,2	540
SB2157	42G0,75	19,7	590
SB2158	50G0,75	20,5	670
SB2159	56G0,75	21,1	725
SB2160	61G0,75	21,7	775
SB2161	2x1,0	7,5	80
SB2162	3G1,0	7,9	92
SB2163	3x1,0	7,9	92
SB2164	4G1,0	8,4	108
SB2165	4x1,0	8,4	108
SB2166	5G1,0	9,0	126
SB2167	5x1,0	9,0	126
SB2168	6G1,0	9,6	146
SB2169	6x1,0	9,6	146
SB2170	7G1,0	9,6	152
SB2171	7x1,0	9,6	152
SB2172	8G1,0	10,5	155
SB2173	10G1,0	12,1	220
SB2174	10x1,0	12,1	220
SB2175	12G1,0	12,1	235
SB2176	12x1,0	12,1	235
SB2177	14G1,0	12,6	260
SB2178	16G1,0	13,2	295
SB2179	18G1,0	13,8	325
SB2180	18x1,0	13,8	325
SB2181	19G1,0	13,8	330
SB2182	21G1,0	14,5	360
SB2183	25G1,0	16,3	430
SB2184	27G1,0	16,3	445
SB2185	30G1,0	17,4	510
SB2186	34G1,0	18,6	580
SB2187	37G1,0	18,6	600
SB2188	40G1,0	19,5	655
SB2189	42G1,0	20,9	705
SB2190	50G1,0	21,8	805
SB2191	56G1,0	22,8	895
SB2192	61G1,0	23,4	955
SB2193	2x1,5	8,3	100
SB2194	3G1,5	8,7	118
SB2195	3x1,5	8,7	118
SB2196	4G1,5	9,4	142
SB2197	4x1,5	9,4	142
SB2198	5G1,5	10,1	166
SB2199	5x1,5	10,1	166
SB2200	6G1,5	10,8	190
SB2201	6x1,5	10,8	190
SB2202	7G1,5	10,8	200
SB2203	7x1,5	10,8	200
SB2204	8G1,5	11,8	235

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2205	10G1,5	13,7	295
SB2206	10x1,5	13,7	295
SB2207	12G1,5	13,7	315
SB2208	12x1,5	13,7	315
SB2209	14G1,5	14,3	355
SB2210	16G1,5	15,1	395
SB2211	18G1,5	15,8	440
SB2212	19G1,5	15,8	450
SB2213	21G1,5	17,2	515
SB2214	25G1,5	19,5	625
SB2215	27G1,5	19,5	645
SB2216	30G1,5	20,2	705
SB2217	34G1,5	21,6	805
SB2218	37G1,5	21,6	835
SB2219	40G1,5	22,8	920
SB2220	42G1,5	24,5	985
SB2221	50G1,5	26,1	1170
SB2222	56G1,5	26,9	1270
SB2223	61G1,5	27,6	1360
SB2224	2x2,5	9,4	134
SB2225	3G2,5	9,9	160
SB2226	3x2,5	9,9	160
SB2227	4G2,5	10,7	194
SB2228	4x2,5	10,7	194
SB2229	5G2,5	11,6	230
SB2230	5x2,5	11,6	230
SB2231	6G2,5	12,5	270
SB2232	6x2,5	12,5	270
SB2233	7G2,5	12,5	285
SB2234	7x2,5	12,5	285
SB2235	10G2,5	16,0	420
SB2236	12G2,5	16,0	450
SB2237	12x2,5	16,0	450
SB2238	14G2,5	17,4	535
SB2239	16G2,5	18,3	600
SB2240	18G2,5	19,4	675
SB2241	21G2,5	20,3	760
SB2242	25G2,5	23,3	930
SB2243	30G2,5	24,1	1050
SB2244	34G2,5	26,5	1240
SB2245	37G2,5	26,5	1290
SB2246	42G2,5	29,5	1490
SB2247	50G2,5	30,8	1710
SB2248	2x4,0	11,1	194
SB2249	3G4,0	11,7	240
SB2250	3x4,0	11,7	240
SB2251	4G4,0	12,8	290
SB2252	5G4,0	13,9	350
SB2253	7G4,0	15,0	435
SB2254	10G4,0	20,3	680
SB2255	12G4,0	20,3	740
SB2256	2x6,0	11,7	240
SB2257	3G6,0	12,4	300
SB2258	3x6,0	12,4	300
SB2259	4G6,0	13,6	380

BiT 500[®] BLACK OR

Flexible, highly flame retardant, oil resistant control cables for outdoor applications with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2260	5G6,0	14,7	455
SB2261	7G6,0	15,9	575
SB2262	2x10	13,9	365
SB2263	3G10	14,7	460
SB2264	3x10	14,7	460
SB2265	4G10	16,9	605
SB2266	5G10	18,3	730
SB2267	7G10	20,0	940
SB2268	2x16	15,7	505
SB2269	3G16	17,3	675
SB2270	3x16	17,3	675
SB2271	4G16	19,3	865
SB2272	5G16	20,9	1050
SB2273	2x25	20,1	750
SB2274	3G25	21,3	1040
SB2275	3x25	21,3	1040

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2276	4G25	24,1	1340
SB2277	5G25	26,7	1650
SB2278	2x35	22,5	980
SB2279	3G35	23,9	1350
SB2280	3x35	23,9	1350
SB2281	4G35	27,2	1750
SB2282	5G35	29,4	2110
SB2283	2x50	27,1	1490
SB2284	3G50	28,8	1940
SB2285	3x50	28,8	1940
SB2286	4G50	32,3	2480
SB2287	5G50	35,0	3100
SB2288	2x70	30,7	2030
SB2289	3G70	32,9	2080
SB2290	3x70	32,9	2080
SB2291	4G70	37,1	3470
SB2292	5G70	40,5	4240

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2293	2x2x0,5	8,9	94
SB2294	3x2x0,5	9,8	106
SB2295	4x2x0,5	10,5	126
SB2296	5x2x0,5	11,2	152
SB2297	6x2x0,5	11,6	160
SB2298	7x2x0,5	12,8	184
SB2299	8x2x0,5	13,3	205
SB2300	10x2x0,5	14,2	240
SB2301	12x2x0,5	15,1	270
SB2302	14x2x0,5	15,9	305
SB2303	16x2x0,5	17,6	375
SB2304	18x2x0,5	18,3	400
SB2305	20x2x0,5	18,8	430
SB2306	24x2x0,5	19,5	500
SB2307	2x2x0,75	9,6	110
SB2308	3x2x0,75	10,6	130
SB2309	4x2x0,75	11,3	155
SB2310	5x2x0,75	12,1	185
SB2311	6x2x0,75	12,5	200
SB2312	7x2x0,75	13,9	230
SB2313	8x2x0,75	14,5	250
SB2314	10x2x0,75	15,4	295
SB2315	12x2x0,75	17,0	365
SB2316	14x2x0,75	18,0	410
SB2317	16x2x0,75	19,4	475
SB2318	18x2x0,75	20,1	515
SB2319	20x2x0,75	20,7	555
SB2320	24x2x0,75	21,3	635
SB2321	2x2x1,0	10,1	128
SB2322	3x2x1,0	11,1	144
SB2323	4x2x1,0	12,0	174
SB2324	5x2x1,0	12,8	215
SB2325	6x2x1,0	13,2	235

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2326	7x2x1,0	14,7	270
SB2327	8x2x1,0	15,3	295
SB2328	10x2x1,0	16,4	350
SB2329	12x2x1,0	18,0	430
SB2330	14x2x1,0	19,3	495
SB2331	16x2x1,0	20,5	565
SB2332	18x2x1,0	21,4	610
SB2333	20x2x1,0	22,0	660
SB2334	24x2x1,0	23,0	780
SB2335	2x2x1,5	11,3	162
SB2336	3x2x1,5	12,6	188
SB2337	4x2x1,5	13,6	230
SB2338	5x2x1,5	14,6	285
SB2339	6x2x1,5	15,1	310
SB2340	7x2x1,5	17,4	380
SB2341	8x2x1,5	18,2	420
SB2342	10x2x1,5	19,6	510
SB2343	12x2x1,5	20,9	590
SB2344	14x2x1,5	22,1	670
SB2345	16x2x1,5	24,0	785
SB2346	18x2x1,5	25,0	850
SB2347	20x2x1,5	26,4	965
SB2348	24x2x1,5	27,1	1110
SB2349	2x2x2,5	13,1	225
SB2350	3x2x2,5	14,6	260
SB2351	4x2x2,5	15,9	325
SB2352	5x2x2,5	17,7	430
SB2353	6x2x2,5	18,3	470
SB2354	7x2x2,5	20,6	550
SB2355	8x2x2,5	21,5	610
SB2356	10x2x2,5	23,5	750
SB2357	12x2x2,5	25,0	875
SB2358	14x2x2,5	27,1	1030
SB2359	16x2x2,5	28,9	1180

*Outer diameter tolerance: +/- 5%
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 G - cables with green/yellow earthing conductor
 x - cables without green/yellow earthing conductor
 Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] BiT 500[®] BLACK FR

Flexible, highly flame retardant control cables for outdoor applications with number coded conductors, rated 300/500 V



Industrial application



Internal application



External application



Underground application



EN 60332-1-2



EN 60332-3-24



Oxygen index



UV resistant



High flexibility

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C
occasional flexing: -15 °C* to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Design:

Conductors:

bare copper conductors, multi-stranded class 5

acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant; colour: black

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Insulation and sheath materials and conductor construction in BiT 500[®] BLACK FR cable enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

*minimum temperature for occasional flexing with bending radius not smaller than $15 \times D$. Bending test at low temperature (-15 °C acc. to EN 60811-504).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1800	2x0,5	6,8	62
SB1801	3G0,5	7,1	70
SB1802	3x0,5	7,1	70
SB1803	4G0,5	7,6	80
SB1804	4x0,5	7,6	80
SB1805	5G0,5	8,1	92
SB1806	5x0,5	8,1	92
SB1807	6G0,5	8,6	105
SB1808	7G0,5	8,6	110
SB1809	7x0,5	8,6	110
SB1810	8G0,5	9,3	125
SB1811	8x0,5	9,3	125
SB1812	10G0,5	10,6	155
SB1813	12G0,5	10,6	165
SB1814	12x0,5	10,6	165
SB1815	14G0,5	11,0	180
SB1816	16G0,5	11,6	200
SB1817	18G0,5	12,1	220
SB1818	19G0,5	12,1	220
SB1819	21G0,5	12,6	240
SB1820	25G0,5	14,1	285
SB1821	27G0,5	14,1	295
SB1822	30G0,5	14,6	320
SB1823	34G0,5	15,6	365
SB1824	37G0,5	15,6	375

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1825	40G0,5	16,1	400
SB1826	42G0,5	17,9	455
SB1827	50G0,5	18,6	515
SB1828	56G0,5	19,4	570
SB1829	61G0,5	19,9	605
SB1830	2x0,75	7,2	70
SB1831	3G0,75	7,5	82
SB1832	3x0,75	7,5	82
SB1833	4G0,75	8,1	94
SB1834	4x0,75	8,1	94
SB1835	5G0,75	8,6	110
SB1836	5x0,75	8,6	110
SB1837	6G0,75	9,2	126
SB1838	6x0,75	9,2	126
SB1839	7G0,75	9,2	132
SB1840	7x0,75	9,2	132
SB1841	8G0,75	10,0	152
SB1842	8x0,75	10,0	152
SB1843	10G0,75	11,4	188
SB1844	12G0,75	11,4	200
SB1845	12x0,75	11,4	200
SB1846	14G0,75	11,9	225
SB1847	16G0,75	12,5	250
SB1848	18G0,75	13,1	275
SB1849	19G0,75	13,1	280

BIT 500[®] BLACK FR

Flexible, highly flame retardant control cables for outdoor applications with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1850	21G0,75	13,7	305
SB1851	25G0,75	15,3	365
SB1852	27G0,75	15,3	375
SB1853	30G0,75	15,8	405
SB1854	34G0,75	17,6	490
SB1855	37G0,75	17,6	505
SB1856	40G0,75	18,2	540
SB1857	42G0,75	19,7	590
SB1858	50G0,75	20,5	670
SB1859	56G0,75	21,1	725
SB1860	61G0,75	21,7	775
SB1861	2x1,0	7,5	80
SB1862	3G1,0	7,9	92
SB1863	3x1,0	7,9	92
SB1864	4G1,0	8,4	108
SB1865	4x1,0	8,4	108
SB1866	5G1,0	9,0	126
SB1867	5x1,0	9,0	126
SB1868	6G1,0	9,6	146
SB1869	6x1,0	9,6	146
SB1870	7G1,0	9,6	152
SB1871	7x1,0	9,6	152
SB1872	8G1,0	10,5	155
SB1873	10G1,0	12,1	220
SB1874	10x1,0	12,1	220
SB1875	12G1,0	12,1	235
SB1876	12x1,0	12,1	235
SB1877	14G1,0	12,6	260
SB1878	16G1,0	13,2	295
SB1879	18G1,0	13,8	325
SB1880	18x1,0	13,8	325
SB1881	19G1,0	13,8	330
SB1882	21G1,0	14,5	360
SB1883	25G1,0	16,3	430
SB1884	27G1,0	16,3	445
SB1885	30G1,0	17,4	510
SB1886	34G1,0	18,6	580
SB1887	37G1,0	18,6	600
SB1888	40G1,0	19,5	655
SB1889	42G1,0	20,9	705
SB1890	50G1,0	21,8	805
SB1891	56G1,0	22,8	895
SB1892	61G1,0	23,4	955
SB1893	2x1,5	8,3	100
SB1894	3G1,5	8,7	118
SB1895	3x1,5	8,7	118
SB1896	4G1,5	9,4	142
SB1897	4x1,5	9,4	142
SB1898	5G1,5	10,1	166
SB1899	5x1,5	10,1	166
SB1900	6G1,5	10,8	190
SB1901	6x1,5	10,8	190
SB1902	7G1,5	10,8	200
SB1903	7x1,5	10,8	200
SB1904	8G1,5	11,8	235
SB1905	10G1,5	13,7	295
SB1906	10x1,5	13,7	295
SB1907	12G1,5	13,7	315
SB1908	12x1,5	13,7	315
SB1909	14G1,5	14,3	355
SB1910	16G1,5	15,1	395
SB1911	18G1,5	15,8	440

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1912	19G1,5	15,8	450
SB1913	21G1,5	17,2	515
SB1914	25G1,5	19,5	625
SB1915	27G1,5	19,5	645
SB1916	30G1,5	20,2	705
SB1917	34G1,5	21,6	805
SB1918	37G1,5	21,6	835
SB1919	40G1,5	22,8	920
SB1920	42G1,5	24,5	985
SB1921	50G1,5	26,1	1170
SB1922	56G1,5	26,9	1270
SB1923	61G1,5	27,6	1360
SB1924	2x2,5	9,4	134
SB1925	3G2,5	9,9	160
SB1926	3x2,5	9,9	160
SB1927	4G2,5	10,7	194
SB1928	4x2,5	10,7	194
SB1929	5G2,5	11,6	230
SB1930	5x2,5	11,6	230
SB1931	6G2,5	12,5	270
SB1932	6x2,5	12,5	270
SB1933	7G2,5	12,5	285
SB1934	7x2,5	12,5	285
SB1935	10G2,5	16,0	420
SB1936	12G2,5	16,0	450
SB1937	12x2,5	16,0	450
SB1938	14G2,5	17,4	535
SB1939	16G2,5	18,3	600
SB1940	18G2,5	19,4	675
SB1941	21G2,5	20,3	760
SB1942	25G2,5	23,3	930
SB1943	30G2,5	24,1	1050
SB1944	34G2,5	26,5	1240
SB1945	37G2,5	26,5	1290
SB1946	42G2,5	29,5	1490
SB1947	50G2,5	30,8	1710
SB1948	2x4,0	11,1	194
SB1949	3G4,0	11,7	240
SB1950	3x4,0	11,7	240
SB1951	4G4,0	12,8	290
SB1952	5G4,0	13,9	350
SB1953	7G4,0	15,0	435
SB1954	10G4,0	20,3	680
SB1955	12G4,0	20,3	740
SB1956	2x6,0	11,7	240
SB1957	3G6,0	12,4	300
SB1958	3x6,0	12,4	300
SB1959	4G6,0	13,6	380
SB1960	5G6,0	14,7	455
SB1961	7G6,0	15,9	575
SB1962	2x10	13,9	365
SB1963	3G10	14,7	460
SB1964	3x10	14,7	460
SB1965	4G10	16,9	605
SB1966	5G10	18,3	730
SB1967	7G10	20,0	940
SB1968	2x16	15,7	505
SB1969	3G16	17,3	675
SB1970	3x16	17,3	675
SB1971	4G16	19,3	865
SB1972	5G16	20,9	1050

BiT 500[®] BLACK FR

Flexible, highly flame retardant control cables for outdoor applications with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1973	2x25	20,1	750
SB1974	3G25	21,3	1040
SB1975	3x25	21,3	1040
SB1976	4G25	24,1	1340
SB1977	5G25	26,7	1650
SB1978	2x35	22,5	980
SB1979	3G35	23,9	1350
SB1980	3x35	23,9	1350
SB1981	4G35	27,2	1750
SB1982	5G35	29,4	2110

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1983	2x50	27,1	1490
SB1984	3G50	28,8	1940
SB1985	3x50	28,8	1940
SB1986	4G50	32,3	2480
SB1987	5G50	35,0	3100
SB1988	2x70	30,7	2030
SB1989	3G70	32,9	2080
SB1990	3x70	32,9	2080
SB1991	4G70	37,1	3470
SB1992	5G70	40,5	4240

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB1993	2x2x0,5	8,9	94
SB1994	3x2x0,5	9,8	106
SB1995	4x2x0,5	10,5	126
SB1996	5x2x0,5	11,2	152
SB1997	6x2x0,5	11,6	160
SB1998	7x2x0,5	12,8	184
SB1999	8x2x0,5	13,3	205
SB2000	10x2x0,5	14,2	240
SB2001	12x2x0,5	15,1	270
SB2002	14x2x0,5	15,9	305
SB2003	16x2x0,5	17,6	375
SB2004	18x2x0,5	18,3	400
SB2005	20x2x0,5	18,8	430
SB2006	24x2x0,5	19,5	500
SB2007	2x2x0,75	9,6	110
SB2008	3x2x0,75	10,6	130
SB2009	4x2x0,75	11,3	155
SB2010	5x2x0,75	12,1	185
SB2011	6x2x0,75	12,5	200
SB2012	7x2x0,75	13,9	230
SB2013	8x2x0,75	14,5	250
SB2014	10x2x0,75	15,4	295
SB2015	12x2x0,75	17,0	365
SB2016	14x2x0,75	18,0	410
SB2017	16x2x0,75	19,4	475
SB2018	18x2x0,75	20,1	515
SB2019	20x2x0,75	20,7	555
SB2020	24x2x0,75	21,3	635
SB2021	2x2x1,0	10,1	128
SB2022	3x2x1,0	11,1	144
SB2023	4x2x1,0	12,0	174
SB2024	5x2x1,0	12,8	215
SB2025	6x2x1,0	13,2	235

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2026	7x2x1,0	14,7	270
SB2027	8x2x1,0	15,3	295
SB2028	10x2x1,0	16,4	350
SB2029	12x2x1,0	18,0	430
SB2030	14x2x1,0	19,3	495
SB2031	16x2x1,0	20,5	565
SB2032	18x2x1,0	21,4	610
SB2033	20x2x1,0	22,0	660
SB2034	24x2x1,0	23,0	780
SB2035	2x2x1,5	11,3	162
SB2036	3x2x1,5	12,6	188
SB2037	4x2x1,5	13,6	230
SB2038	5x2x1,5	14,6	285
SB2039	6x2x1,5	15,1	310
SB2040	7x2x1,5	17,4	380
SB2041	8x2x1,5	18,2	420
SB2042	10x2x1,5	19,6	510
SB2043	12x2x1,5	20,9	590
SB2044	14x2x1,5	22,1	670
SB2045	16x2x1,5	24,0	785
SB2046	18x2x1,5	25,0	850
SB2047	20x2x1,5	26,4	965
SB2048	24x2x1,5	27,1	1110
SB2049	2x2x2,5	13,1	225
SB2050	3x2x2,5	14,6	260
SB2051	4x2x2,5	15,9	325
SB2052	5x2x2,5	17,7	430
SB2053	6x2x2,5	18,3	470
SB2054	7x2x2,5	20,6	550
SB2055	8x2x2,5	21,5	610
SB2056	10x2x2,5	23,5	750
SB2057	12x2x2,5	25,0	875
SB2058	14x2x2,5	27,1	1030
SB2059	16x2x2,5	28,9	1180

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserve the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BIT 500[®]C BLACK FR



Control cables 300/500 V

Flexible, highly flame retardant, screened control cables for outdoor applications, with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 5 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Screen:

tinned copper wire braid, coverage ≥ 85%

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant; colour: black

Application:

Flexible power and control cables designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field (screen attenuation ca. 50 dB). Cables are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Insulation and sheath materials and conductor construction in BIT 500°C BLACK cable enable easy and fast connections and ensure their high durability. Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3410	2x0,5	7,2	72
SB3411	3G0,5	7,5	75
SB3412	3x0,5	7,5	75
SB3413	4G0,5	8,0	88
SB3414	4x0,5	8,0	88
SB3415	5G0,5	8,5	102
SB3416	5x0,5	8,5	102
SB3417	6G0,5	9,0	115
SB3418	7G0,5	9,0	120
SB3419	7x0,5	9,0	120
SB3420	8G0,5	9,9	145
SB3421	8x0,5	9,9	145
SB3422	10G0,5	11,2	176
SB3423	12G0,5	11,2	184
SB3424	12x0,5	11,2	184
SB3425	14G0,5	11,6	205
SB3426	16G0,5	12,2	225
SB3427	18G0,5	12,7	245
SB3428	19G0,5	12,5	250

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3429	21G0,5	13,2	270
SB3430	25G0,5	14,7	320
SB3431	27G0,5	14,7	330
SB3432	30G0,5	15,2	355
SB3433	34G0,5	16,2	400
SB3434	37G0,5	16,2	415
SB3435	40G0,5	17,3	465
SB3436	42G0,5	18,5	500
SB3437	50G0,5	19,2	570
SB3438	56G0,5	20,0	615
SB3439	61G0,5	20,5	655
SB3440	2x0,75	7,6	80
SB3441	3G0,75	7,9	88
SB3442	3x0,75	7,9	88
SB3443	4G0,75	8,5	102
SB3444	4x0,75	8,5	102
SB3445	5G0,75	9,0	120
SB3446	5x0,75	9,0	120
SB3447	6G0,75	9,8	146

BiT 500[®] C BLACK FR

Flexible, highly flame retardant, screened control cables for outdoor applications, with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3448	6x0,75	9,8	146
SB3449	7G0,75	9,8	150
SB3450	7x0,75	9,8	150
SB3451	8G0,75	10,6	170
SB3452	8x0,75	10,6	170
SB3453	10G0,75	12,0	215
SB3454	12G0,75	11,8	220
SB3455	12x0,75	11,8	220
SB3456	14G0,75	12,5	250
SB3457	16G0,75	13,1	275
SB3458	18G0,75	13,7	305
SB3459	19G0,75	13,7	310
SB3460	21G0,75	14,3	335
SB3461	25G0,75	15,9	400
SB3462	27G0,75	15,9	410
SB3463	30G0,75	17,0	465
SB3464	34G0,75	18,2	530
SB3465	37G0,75	18,2	545
SB3466	40G0,75	18,8	585
SB3467	42G0,75	20,3	635
SB3468	50G0,75	21,1	720
SB3469	56G0,75	21,7	775
SB3470	61G0,75	22,7	850
SB3471	2x1,0	7,9	88
SB3472	3G1,0	8,3	98
SB3473	3x1,0	8,3	98
SB3474	4G1,0	8,6	114
SB3475	4x1,0	8,6	114
SB3476	5G1,0	9,6	150
SB3477	5x1,0	9,6	150
SB3478	6G1,0	10,2	166
SB3479	6x1,0	10,2	166
SB3480	7G1,0	10,2	172
SB3481	7x1,0	10,2	172
SB3482	8G1,0	11,1	196
SB3483	10G1,0	12,5	245
SB3484	10x1,0	12,5	245
SB3485	12G1,0	12,5	260
SB3486	12x1,0	12,5	260
SB3487	14G1,0	13,2	290
SB3488	16G1,0	13,8	320
SB3489	18G1,0	14,4	355
SB3490	18x1,0	14,4	355
SB3491	19G1,0	14,4	360
SB3492	21G1,0	15,1	395
SB3493	25G1,0	17,5	495
SB3494	27G1,0	17,5	505
SB3495	30G1,0	18,0	550
SB3496	34G1,0	19,4	635
SB3497	37G1,0	19,4	655
SB3498	40G1,0	20,1	700
SB3499	42G1,0	21,5	750
SB3500	50G1,0	22,8	875
SB3501	56G1,0	23,4	945
SB3502	61G1,0	24,0	1010
SB3503	2x1,5	8,7	108
SB3504	3G1,5	9,1	122
SB3505	3x1,5	9,1	122
SB3506	4G1,5	10,0	156

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3507	4x1,5	10,0	156
SB3508	5G1,5	10,7	184
SB3509	5x1,5	10,7	184
SB3510	6G1,5	11,4	215
SB3511	6x1,5	11,4	215
SB3512	7G1,5	11,4	225
SB3513	7x1,5	11,4	225
SB3514	8G1,5	12,2	255
SB3515	10G1,5	14,3	320
SB3516	10x1,5	14,3	320
SB3517	12G1,5	14,3	340
SB3518	12x1,5	14,3	340
SB3519	14G1,5	14,9	380
SB3520	16G1,5	15,7	430
SB3521	18G1,5	17,0	495
SB3522	19G1,5	17,0	505
SB3523	21G1,5	17,8	555
SB3524	25G1,5	20,1	665
SB3525	27G1,5	20,1	685
SB3526	30G1,5	20,8	745
SB3527	34G1,5	22,6	875
SB3528	37G1,5	22,6	905
SB3529	40G1,5	23,4	970
SB3530	42G1,5	25,1	1040
SB3531	50G1,5	26,7	1230
SB3532	56G1,5	27,5	1330
SB3533	61G1,5	28,2	1420
SB3534	2x2,5	10,0	146
SB3535	3G2,5	10,5	172
SB3536	3x2,5	10,5	172
SB3537	4G2,5	11,3	210
SB3538	4x2,5	11,3	210
SB3539	5G2,5	12,2	250
SB3540	5x2,5	12,2	250
SB3541	6G2,5	13,1	290
SB3542	6x2,5	13,1	290
SB3543	7G2,5	13,1	310
SB3544	7x2,5	13,1	310
SB3545	10G2,5	17,2	470
SB3546	12G2,5	17,2	500
SB3547	12x2,5	17,2	500
SB3548	14G2,5	18,0	565
SB3549	16G2,5	18,9	635
SB3550	18G2,5	20,0	715
SB3551	21G2,5	20,9	800
SB3552	25G2,5	23,9	975
SB3553	30G2,5	24,7	1100
SB3554	34G2,5	27,1	1300
SB3555	37G2,5	27,1	1340
SB3556	42G2,5	30,3	1570
SB3557	50G2,5	31,6	1800
SB3558	2x4,0	11,5	205
SB3559	3G4,0	12,1	235
SB3560	3x4,0	12,1	235
SB3561	4G4,0	13,1	300
SB3562	5G4,0	14,2	360
SB3563	7G4,0	15,3	450
SB3564	10G4,0	20,5	695
SB3565	12G4,0	20,5	755

BiT 500[®] C BLACK FR

Flexible, highly flame retardant, screened control cables for outdoor applications, with number coded conductors, rated 300/500 V

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3566	2x2x0,5	9,3	110
SB3567	3x2x0,5	10,4	134
SB3568	4x2x0,5	11,1	154
SB3569	5x2x0,5	11,8	184
SB3570	6x2x0,5	12,2	194
SB3571	7x2x0,5	13,4	225
SB3572	8x2x0,5	13,9	245
SB3573	10x2x0,5	14,8	280
SB3574	12x2x0,5	15,7	320
SB3575	14x2x0,5	17,1	380
SB3576	16x2x0,5	18,2	425
SB3577	18x2x0,5	18,9	455
SB3578	20x2x0,5	19,6	500
SB3579	24x2x0,5	20,1	560
SB3580	2x2x0,75	10,2	138
SB3581	3x2x0,75	11,2	156
SB3582	4x2x0,75	11,9	184
SB3583	5x2x0,75	12,7	225
SB3584	6x2x0,75	13,1	235
SB3585	7x2x0,75	14,5	270
SB3586	8x2x0,75	15,1	295
SB3587	10x2x0,75	16,0	345
SB3588	12x2x0,75	17,6	415
SB3589	14x2x0,75	18,6	465
SB3590	16x2x0,75	20,0	535
SB3591	18x2x0,75	20,7	575
SB3592	20x2x0,75	21,3	620
SB3593	24x2x0,75	21,9	705
SB3594	2x2x1,0	10,7	155
SB3595	3x2x1,0	11,7	180
SB3596	4x2x1,0	12,6	210
SB3597	5x2x1,0	13,4	255
SB3598	6x2x1,0	13,8	270

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3599	7x2x1,0	15,3	315
SB3600	8x2x1,0	15,9	345
SB3601	10x2x1,0	17,6	425
SB3602	12x2x1,0	18,6	485
SB3603	14x2x1,0	19,9	555
SB3604	16x2x1,0	21,1	625
SB3605	18x2x1,0	22,0	675
SB3606	20x2x1,0	23,0	760
SB3607	24x2x1,0	23,6	855
SB3608	2x2x1,5	11,9	194
SB3609	3x2x1,5	13,2	220
SB3610	4x2x1,5	14,2	270
SB3611	5x2x1,5	15,2	335
SB3612	6x2x1,5	15,7	355
SB3613	7x2x1,5	18,0	435
SB3614	8x2x1,5	18,8	480
SB3615	10x2x1,5	20,2	570
SB3616	12x2x1,5	21,5	655
SB3617	14x2x1,5	23,1	760
SB3618	16x2x1,5	24,6	860
SB3619	18x2x1,5	26,2	970
SB3620	20x2x1,5	27,0	1050
SB3621	24x2x1,5	27,7	1210
SB3622	2x2x2,5	13,7	260
SB3623	3x2x2,5	15,2	305
SB3624	4x2x2,5	17,1	395
SB3625	5x2x2,5	18,3	480
SB3626	6x2x2,5	18,9	525
SB3627	7x2x2,5	21,2	615
SB3628	8x2x2,5	22,1	670
SB3629	10x2x2,5	24,1	825
SB3630	12x2x2,5	25,6	950
SB3631	14x2x2,5	27,7	1110
SB3632	16x2x2,5	29,5	1250

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®] (St) BLACK FR

RoHS 2015/863/EU



LVD 2014/35/EU



CPR 305/2011



Flexible, highly flame retardant screened control cables for outdoor applications, with number coded conductors, rated 300/500 V



Industrial application



Internal application



External application



Underground application



EN 60332-1-2



EN 60332-3-24



oxygen index



UV resistant



High flexibility

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

fixed installation: 6 x Ø
flexible connections: 10 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

pairs twisted together or cores twisted together

Screen:

aluminum backed polyester tape with tinned copper drain wire

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24 cat. C), UV resistant; colour: black

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Common screen improves protection of transmitted signals against external electromagnetic field. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation. Outer sheath is UV resistant. **Designed for direct burial in ground.** Insulation materials and conductor construction in BiT 500[®] (St) BLACK FR cable enable easy and fast connections and ensure their high durability. Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2400	2x0,5	7,0	66
SB2401	3G0,5	7,3	70
SB2402	3x0,5	7,3	70
SB2403	4G0,5	7,8	82
SB2404	4x0,5	7,8	82
SB2405	5G0,5	8,3	94
SB2406	5x0,5	8,3	94
SB2407	6G0,5	8,8	106
SB2408	7G0,5	8,8	110
SB2409	7x0,5	8,8	110
SB2410	8G0,5	9,7	126
SB2411	8x0,5	9,7	126
SB2412	10G0,5	11,0	154
SB2413	12G0,5	11,0	162
SB2414	12x0,5	11,0	162
SB2415	14G0,5	11,4	180
SB2416	16G0,5	12,0	200
SB2417	18G0,5	12,5	220
SB2418	19G0,5	12,5	225
SB2419	21G0,5	13,0	245
SB2420	25G0,5	14,5	290
SB2421	27G0,5	14,5	295
SB2422	30G0,5	15,0	320
SB2423	34G0,5	16,0	365
SB2424	37G0,5	16,0	375
SB2425	40G0,5	17,1	425
SB2426	42G0,5	18,3	455
SB2427	50G0,5	19,2	525

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2428	56G0,5	19,8	570
SB2429	61G0,5	20,3	605
SB2430	2x0,75	7,4	74
SB2431	3G0,75	7,7	82
SB2432	3x0,75	7,7	82
SB2433	4G0,75	8,3	96
SB2434	4x0,75	8,3	96
SB2435	5G0,75	8,8	112
SB2436	5x0,75	8,8	112
SB2437	6G0,75	9,4	128
SB2438	6x0,75	9,4	128
SB2439	7G0,75	9,4	132
SB2440	7x0,75	9,4	132
SB2441	8G0,75	10,4	152
SB2442	8x0,75	10,4	152
SB2443	10G0,75	11,8	188
SB2444	12G0,75	11,8	198
SB2445	12x0,75	11,8	198
SB2446	14G0,75	12,3	225
SB2447	16G0,75	12,9	250
SB2448	18G0,75	13,5	275
SB2449	19G0,75	13,5	280
SB2450	21G0,75	14,1	305
SB2451	25G0,75	15,7	365
SB2452	27G0,75	15,7	375
SB2453	30G0,75	16,2	405
SB2454	34G0,75	18,0	490
SB2455	37G0,75	18,0	505

BiT 500[®] (St) BLACK FR

Flexible, highly flame retardant screened control cables for outdoor applications, with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2456	40G0,75	18,6	540
SB2457	42G0,75	20,1	590
SB2458	50G0,75	20,9	670
SB2459	56G0,75	21,5	725
SB2460	61G0,75	22,1	75
SB2461	2x1,0	7,7	84
SB2462	3G1,0	8,1	94
SB2463	3x1,0	8,1	94
SB2464	4G1,0	8,6	110
SB2465	4x1,0	8,6	110
SB2466	5G1,0	9,2	128
SB2467	5x1,0	9,2	128
SB2468	6G1,0	9,8	148
SB2469	6x1,0	9,8	148
SB2470	7G1,0	9,8	154
SB2471	7x1,0	9,8	154
SB2472	8G1,0	10,9	178
SB2473	10G1,0	12,5	225
SB2474	10x1,0	12,5	225
SB2475	12G1,0	12,5	235
SB2476	12x1,0	12,5	235
SB2477	14G1,0	13,0	265
SB2478	16G1,0	13,6	295
SB2479	18G1,0	14,2	325
SB2480	18x1,0	14,2	325
SB2481	19G1,0	14,2	330
SB2482	21G1,0	14,9	365
SB2483	25G1,0	17,3	455
SB2484	27G1,0	17,3	470
SB2485	30G1,0	17,8	510
SB2486	34G1,0	19,2	590
SB2487	37G1,0	19,2	610
SB2488	40G1,0	19,9	655
SB2489	42G1,0	21,3	700
SB2490	50G1,0	22,2	805
SB2491	56G1,0	23,2	895
SB2492	61G1,0	23,8	955
SB2493	2x1,5	8,5	102
SB2494	3G1,5	8,9	116
SB2495	3x1,5	8,9	116
SB2496	4G1,5	9,6	140
SB2497	4x1,5	9,6	140
SB2498	5G1,5	10,3	164
SB2499	5x1,5	10,3	164
SB2500	6G1,5	11,2	192
SB2501	6x1,5	11,2	192
SB2502	7G1,5	11,2	205
SB2503	7x1,5	11,2	205
SB2504	8G1,5	12,2	235
SB2505	10G1,5	14,1	290

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2506	10x1,5	14,1	290
SB2507	12G1,5	14,1	310
SB2508	12x1,5	14,1	310
SB2509	14G1,5	14,7	350
SB2510	16G1,5	15,5	395
SB2511	18G1,5	16,2	435
SB2512	19G1,5	16,2	445
SB2513	21G1,5	17,6	515
SB2514	25G1,5	19,9	620
SB2515	27G1,5	19,9	640
SB2516	30G1,5	20,6	700
SB2517	34G1,5	22,0	800
SB2518	37G1,5	22,0	830
SB2519	40G1,5	23,2	915
SB2520	42G1,5	24,9	980
SB2521	50G1,5	26,5	1160
SB2522	56G1,5	27,3	1260
SB2523	61G1,5	28,0	1350
SB2524	2x2,5	9,6	130
SB2525	3G2,5	10,1	154
SB2526	3x2,5	10,1	154
SB2527	4G2,5	10,9	188
SB2528	4x2,5	10,9	188
SB2529	5G2,5	11,8	225
SB2530	5x2,5	11,8	225
SB2531	6G2,5	12,9	270
SB2532	6x2,5	12,9	270
SB2533	7G2,5	12,9	285
SB2534	7x2,5	12,9	285
SB2535	10G2,5	17,0	435
SB2536	12G2,5	17,0	465
SB2537	12x2,5	17,0	465
SB2538	14G2,5	17,8	525
SB2539	16G2,5	18,7	590
SB2540	18G2,5	19,8	670
SB2541	21G2,5	20,7	750
SB2542	25G2,5	23,7	920
SB2543	30G2,5	24,5	1040
SB2544	34G2,5	26,9	1230
SB2545	37G2,5	26,9	1280
SB2546	42G2,5	29,9	1470
SB2547	50G2,5	31,2	1690
SB2548	2x4,0	11,1	180
SB2549	3G4,0	11,7	220
SB2550	3x4,0	11,7	220
SB2551	4G4,0	12,7	275
SB2552	5G4,0	13,7	330
SB2553	7G4,0	14,8	415
SB2554	10G4,0	19,9	645
SB2555	12G4,0	19,9	700

BiT 500[®] (St) BLACK FR

Flexible, highly flame retardant screened control cables for outdoor applications, with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2556	2x2x0,5	9,3	102
SB2557	3x2x0,5	10,2	116
SB2558	4x2x0,5	10,9	134
SB2559	5x2x0,5	11,6	160
SB2560	6x2x0,5	12,0	170
SB2561	7x2x0,5	13,2	194
SB2562	8x2x0,5	13,7	215
SB2563	10x2x0,5	14,6	250
SB2564	12x2x0,5	15,5	285
SB2565	14x2x0,5	16,3	320
SB2566	16x2x0,5	18,0	385
SB2567	18x2x0,5	18,7	415
SB2568	20x2x0,5	19,4	455
SB2569	24x2x0,5	19,9	515
SB2570	2x2x0,75	10,0	120
SB2571	3x2x0,75	11,0	136
SB2572	4x2x0,75	11,7	160
SB2573	5x2x0,75	12,5	196
SB2574	6x2x0,75	12,9	210
SB2575	7x2x0,75	14,3	240
SB2576	8x2x0,75	14,9	265
SB2577	10x2x0,75	15,8	310
SB2578	12x2x0,75	17,4	380
SB2579	14x2x0,75	18,4	425
SB2580	16x2x0,75	19,8	490
SB2581	18x2x0,75	20,5	525
SB2582	20x2x0,75	21,1	570
SB2583	24x2x0,75	21,7	650
SB2584	2x2x1,0	10,5	138
SB2585	3x2x1,0	11,5	156
SB2586	4x2x1,0	12,4	188
SB2587	5x2x1,0	13,2	230
SB2588	6x2x1,0	13,6	245

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB2589	7x2x1,0	15,1	280
SB2590	8x2x1,0	15,7	310
SB2591	10x2x1,0	17,4	390
SB2592	12x2x1,0	18,4	445
SB2593	14x2x1,0	19,7	510
SB2594	16x2x1,0	20,9	580
SB2595	18x2x1,0	21,8	625
SB2596	20x2x1,0	22,8	700
SB2597	24x2x1,0	23,4	800
SB2598	2x2x1,5	11,7	174
SB2599	3x2x1,5	13,0	200
SB2600	4x2x1,5	14,0	245
SB2601	5x2x1,5	15,0	300
SB2602	6x2x1,5	15,5	325
SB2603	7x2x1,5	17,8	395
SB2604	8x2x1,5	18,6	435
SB2605	10x2x1,5	20,0	525
SB2606	12x2x1,5	21,3	605
SB2607	14x2x1,5	22,9	705
SB2608	16x2x1,5	24,4	805
SB2609	18x2x1,5	25,4	870
SB2610	20x2x1,5	26,8	980
SB2611	24x2x1,5	27,5	1130
SB2612	2x2x2,5	13,5	235
SB2613	3x2x2,5	15,0	275
SB2614	4x2x2,5	16,3	335
SB2615	5x2x2,5	18,1	440
SB2616	6x2x2,5	18,7	485
SB2617	7x2x2,5	21,0	565
SB2618	8x2x2,5	21,9	625
SB2619	10x2x2,5	23,9	770
SB2620	12x2x2,5	25,4	890
SB2621	14x2x2,5	27,5	1050
SB2622	16x2x2,5	29,3	1200

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] BiT 500[®] 2(St) BLACK FR

RoHS 2015/863/EU
 CE
 LVD 2014/35/EU
 CPR
 CPR 305/2011
 24 months warranty

Control cables 300/500 V

Flexible, individually and collectively screened highly flame retardant control cables for outdoor applications, with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:
Operating temperature:
 fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C

Electrical parameters:
Operating voltage: U_i/U = 300/500 V
Test voltage (50 Hz): 3000 V
Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:
 fixed installation: 6 x Ø
 flexible connections: 12 x Ø

Design:

Conductors: bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation: PVC compound

Core identification: black, number coded conductors

Core arrangement: twisted screened pairs

Individual screen: aluminum backed polyester tape with tinned copper drain wire underneath each pair

Collective screen: aluminum backed polyester tape with tinned copper drain wire

Outer sheath: PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant; colour: black

Application:

Flexible control cables designed for operation in control and protective devices as well as in control circuits. Individual screening of pairs decreases signal interferences from adjacent pairs. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation. Outer sheath is UV resistant. **Designed for direct burial in ground.** Insulation materials and conductor construction in BiT 500[®] 2(St) BLACK FR cable enable easy and fast connections and ensure their high durability. Cables classified according to EN 50575 (CPR).

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3000	2x2x0,5	9,3	114
SB3001	3x2x0,5	10,2	132
SB3002	4x2x0,5	10,9	158
SB3003	5x2x0,5	11,6	188
SB3004	6x2x0,5	12,0	204
SB3005	7x2x0,5	13,2	235
SB3006	8x2x0,5	13,7	260
SB3007	10x2x0,5	14,6	305
SB3008	12x2x0,5	15,5	350
SB3009	14x2x0,5	16,3	395
SB3010	16x2x0,5	18,0	475
SB3011	18x2x0,5	18,7	515
SB3012	20x2x0,5	19,4	570
SB3013	24x2x0,5	19,9	650
SB3014	2x2x0,75	10,0	132
SB3015	3x2x0,75	11,0	154
SB3016	4x2x0,75	11,7	184
SB3017	5x2x0,75	12,5	226
SB3018	6x2x0,75	12,9	245
SB3019	7x2x0,75	14,3	280
SB3020	8x2x0,75	14,9	310
SB3021	10x2x0,75	15,8	370
SB3022	12x2x0,75	17,4	450
SB3023	14x2x0,75	18,4	510
SB3024	16x2x0,75	19,8	585
SB3025	18x2x0,75	20,5	635

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3026	20x2x0,75	21,1	690
SB3027	24x2x0,75	21,7	795
SB3028	2x2x1,0	10,5	154
SB3029	3x2x1,0	11,5	180
SB3030	4x2x1,0	12,4	220
SB3031	5x2x1,0	13,2	270
SB3032	6x2x1,0	13,6	295
SB3033	7x2x1,0	15,1	335
SB3034	8x2x1,0	15,7	375
SB3035	10x2x1,0	17,4	470
SB3036	12x2x1,0	18,4	540
SB3037	14x2x1,0	19,7	625
SB3038	16x2x1,0	20,9	710
SB3039	18x2x1,0	21,8	770
SB3040	20x2x1,0	22,8	860
SB3041	24x2x1,0	23,4	995
SB3042	2x2x1,5	11,7	190
SB3043	3x2x1,5	13,0	226
SB3044	4x2x1,5	14,0	275
SB3045	5x2x1,5	15,0	340
SB3046	6x2x1,5	15,5	375
SB3047	7x2x1,5	17,8	455
SB3048	8x2x1,5	18,6	505
SB3049	10x2x1,5	20,0	610
SB3050	12x2x1,5	21,3	705
SB3051	14x2x1,5	22,9	820

BiT 500[®] 2(St) BLACK FR

Flexible, individually and collectively screened highly flame retardant control cables for outdoor applications, with number coded conductors, rated 300/500 V

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3052	16x2x1,5	24,4	935
SB3053	18x2x1,5	25,4	1015
SB3054	20x2x1,5	26,8	1150
SB3055	24x2x1,5	27,5	1330
SB3056	2x2x2,5	13,5	255
SB3057	3x2x2,5	15,0	300
SB3058	4x2x2,5	16,3	370
SB3059	5x2x2,5	18,1	485

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3060	6x2x2,5	18,7	535
SB3061	7x2x2,5	21,0	625
SB3062	8x2x2,5	21,9	695
SB3063	10x2x2,5	23,9	855
SB3064	12x2x2,5	25,4	995
SB3065	14x2x2,5	27,5	1170
SB3066	16x2x2,5	29,3	1340

*Outer diameter tolerance: +/-5 %

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] BtT 500[®] PUR



Control cables 300/500 V

Flexible, PUR sheathed control cables with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:
Operating temperature:
 fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C
 occasional flexing: -15 °C* to 80 °C

Electrical parameters:
Operating voltage: U₀/U = 300/500 V
Test voltage (50 Hz): 3000 V
Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:
 flexible connections: 7,5 x Ø
 fixed installation: 4 x Ø

*minimum temperature for occasional flexing with bending radius not smaller than 15 x D. Bending test at low temperature (-15 °C acc. to EN 60811-504).

Design::

Conductors: bare copper conductors, multi-stranded class 5 acc. to EN 60228
Insulation: PVC compound
Core identification: black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)
Core arrangement: cores twisted together
Outer sheath: special PUR compound, oil resistant (EN 60811-404), resistant to hydrocarbons, industrial coolants and UV radiation; colour: grey

Application:

Flexible power and control cables with high level of resistance to environmental conditions designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. Cables are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. They can be installed outdoors – UV resistance and increased mechanical protection due to special outer sheath compound. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54700	2x0,5	5,0	33
S54701	3G0,5	5,3	39
S54702	3x0,5	5,3	39
S54703	4G0,5	5,7	47
S54704	4x0,5	5,7	47
S54705	5G0,5	6,2	58
S54706	5x0,5	6,2	58
S54707	6G0,5	7,9	91
S54708	7G0,5	7,9	94
S54709	7x0,5	7,9	94
S54710	8G0,5	8,6	109
S54711	10G0,5	10,0	137
S54712	12G0,5	10,3	151
S54713	12x0,5	10,3	151
S54714	14G0,5	10,7	168
S54715	14x0,5	10,7	168
S54716	16G0,5	11,4	191
S54717	18G0,5	12,0	210
S54718	19G0,5	12,0	214
S54720	21G0,5	12,5	234
S54800	25G0,5	13,9	270
S54722	27G0,5	14,2	291
S54723	30G0,5	14,6	315
S54724	37G0,5	16,1	384
S54725	2x0,75	5,4	40
S54726	3G0,75	5,7	49
S54727	3x0,75	5,7	49
S54728	4G0,75	6,2	59
S54729	4x0,75	6,2	59
S54730	5G0,75	7,0	76
S54731	5x0,75	7,0	76

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54732	6G0,75	8,5	112
S54733	7G0,75	8,5	116
S54734	7x0,75	8,5	116
S54735	8G0,75	9,6	141
S54736	10G0,75	10,8	169
S54737	12G0,75	11,3	192
S54738	12x0,75	11,3	192
S54739	14G0,75	11,8	214
S54740	14x0,75	11,8	214
S54741	16G0,75	12,4	239
S54742	18G0,75	13,0	264
S54743	19G0,75	13,0	268
S54745	21G0,75	13,7	299
S54801	25G0,75	15,1	339
S54747	2x1,0	5,7	46
S54748	3G1,0	6,0	57
S54749	3x1,0	6,0	57
S54750	4G1,0	6,8	73
S54751	4x1,0	6,8	73
S54752	5G1,0	7,4	89
S54753	5x1,0	7,4	89
S54754	6G1,0	9,3	139
S54755	7G1,0	9,3	143
S54756	7x1,0	9,3	143
S54757	8G1,0	10,1	165
S54758	10G1,0	11,6	202
S54759	12G1,0	11,9	225
S54760	12x1,0	11,9	225
S54761	14G1,0	12,4	251
S54762	14x1,0	12,4	251
S54763	16G1,0	13,1	282

BiT 500[®]PUR

Flexible, PUR sheathed control cables with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54764	18G1,0	16,4	319
S54765	19G1,0	6,4	324
S54767	21G1,0	7,0	354
S54802	25G1,0	7,0	415
S54769	2x1,5	7,6	61
S54770	3G1,5	7,6	80
S54771	3x1,5	8,3	80
S54772	4G1,5	8,3	99
S54773	4x1,5	10,4	99
S54774	5G1,5	10,4	121
S54775	5x1,5	10,4	121
S54776	6G1,5	11,5	181
S54777	7G1,5	13,0	189
S54778	7x1,5	13,6	189
S54779	8G1,5	13,9	223
S54780	10G1,5	13,9	268

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54781	12G1,5	14,5	307
S54782	12x1,5	13,6	307
S54783	2x2,5	7,7	93
S54784	3G2,5	8,2	118
S54785	3x2,5	8,2	118
S54786	4G2,5	9,4	154
S54787	4x2,5	9,4	154
S54788	5G2,5	10,2	189
S54789	5x2,5	10,2	189
S54790	6G2,5	12,2	267
S54791	7G2,5	12,2	281
S54792	7x2,5	12,2	281
S54793	8G2,5	13,6	331
S54794	10G2,5	15,4	399
S54795	12G2,5	16,3	464

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] CPUR

RoHS 2015/863/EU
 CE
 LVD 2014/35/EU
 CPR
 CPR 305/2011
 24 months warranty

Control cables 300/500 V

Flexible, screened, PUR sheathed control cables with number coded conductors, rated 300/500 V



							
industrial application	internal application	external application	oil resistant EN 60811-404	chemical resistance	UV resistant	high flexibility	EMC

Technical data:

Thermal parameters:
Operating temperature:
 fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C

Electrical parameters:
Operating voltage: $U_0/U = 300/500$ V
Test voltage (50 Hz): 3000 V
Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:
 flexible connections: 12 x Ø
 fixed installation: 6 x Ø

Design:

Conductors: bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation: PVC compound

Core identification: black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement: cores twisted together

Inner sheath: PVC compound

Screen: tinned copper wire braid, coverage ≥85%

Outer sheath: special PUR compound, oil resistant (EN 60811-404), resistant to hydrocarbons, industrial coolants and UV radiation; colour: grey

Application:

Flexible power and control cables with high level of resistance to environmental conditions designed for operation in control and protective devices as well as in control circuits. Also for power supply to low power portable and mobile devices. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field especially in industrial environment. Reciprocal connection of screen to earth ensures full electromagnetic compatibility (EMC). Cables are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. They can be installed outdoors – UV resistance and increased mechanical protection due to special outer sheath compound. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54850	2x0,5	7,1	78
S54851	3G0,5	7,4	86
S54852	4G0,5	7,8	97
S54853	5G0,5	8,3	111
S54854	6G0,5	9,3	132
S54855	7G0,5	9,3	136
S54856	8G0,5	10,0	154
S54857	10G0,5	11,0	180
S54858	12G0,5	11,5	200
S54859	14G0,5	11,9	218
S54860	16G0,5	12,4	241
S54861	18G0,5	13,0	262
S54862	19G0,5	13,0	265
S54864	21G0,5	13,7	293
S54920	25G0,5	14,9	330
S54866	27G0,5	15,2	352
S54867	30G0,5	16,0	391
S54868	37G0,5	17,1	453
S54869	2x0,75	7,5	88
S54870	3G0,75	7,8	98
S54871	4G0,75	8,3	113
S54872	5G0,75	9,3	138
S54873	6G0,75	9,9	157

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54874	7G0,75	9,9	161
S54875	8G0,75	10,6	183
S54876	10G0,75	12,0	220
S54877	12G0,75	12,3	241
S54878	14G0,75	12,8	264
S54879	16G0,75	13,6	298
S54880	18G0,75	14,2	326
S54881	19G0,75	14,2	330
S54883	21G0,75	14,7	358
S54921	25G0,75	16,5	417
S54885	2x1,0	7,8	97
S54886	3G1,0	8,1	111
S54887	4G1,0	9,1	135
S54888	5G1,0	9,7	156
S54889	6G1,0	10,3	178
S54890	7G1,0	10,3	183
S54891	8G1,0	11,3	212
S54892	10G1,0	12,6	252
S54893	12G1,0	12,9	276
S54894	14G1,0	13,6	310
S54895	16G1,0	14,3	344
S54896	18G1,0	14,9	379
S54897	19G1,0	14,9	383

BIT 500[®] CPUR

Flexible, screened, PUR sheathed control cables with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54899	21G1,0	15,9	430
S54922	25G1,0	17,4	485
S54901	2x1,5	8,5	119
S54902	3G1,5	9,3	144
S54903	4G1,5	9,9	168
S54904	5G1,5	10,6	197
S54905	6G1,5	11,6	230
S54906	7G1,5	11,6	238
S54907	8G1,5	12,5	273
S54908	10G1,5	14,2	330

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S54909	12G1,5	14,6	365
S54910	2x2,5	10,0	167
S54911	3G2,5	10,5	196
S54912	4G2,5	11,5	234
S54913	5G2,5	12,3	276
S54914	6G2,5	13,2	320
S54915	7G2,5	13,2	333
S54916	8G2,5	14,6	389
S54917	10G2,5	16,8	479
S54918	12G2,5	17,3	534

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®]H



Control cables 300/500 V

Flexible, halogen-free control cables with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

fixed installation: 5 x Ø
flexible connections: 10 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

black, number coded conductors

Core arrangement:

cores twisted together or pairs twisted together

Outer sheath:

special halogen-free compound, self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C); colour: grey

Application:

Flexible, halogen-free power and control cables designed for operation in control and protective devices as well as in control circuits. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables are halogen-free, low smoke and significantly limit flame propagation. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H50001	2x0,5	5,0	36
H50002	3G0,5	5,3	43
H50003	3x0,5	5,3	43
H50004	4G0,5	5,8	51
H50005	4x0,5	5,8	51
H50006	5G0,5	6,3	62
H50007	5x0,5	6,3	62
H50008	6G0,5	7,0	74
H50009	7G0,5	7,0	78
H50010	7x0,5	7,0	78
H50011	8G0,5	7,7	91
H50012	8x0,5	7,7	91
H50013	10G0,5	9,4	118
H50014	12G0,5	9,4	132
H50015	12x0,5	9,4	132
H50016	14G0,5	9,8	147
H50017	16G0,5	10,4	165
H50018	18G0,5	10,9	183
H50019	19G0,5	10,9	187
H50021	21G0,5	11,6	211
H50102	25G0,5	13,1	239
H50023	27G0,5	13,1	260
H50024	30G0,5	13,8	289
H51815	34G0,5	14,8	335
H50025	37G0,5	14,8	343
H51816	40G0,5	15,3	370
H51817	42G0,5	16,9	415
H51818	50G0,5	17,6	475
H51819	56G0,5	18,4	525
H51820	61G0,5	18,9	560

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H50026	2x0,75	5,4	44
H50027	3G0,75	5,7	53
H50028	3x0,75	5,7	53
H50029	4G0,75	6,3	63
H50030	4x0,75	6,3	63
H50031	5G0,75	7,0	81
H50032	5x0,75	7,0	81
H50033	6G0,75	7,6	95
H50034	6x0,75	7,6	95
H50035	7G0,75	7,6	99
H50036	7x0,75	7,6	99
H50037	8G0,75	8,4	114
H50038	8x0,75	8,4	114
H50039	10G0,75	10,2	147
H50040	12G0,75	10,2	166
H50041	12x0,75	10,2	166
H50042	14G0,75	10,7	186
H50043	16G0,75	11,5	216
H50044	18G0,75	12,1	240
H50045	19G0,75	12,1	244
H50047	21G0,75	12,7	268
H50103	25G0,75	14,5	311
H51821	27G0,75	14,5	345
H51822	30G0,75	15,0	375
H51823	34G0,75	16,6	450
H51824	37G0,75	16,6	465
H51825	40G0,75	17,2	500
H51826	42G0,75	18,7	545
H51827	50G0,75	19,5	625
H51828	56G0,75	20,1	675
H51829	61G0,75	20,7	725

BIT 500[®]H

Flexible, halogen-free control cables with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H50049	2x1,0	5,7	50
H50050	3G1,0	6,1	62
H50051	3x1,0	6,1	62
H50052	4G1,0	6,8	78
H50053	4x1,0	6,8	78
H50054	5G1,0	7,4	95
H50055	5x1,0	7,4	95
H50056	6G1,0	8,0	113
H50057	6x1,0	8,0	113
H50058	7G1,0	8,0	117
H50059	7x1,0	8,0	117
H50060	8G1,0	9,3	145
H50061	10G1,0	10,9	174
H50062	10x1,0	10,9	174
H50063	12G1,0	10,9	197
H50064	12x1,0	10,9	197
H50065	14G1,0	11,6	228
H50066	16G1,0	12,2	257
H50067	18G1,0	12,8	287
H50068	18x1,0	12,8	287
H50069	19G1,0	12,8	292
H50072	21G1,0	13,7	328
H50104	25G1,0	15,5	372
H51830	27G1,0	15,5	415
H51831	30G1,0	16,4	470
H51832	34G1,0	17,6	540
H51833	37G1,0	17,6	560
H51834	40G1,0	18,5	610
H51835	42G1,0	19,9	655
H51836	50G1,0	20,8	755
H51837	56G1,0	21,6	830
H51838	61G1,0	22,2	890
H50074	2x1,5	6,7	66
H50075	3G1,5	7,1	86
H50076	3x1,5	7,1	86
H50077	4G1,5	7,8	105
H50078	4x1,5	7,8	105
H50079	5G1,5	8,5	128
H50080	5x1,5	8,5	128
H50081	6G1,5	9,6	162
H50106	6x1,5	9,6	162
H50082	7G1,5	9,6	169
H50083	7x1,5	9,6	169
H50084	8G1,5	10,6	196
H50085	10G1,5	12,7	265
H50107	10x1,5	12,7	265
H50086	12G1,5	12,7	275
H50087	12x1,5	12,7	275

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H51839	14G1,5	13,5	325
H51840	16G1,5	14,3	370
H50105	18G1,5	15,0	410
H51841	19G1,5	15,0	420
H51842	21G1,5	16,2	475
H51843	25G1,5	18,5	580
H51844	27G1,5	18,5	600
H51845	30G1,5	19,2	655
H51846	34G1,5	20,6	755
H51847	37G1,5	20,6	785
H51848	40G1,5	21,6	855
H51849	42G1,5	23,3	920
H51850	50G1,5	24,7	1080
H51851	56G1,5	25,5	1180
H51852	61G1,5	26,2	1270
H50088	2x2,5	7,8	100
H50089	3G2,5	8,3	125
H50090	3x2,5	8,3	125
H50091	4G2,5	9,5	163
H50092	4x2,5	9,5	163
H50093	5G2,5	10,4	199
H50094	5x2,5	10,4	199
H50108	6x2,5	11,5	243
H50095	6G2,5	11,5	243
H50096	7G2,5	11,5	256
H50097	7x2,5	11,5	256
H50098	8G2,5	12,5	298
H50099	10G2,5	15,2	368
H50100	12G2,5	15,2	420
H50101	12x2,5	15,2	420
H51853	14G2,5	16,4	495
H51854	16G2,5	17,3	560
H51855	18G2,5	18,4	630
H51856	21G2,5	19,3	710
H51857	25G2,5	22,1	870
H51858	30G2,5	22,9	985
H51859	34G2,5	25,1	1160
H51860	37G2,5	25,1	1210
H51861	42G2,5	28,1	1390
H51862	50G2,5	29,4	1610
H51863	2x4,0	9,3	152
H51864	3G4,0	10,3	202
H51871	3x4,0	10,3	202
H51865	4G4,0	11,3	255
H51866	5G4,0	12,6	310
H51867	7G4,0	13,7	395
H51868	10G4,0	18,7	615
H51869	12G4,0	18,7	675

BiT 500[®]H

Flexible, halogen-free control cables with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H52000	2x2x0,5	7,3	63
H52001	3x2x0,5	8,2	72
H52002	4x2x0,5	9,3	97
H52003	5x2x0,5	10,0	122
H52004	6x2x0,5	10,4	130
H52005	7x2x0,5	11,8	156
H52006	8x2x0,5	12,3	172
H52007	10x2x0,5	13,2	205
H52008	12x2x0,5	14,3	245
H52009	14x2x0,5	15,1	275
H52010	16x2x0,5	16,6	335
H52011	18x2x0,5	17,3	360
H52012	20x2x0,5	17,8	390
H52013	24x2x0,5	18,5	455
H52014	2x2x0,75	8,0	80
H52015	3x2x0,75	9,4	98
H52016	4x2x0,75	10,1	122
H52017	5x2x0,75	10,9	152
H52018	6x2x0,75	11,5	170
H52019	7x2x0,75	12,9	196
H52020	8x2x0,75	13,7	225
H52021	10x2x0,75	14,6	270
H52022	12x2x0,75	16,0	325
H52023	14x2x0,75	17,0	370
H52024	16x2x0,75	18,4	435
H52025	18x2x0,75	19,1	470
H52026	20x2x0,75	19,7	510
H52027	24x2x0,75	20,3	590
H52028	2x2x1,0	8,5	92
H52029	3x2x1,0	9,9	116
H52030	4x2x1,0	10,8	142
H52031	5x2x1,0	11,8	184
H52032	6x2x1,0	12,2	202

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H52033	7x2x1,0	13,9	240
H52034	8x2x1,0	14,5	270
H52035	10x2x1,0	15,6	320
H52036	12x2x1,0	17,0	390
H52037	14x2x1,0	18,3	450
H52038	16x2x1,0	19,5	515
H52039	18x2x1,0	20,4	560
H52040	20x2x1,0	21,0	610
H52041	24x2x1,0	21,8	720
H52042	2x2x1,5	10,1	132
H52043	3x2x1,5	11,6	160
H52044	4x2x1,5	12,6	198
H52045	5x2x1,5	13,8	258
H52046	6x2x1,5	14,3	280
H52047	7x2x1,5	16,4	340
H52048	8x2x1,5	17,2	380
H52049	10x2x1,5	18,6	465
H52050	12x2x1,5	19,9	540
H52051	14x2x1,5	21,1	620
H52052	16x2x1,5	22,8	720
H52053	18x2x1,5	23,8	785
H52054	20x2x1,5	25,0	880
H52055	24x2x1,5	25,7	1020
H52056	2x2x2,5	12,1	192
H52057	3x2x2,5	13,8	235
H52058	4x2x2,5	15,1	295
H52059	5x2x2,5	16,7	385
H52060	6x2x2,5	17,3	425
H52061	7x2x2,5	19,6	500
H52062	8x2x2,5	20,5	560
H52063	10x2x2,5	22,3	690
H52064	12x2x2,5	23,8	805
H52065	14x2x2,5	25,7	945
H52066	16x2x2,5	27,5	1085

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x - cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®](St)H



Flexible, halogen-free, screened control cables with number coded conductors, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_n/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

fixed installation: 5 x Ø
flexible connections: 10 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Screen:

aluminum backed polyester tape with tinned copper drain wire

Outer sheath:

special halogen-free compound, self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C); colour: grey

Application:

Flexible, halogen-free power and control cables designed for operation in control and protective devices as well as in control circuits. Common screen improves protection of transmitted signals against external electromagnetic field. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Insulation materials and conductor construction in BiT 500[®](St)H cable enable easy and fast connections and ensure their high durability. Cables are halogen-free, low smoke and significantly limit flame propagation. Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4250	2x0,5	5,2	40
SB4251	3G0,5	5,5	44
SB4252	3x0,5	5,5	44
SB4253	4G0,5	6,0	52
SB4254	4x0,5	6,0	52
SB4255	5G0,5	6,5	64
SB4256	5x0,5	6,5	64
SB4257	6G0,5	7,2	76
SB4258	7G0,5	7,2	80
SB4259	7x0,5	7,2	80
SB4260	8G0,5	8,1	94
SB4261	8x0,5	8,1	94
SB4262	10G0,5	9,8	126
SB4263	12G0,5	9,8	134
SB4264	12x0,5	9,8	134
SB4265	14G0,5	10,2	150
SB4266	16G0,5	10,8	168
SB4267	18G0,5	11,5	192
SB4268	19G0,5	11,5	196
SB4269	21G0,5	12,0	215
SB4270	25G0,5	13,7	260
SB4271	27G0,5	13,7	270
SB4272	30G0,5	14,2	295
SB4273	34G0,5	15,2	335
SB4274	37G0,5	15,2	345
SB4275	40G0,5	16,1	390
SB4276	42G0,5	17,3	415
SB4277	50G0,5	18,2	485

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4278	56G0,5	18,8	525
SB4279	61G0,5	19,3	560
SB4280	2x0,75	5,6	48
SB4281	3G0,75	5,9	54
SB4282	3x0,75	5,9	54
SB4283	4G0,75	6,5	66
SB4284	4x0,75	6,5	66
SB4285	5G0,75	7,2	81
SB4286	5x0,75	7,2	81
SB4287	6G0,75	7,8	96
SB4288	6x0,75	7,8	96
SB4289	7G0,75	7,8	102
SB4290	7x0,75	7,8	102
SB4291	8G0,75	9,2	126
SB4292	8x0,75	9,2	126
SB4293	10G0,75	10,6	159
SB4294	12G0,75	10,6	168
SB4295	12x0,75	10,6	168
SB4296	14G0,75	11,3	195
SB4297	16G0,75	11,9	220
SB4298	18G0,75	12,5	245
SB4299	19G0,75	12,5	250
SB4300	21G0,75	13,1	275
SB4301	25G0,75	14,9	335
SB4302	27G0,75	14,9	345
SB4303	30G0,75	15,4	375
SB4304	34G0,75	17,0	450
SB4305	37G0,75	17,0	465

BiT 500[®](St)H

Flexible, halogen-free, screened control cables with number coded conductors, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4306	40G0,75	17,6	500
SB4307	42G0,75	19,1	540
SB4308	50G0,75	19,9	620
SB4309	56G0,75	20,5	675
SB4310	61G0,75	21,1	725
SB4311	2x1,0	5,9	54
SB4312	3G1,0	6,3	64
SB4313	3x1,0	6,3	64
SB4314	4G1,0	7,0	80
SB4315	4x1,0	7,0	80
SB4316	5G1,0	7,6	98
SB4317	5x1,0	7,6	98
SB4318	6G1,0	8,2	114
SB4319	6x1,0	8,2	114
SB4320	7G1,0	8,2	120
SB4321	7x1,0	8,2	120
SB4322	8G1,0	9,7	148
SB4323	10G1,0	11,5	194
SB4324	10x1,0	11,5	194
SB4325	12G1,0	11,5	210
SB4326	12x1,0	11,5	210
SB4327	14G1,0	12,0	235
SB4328	16G1,0	12,6	265
SB4329	18G1,0	13,2	295
SB4330	18x1,0	13,2	295
SB4331	19G1,0	13,2	300
SB4332	21G1,0	14,1	335
SB4333	25G1,0	16,3	415
SB4334	27G1,0	16,3	430
SB4335	30G1,0	16,8	470
SB4336	34G1,0	18,2	550
SB4337	37G1,0	18,2	565
SB4338	40G1,0	18,9	610
SB4339	42G1,0	20,3	650
SB4340	50G1,0	21,2	750
SB4341	56G1,0	22,0	830
SB4342	61G1,0	22,6	890
SB4343	2x1,5	6,9	74
SB4344	3G1,5	7,3	86
SB4345	3x1,5	7,3	86
SB4346	4G1,5	8,0	108
SB4347	4x1,5	8,0	108
SB4348	5G1,5	9,1	138
SB4349	5x1,5	9,1	138
SB4350	6G1,5	9,8	162
SB4351	6x1,5	9,8	162
SB4352	7G1,5	9,8	172
SB4353	7x1,5	9,8	172
SB4354	8G1,5	11,0	200
SB4355	10G1,5	13,1	260

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4356	10x1,5	13,1	260
SB4357	12G1,5	13,1	280
SB4358	12x1,5	13,1	280
SB4359	14G1,5	13,9	325
SB4360	16G1,5	14,7	365
SB4361	18G1,5	15,4	410
SB4362	19G1,5	15,4	420
SB4363	21G1,5	16,6	475
SB4364	25G1,5	18,9	575
SB4365	27G1,5	18,9	595
SB4366	30G1,5	19,6	650
SB4367	34G1,5	21,0	750
SB4368	37G1,5	21,0	780
SB4369	40G1,5	22,0	850
SB4370	42G1,5	23,7	910
SB4371	50G1,5	25,1	1080
SB4372	56G1,5	25,9	1180
SB4373	61G1,5	26,6	1260
SB4374	2x2,5	8,0	96
SB4375	3G2,5	8,5	118
SB4376	3x2,5	8,5	118
SB4377	4G2,5	9,7	160
SB4378	4x2,5	9,7	160
SB4379	5G2,5	10,6	192
SB4380	5x2,5	10,6	192
SB4381	6G2,5	11,9	240
SB4382	6x2,5	11,9	240
SB4383	7G2,5	11,9	255
SB4384	7x2,5	11,9	255
SB4385	10G2,5	16,0	395
SB4386	12G2,5	16,0	430
SB4387	12x2,5	16,0	430
SB4388	14G2,5	16,8	485
SB4389	16G2,5	17,7	550
SB4390	18G2,5	18,8	625
SB4391	21G2,5	19,7	705
SB4392	25G2,5	22,5	855
SB4393	30G2,5	23,3	970
SB4394	34G2,5	25,5	1150
SB4395	37G2,5	25,5	1190
SB4396	42G2,5	28,5	1370
SB4397	50G2,5	29,8	1590
SB4398	2x4,0	9,9	150
SB4399	3G4,0	10,5	190
SB4400	3x4,0	10,5	190
SB4401	4G4,0	11,7	240
SB4402	5G4,0	12,7	300
SB4403	7G4,0	14,0	390
SB4404	10G4,0	18,9	600
SB4405	12G4,0	18,9	660

BiT 500[®](St)H

Flexible, halogen-free, screened control cables with number coded conductors, rated 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4406	2x2x0,5	7,7	70
SB4407	3x2x0,5	8,6	80
SB4408	4x2x0,5	9,7	106
SB4409	5x2x0,5	10,4	130
SB4410	6x2x0,5	10,8	138
SB4411	7x2x0,5	12,2	166
SB4412	8x2x0,5	12,7	182
SB4413	10x2x0,5	13,8	220
SB4414	12x2x0,5	14,7	255
SB4415	14x2x0,5	15,5	290
SB4416	16x2x0,5	17,0	345
SB4417	18x2x0,5	17,7	370
SB4418	20x2x0,5	18,4	410
SB4419	24x2x0,5	18,9	470
SB4420	2x2x0,75	8,4	86
SB4421	3x2x0,75	9,8	106
SB4422	4x2x0,75	10,5	130
SB4423	5x2x0,75	11,5	168
SB4424	6x2x0,75	11,9	180
SB4425	7x2x0,75	13,3	205
SB4426	8x2x0,75	14,1	235
SB4427	10x2x0,75	15,0	280
SB4428	12x2x0,75	16,4	340
SB4429	14x2x0,75	17,4	380
SB4430	16x2x0,75	18,8	445
SB4431	18x2x0,75	19,5	480
SB4432	20x2x0,75	20,1	520
SB4433	24x2x0,75	20,7	600
SB4434	2x2x1,0	9,3	110
SB4435	3x2x1,0	10,3	126
SB4436	4x2x1,0	11,2	154
SB4437	5x2x1,0	12,2	196
SB4438	6x2x1,0	12,6	214

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4439	7x2x1,0	14,3	255
SB4440	8x2x1,0	14,9	280
SB4441	10x2x1,0	16,4	350
SB4442	12x2x1,0	17,4	405
SB4443	14x2x1,0	18,7	465
SB4444	16x2x1,0	19,9	530
SB4445	18x2x1,0	20,8	575
SB4446	20x2x1,0	21,6	635
SB4447	24x2x1,0	22,2	735
SB4448	2x2x1,5	10,5	142
SB4449	3x2x1,5	12,0	172
SB4450	4x2x1,5	13,0	210
SB4451	5x2x1,5	14,2	270
SB4452	6x2x1,5	14,7	295
SB4453	7x2x1,5	16,8	355
SB4454	8x2x1,5	17,6	395
SB4455	10x2x1,5	19,0	480
SB4456	12x2x1,5	20,3	555
SB4457	14x2x1,5	21,7	645
SB4458	16x2x1,5	23,2	735
SB4459	18x2x1,5	24,2	800
SB4460	20x2x1,5	25,4	895
SB4461	24x2x1,5	26,1	1035
SB4462	2x2x2,5	12,5	205
SB4463	3x2x2,5	14,2	245
SB4464	4x2x2,5	15,5	305
SB4465	5x2x2,5	17,1	400
SB4466	6x2x2,5	17,7	440
SB4467	7x2x2,5	20,0	515
SB4468	8x2x2,5	20,9	575
SB4469	10x2x2,5	22,7	705
SB4470	12x2x2,5	24,2	820
SB4471	14x2x2,5	26,1	960
SB4472	16x2x2,5	27,9	1100

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

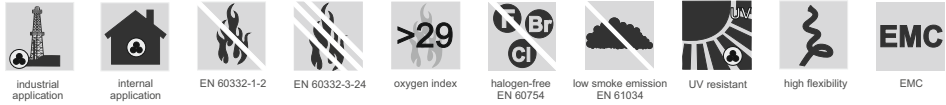
x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®](St)CH



Flexible, double screened, halogen-free control cables with number coded conductors, 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 70 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

fixed installation: 5 x Ø
flexible connections: 10 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5

acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

black, number coded conductors

Core arrangement:

cores twisted together or pairs twisted together

Screen:

electrostatic screen made of aluminium backed polyester tape and a second screen made of tinned copper wire braid, total screen coverage 100%

Outer sheath:

special halogen-free compound, self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C); colour: grey

Application:

Flexible, halogen-free power and control cables designed for operation in control and protective devices as well as in control circuits. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Common screen of tinned copper wire braid and metalized tape ensures very good protection against external electromagnetic field (screen attenuation ca. 50 dB). Cables are halogen-free, low smoke and significantly limit flame propagation.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB9700	2x0,5	5,6	44
SB9701	3G0,5	5,9	48
SB9702	3x0,5	5,9	48
SB9703	4G0,5	6,4	58
SB9704	4x0,5	6,4	58
SB9705	5G0,5	7,1	72
SB9706	5x0,5	7,1	72
SB9707	6G0,5	7,6	84
SB9708	7G0,5	7,6	88
SB9709	7x0,5	7,6	88
SB9710	8G0,5	8,6	110
SB9711	8x0,5	8,6	110
SB9712	10G0,5	10,2	145
SB9713	12G0,5	10,2	155
SB9714	12x0,5	10,2	155
SB9715	14G0,5	10,6	170
SB9716	16G0,5	11,3	190
SB9717	18G0,5	11,9	220
SB9718	19G0,5	12,0	220
SB9720	21G0,5	12,4	240
SB9722	25G0,5	14,1	295
SB9723	27G0,5	14,1	300
SB9724	30G0,5	14,7	325
SB9726	34G0,5	15,6	370
SB9727	37G0,5	15,6	385
SB9728	40G0,5	16,6	425
SB9729	42G0,5	17,7	455
SB9730	50G0,5	18,5	525

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB9731	56G0,5	19,3	570
SB9732	61G0,5	19,7	610
SB9733	2x0,75	6,0	52
SB9734	3G0,75	6,4	58
SB9735	3x0,75	6,4	58
SB9736	4G0,75	7,1	74
SB9737	4x0,75	7,1	74
SB9738	5G0,75	7,6	88
SB9739	5x0,75	7,6	88
SB9740	6G0,75	8,4	112
SB9741	6x0,75	8,4	112
SB9742	7G0,75	8,4	118
SB9743	7x0,75	8,4	118
SB9744	8G0,75	9,6	142
SB9745	8x0,75	9,6	142
SB9746	10G0,75	10,9	180
SB9747	12G0,75	10,9	190
SB9748	12x0,75	10,9	190
SB9749	14G0,75	11,7	220
SB9750	16G0,75	12,3	245
SB9751	18G0,75	12,9	275
SB9752	19G0,75	12,9	280
SB9754	21G0,75	13,5	305
SB9756	25G0,75	15,3	370
SB9757	27G0,75	15,3	380
SB9758	30G0,75	16,2	425
SB9760	34G0,75	17,4	490
SB9761	37G0,75	17,4	505

BiT 500[®](St)CH

Flexible, double screened, halogen-free control cables, number conductors, 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB9762	40G0,75	18,0	540
SB9763	42G0,75	19,6	590
SB9764	50G0,75	20,3	670
SB9765	56G0,75	20,9	725
SB9766	61G0,75	21,7	790
SB9767	2x1,0	6,4	57
SB9768	3G1,0	6,7	69
SB9769	3x1,0	6,7	69
SB9770	4G1,0	7,3	84
SB9771	4x1,0	7,3	84
SB9772	5G1,0	8,3	111
SB9773	5x1,0	8,3	111
SB9774	6G1,0	8,8	129
SB9775	6x1,0	8,8	129
SB9776	7G1,0	8,8	138
SB9777	7x1,0	8,8	138
SB9778	8G1,0	10,2	165
SB9779	10G1,0	11,7	215
SB9780	10x1,0	11,7	215
SB9781	12G1,0	11,7	230
SB9782	12x1,0	11,7	230
SB9783	14G1,0	12,5	260
SB9784	16G1,0	13,1	290
SB9785	18G1,0	13,9	330
SB9786	18x1,0	13,9	330
SB9787	19G1,0	13,9	335
SB9789	21G1,0	14,5	365
SB9791	25G1,0	16,7	455
SB9792	27G1,0	16,7	465
SB9793	30G1,0	17,2	505
SB9795	34G1,0	18,6	590
SB9796	37G1,0	18,6	610
SB9797	40G1,0	19,4	655
SB9798	42G1,0	20,7	700
SB9799	50G1,0	21,8	815
SB9800	56G1,0	22,5	885
SB9801	61G1,0	23,0	950
SB9802	2x1,5	7,4	88
SB9803	3G1,5	7,7	99
SB9804	3x1,5	7,7	99
SB9805	4G1,5	8,6	122
SB9806	4x1,5	8,6	122
SB9807	5G1,5	9,7	156
SB9808	5x1,5	9,7	156
SB9809	6G1,5	10,4	182
SB9810	6x1,5	10,4	182
SB9811	7G1,5	10,4	192
SB9812	7x1,5	10,4	192
SB9813	8G1,5	11,3	220
SB9814	10G1,5	13,6	290

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB9815	10x1,5	13,6	290
SB9816	12G1,5	13,6	310
SB9817	12x1,5	13,6	310
SB9818	14G1,5	14,3	355
SB9819	16G1,5	15,2	410
SB9820	18G1,5	16,2	455
SB9821	19G1,5	16,2	465
SB9823	21G1,5	17,0	515
SB9825	25G1,5	19,3	620
SB9826	27G1,5	19,3	640
SB9827	30G1,5	20,0	700
SB9829	34G1,5	21,6	810
SB9830	37G1,5	21,6	840
SB9831	40G1,5	22,4	910
SB9832	42G1,5	24,1	970
SB9833	50G1,5	25,5	1140
SB9834	56G1,5	26,3	1240
SB9835	61G1,5	27,0	1330
SB9836	2x2,5	8,4	112
SB9837	3G2,5	9,5	144
SB9838	3x2,5	9,5	144
SB9839	4G2,5	10,3	180
SB9840	4x2,5	10,3	180
SB9841	5G2,5	11,2	216
SB9842	5x2,5	11,2	216
SB9843	6G2,5	12,3	265
SB9844	6x2,5	12,3	265
SB9845	7G2,5	12,3	280
SB9846	7x2,5	12,3	280
SB9847	10G2,5	16,5	430
SB9848	12G2,5	16,5	465
SB9849	12x2,5	16,5	465
SB9850	14G2,5	17,2	525
SB9851	16G2,5	17,2	590
SB9852	18G2,5	19,2	665
SB9855	21G2,5	20,1	750
SB9857	25G2,5	22,9	910
SB9859	30G2,5	23,7	1030
SB9861	34G2,5	25,9	1210
SB9862	37G2,5	25,9	1260
SB9864	42G2,5	29,1	1470
SB9865	50G2,5	30,5	1700
SB9868	2x4,0	10,6	170
SB9869	3G4,0	11,3	200
SB9870	3x4,0	11,3	200
SB9871	4G4,0	12,3	270
SB9872	5G4,0	13,3	325
SB9873	7G4,0	14,7	425
SB9874	10G4,0	19,8	645
SB9875	12G4,0	19,8	705

BiT 500®(St)CH

Flexible, double screened, halogen-free control cables, number conductors, 300/500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB9897	2x2x0,5	8,0	80
SB9898	3x2x0,5	9,5	105
SB9899	4x2x0,5	10,1	125
SB9900	5x2x0,5	10,9	155
SB9901	6x2x0,5	11,3	165
SB9902	7x2x0,5	12,6	195
SB9903	8x2x0,5	13,1	210
SB9904	10x2x0,5	14,3	255
SB9905	12x2x0,5	15,2	290
SB9906	14x2x0,5	16,3	340
SB9907	16x2x0,5	17,4	385
SB9908	18x2x0,5	18,2	415
SB9909	20x2x0,5	18,8	455
SB9910	24x2x0,5	19,3	515
SB9911	2x2x0,75	8,9	102
SB9912	3x2x0,75	10,3	126
SB9913	4x2x0,75	11,0	152
SB9914	5x2x0,75	12,0	192
SB9915	6x2x0,75	12,3	205
SB9916	7x2x0,75	13,9	245
SB9917	8x2x0,75	14,6	270
SB9918	10x2x0,75	15,5	315
SB9919	12x2x0,75	16,9	375
SB9920	14x2x0,75	17,8	425
SB9921	16x2x0,75	19,2	490
SB9922	18x2x0,75	19,9	530
SB9923	20x2x0,75	20,5	570
SB9924	24x2x0,75	21,2	655
SB9925	2x2x1,0	9,8	126
SB9926	3x2x1,0	10,8	146
SB9927	4x2x1,0	11,9	182
SB9928	5x2x1,0	12,7	225
SB9929	6x2x1,0	13,0	240
SB9930	7x2x1,0	14,7	285

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB9931	8x2x1,0	15,3	315
SB9932	10x2x1,0	16,8	385
SB9933	12x2x1,0	17,9	445
SB9934	14x2x1,0	19,1	510
SB9935	16x2x1,0	20,3	580
SB9936	18x2x1,0	21,3	625
SB9937	20x2x1,0	22,0	690
SB9938	24x2x1,0	22,6	790
SB9939	2x2x1,5	10,9	162
SB9940	3x2x1,5	12,5	196
SB9941	4x2x1,5	13,4	240
SB9942	5x2x1,5	14,6	300
SB9943	6x2x1,5	15,1	325
SB9944	7x2x1,5	17,2	395
SB9945	8x2x1,5	18,1	435
SB9946	10x2x1,5	19,4	525
SB9947	12x2x1,5	20,7	605
SB9948	14x2x1,5	22,1	695
SB9949	16x2x1,5	23,5	795
SB9950	18x2x1,5	24,9	885
SB9951	20x2x1,5	25,8	960
SB9952	24x2x1,5	26,5	1105
SB9953	2x2x2,5	12,9	230
SB9954	3x2x2,5	14,6	280
SB9955	4x2x2,5	16,3	355
SB9956	5x2x2,5	17,5	440
SB9957	6x2x2,5	18,1	480
SB9958	7x2x2,5	20,4	565
SB9959	8x2x2,5	21,3	625
SB9960	10x2x2,5	23,0	760
SB9961	12x2x2,5	24,6	880
SB9962	14x2x2,5	26,5	1030
SB9963	16x2x2,5	28,3	1175

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x - cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 500[®]2(St)H



Flexible, individually and collectively screened halogen-free paired control cables with number coded conductors, rated 300/500 V



Industrial application



Internal application



EN 60332-1-2



EN 60332-3-24



oxygen index >29



halogen-free EN 60754



low smoke emission EN 61034



high flexibility

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

fixed installation: 5 x Ø
flexible connections: 10 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

black, number coded conductors

Core arrangement:

twisted screened pairs

Individual screen:

aluminum backed polyester tape with tinned copper drain wire underneath each pair

Collective screen:

aluminum backed polyester tape with tinned copper drain wire

Outer sheath:

special halogen-free compound, self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C); colour: grey

Application:

Flexible, halogen-free control cables designed for operation in control and protective devices as well as in control circuits. Double screening improves protection of transmitted signals against external electromagnetic field. Individual screening of pairs decreases signal interferences from adjacent pairs. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Insulation materials and conductor construction in BIT 500[®]2(St)H cable enable easy and fast connections and ensure their high durability. Cables are halogen-free, low smoke and limit significantly flame propagation. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4480	2x2x0,5	7,7	82	SB4508	2x2x1,0	9,3	126
SB4481	3x2x0,5	8,6	96	SB4509	3x2x1,0	10,3	150
SB4482	4x2x0,5	9,7	128	SB4510	4x2x1,0	11,2	186
SB4483	5x2x0,5	10,4	158	SB4511	5x2x1,0	12,2	240
SB4484	6x2x0,5	10,8	172	SB4512	6x2x1,0	12,6	265
SB4485	7x2x0,5	12,2	205	SB4513	7x2x1,0	14,3	310
SB4486	8x2x0,5	12,7	230	SB4514	8x2x1,0	14,9	345
SB4487	10x2x0,5	13,8	280	SB4515	10x2x1,0	16,4	430
SB4488	12x2x0,5	14,7	325	SB4516	12x2x1,0	17,4	500
SB4489	14x2x0,5	15,5	365	SB4517	14x2x1,0	18,7	580
SB4490	16x2x0,5	17,0	435	SB4518	16x2x1,0	19,9	660
SB4491	18x2x0,5	17,7	470	SB4519	18x2x1,0	20,8	720
SB4492	20x2x0,5	18,4	525	SB4520	20x2x1,0	21,6	800
SB4493	24x2x0,5	18,9	605	SB4521	24x2x1,0	22,2	930
SB4494	2x2x0,75	8,4	98	SB4522	2x2x1,5	10,5	158
SB4495	3x2x0,75	9,8	124	SB4523	3x2x1,5	12,0	196
SB4496	4x2x0,75	10,5	154	SB4524	4x2x1,5	13,0	245
SB4497	5x2x0,75	11,5	196	SB4525	5x2x1,5	14,2	310
SB4498	6x2x0,75	11,9	215	SB4526	6x2x1,5	14,7	345
SB4499	7x2x0,75	13,3	250	SB4527	7x2x1,5	16,8	415
SB4500	8x2x0,75	14,1	285	SB4528	8x2x1,5	17,6	460
SB4501	10x2x0,75	15,0	340	SB4529	10x2x1,5	19,0	560
SB4502	12x2x0,75	16,4	410	SB4530	12x2x1,5	20,3	655
SB4503	14x2x0,75	17,4	465	SB4531	14x2x1,5	21,7	760
SB4504	16x2x0,75	18,8	540	SB4532	16x2x1,5	23,2	870
SB4505	18x2x0,75	19,5	590	SB4533	18x2x1,5	24,2	945
SB4506	20x2x0,75	20,1	640	SB4534	20x2x1,5	25,4	1060
SB4507	24x2x0,75	20,7	745	SB4535	24x2x1,5	26,1	1240

BiT 500[®]2(St)H

Flexible, halogen-free, paired control cables, individually and collectively screened, with number coded conductors, rated 300/500 V

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4536	2x2x2,5	12,5	220
SB4537	3x2x2,5	14,2	275
SB4538	4x2x2,5	15,5	340
SB4539	5x2x2,5	17,1	445
SB4540	6x2x2,5	17,7	490

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4541	7x2x2,5	20,0	580
SB4542	8x2x2,5	20,9	645
SB4543	10x2x2,5	22,7	790
SB4544	12x2x2,5	24,2	925
SB4545	14x2x2,5	26,1	1090
SB4546	16x2x2,5	27,9	1240

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced



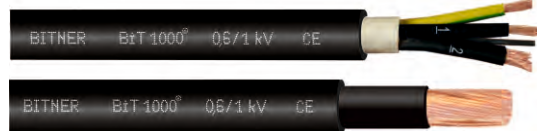
Chapter III

Power control cables 0,6/1 kV

BiT 1000 [®]	110
BiT 1000 [®] C	113
BiT 1000 [®] CY	116
BiT 1000 [®] FR	118
BiT 1000 [®] (St)FR	121
BiT 1000 [®] 2(St)FR	124
BiT 1000 [®] C FR	126
BiT 1000 [®] CY FR	129
BiT 1000 [®] OR	131
BiT 1000 [®] C OR	134
BiT 1000 [®] CY OR	137
BiT 1000 [®] H	139
BiT 1000 [®] CH	142
BiT 1000 [®] HCH	145
BiT 1000 [®] (St)H	147
BiT 1000 [®] 2(St)H	150
BiT 1000 [®] Power	152
BiT 1000 [®] H Power	155
BiT 1000 [®] PP PUR	158
BiT 1000 [®] PP C-PUR	159
BiTinstal [®] H 0,6/1 kV	160

BIT 1000®

Flexible, control and power supply cables, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C
occasional flexing: -15 °C* to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV
Test voltage (50 Hz): 4000 V
Insulation resistance: 20 M Ω km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x \varnothing
fixed installation: 5 x \varnothing

*minimum temperature for occasional flexing with bending radius not smaller than 15 x D. Bending test at low temperature (-15 °C acc. to EN 60811-504).

Design:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, numbered conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together

Inner sheath:

PVC compound for sections over 2,5 mm² (single core or paired cables without inner sheath)

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 50265, IEC 60332-1), UV resistant; colour: black

Application:

BIT 1000® cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BIT 1000® cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installations - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S63100	2x0,5	8,0	82
S63101	3G0,5	8,4	92
S63055	3x0,5	8,4	92
S63102	4G0,5	9,0	108
S63056	4x0,5	9,0	108
S63103	5G0,5	9,6	124
S63057	5x0,5	9,6	124
S63104	6G0,5	10,4	144
S63105	7G0,5	10,4	146
S63058	7x0,5	10,4	146
S63106	8G0,5	11,3	170
S63059	8x0,5	11,3	170
S63107	10G0,5	13,1	220
S63108	12G0,5	13,1	225
S63060	12x0,5	13,1	225
S63109	14G0,5	13,6	250
S63110	16G0,5	14,3	275
S63111	18G0,5	15,1	305
S63113	21G0,5	15,8	335
S63114	25G0,5	17,8	405
S63115	30G0,5	18,4	445
S63116	32G0,5	19,0	480
S63117	34G0,5	19,8	515
S63061	37G0,5	19,8	525
S63062	42G0,5	22,1	610
S63063	52G0,5	23,2	710
S63064	61G0,5	24,7	810

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S63118	2x0,75	8,4	92
S63119	3G0,75	8,8	106
S63065	3x0,75	8,8	106
S63120	4G0,75	9,5	126
S63066	4x0,75	9,5	126
S63121	5G0,75	10,2	146
S63067	5x0,75	10,2	146
S63122	6G0,75	11,0	166
S63068	6x0,75	11,0	166
S63123	7G0,75	11,0	172
S63069	7x0,75	11,0	172
S63124	8G0,75	12,0	200
S63070	8x0,75	12,0	200
S63125	10G0,75	13,9	255
S63126	12G0,75	13,9	265
S63071	12x0,75	13,9	265
S63127	14G0,75	14,5	295
S63128	16G0,75	15,3	330
S63129	18G0,75	16,1	365
S63131	21G0,75	16,8	405
S63132	25G0,75	19,0	485
S63133	30G0,75	19,6	540
S63134	32G0,75	20,4	585
S63135	34G0,75	21,2	625
S63072	37G0,75	21,2	640
S63073	42G0,75	23,9	755
S63074	52G0,75	24,9	875
S63075	61G0,75	26,7	1010

BiT 1000[®]

Flexible, control and power supply cables, rated 0,6/1 kV

Power control cables 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S63136	2x1,0	8,7	102
S63137	3G1,0	9,1	118
S63076	3x1,0	9,1	118
S63138	4G1,0	9,8	140
S63077	4x1,0	9,8	140
S63139	5G1,0	10,6	164
S63078	5x1,0	10,6	164
S63140	6G1,0	11,4	188
S63141	7G1,0	11,4	196
S63079	7x1,0	11,4	196
S63142	8G1,0	12,5	180
S63143	10G1,0	14,5	290
S63080	10x1,0	14,5	290
S63144	12G1,0	14,5	305
S63081	12x1,0	14,5	305
S63145	14G1,0	15,2	340
S63146	16G1,0	16,0	380
S63147	18G1,0	16,8	420
S63149	21G1,0	17,6	470
S63150	25G1,0	19,9	565
S63151	30G1,0	20,6	625
S63152	32G1,0	21,4	675
S63153	34G1,0	22,4	735
S63082	37G1,0	22,4	755
S63083	42G1,0	25,1	880
S63084	52G1,0	26,4	1030
S63085	61G1,0	28,0	1180
S63154	2x1,5	9,5	124
S63155	3G1,5	10,0	146
S63086	3x1,5	10,0	146
S63156	4G1,5	10,8	174
S63087	4x1,5	10,8	174
S63157	5G1,5	11,7	205
S63088	5x1,5	11,7	205
S63158	6G1,5	12,6	240
S63159	7G1,5	12,6	250
S63089	7x1,5	12,6	250
S63160	8G1,5	13,8	290
S63161	10G1,5	16,2	370
S63162	12G1,5	16,2	390
S63090	12x1,5	16,2	390
S63163	14G1,5	16,9	440
S63164	16G1,5	17,9	495
S63165	18G1,5	18,8	545
S63167	21G1,5	19,7	615
S63168	25G1,5	22,6	750
S63169	30G1,5	23,4	840
S63170	32G1,5	24,3	905
S63171	34G1,5	25,2	970
S63091	37G1,5	25,2	1000
S63092	42G1,5	28,7	1190
S63093	52G1,5	29,9	1390
S63094	61G1,5	32,0	1610
S62514	2x2,5	10,6	162
S62515	3G2,5	11,1	192
S62516	3x2,5	11,1	192
S62517	4G2,5	12,1	235
S62518	4x2,5	12,1	235
S62519	5G2,5	13,2	280

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S62520	5x2,5	13,2	280
S62521	7G2,5	14,3	340
S63095	7x2,5	14,3	340
S63096	8G2,5	15,7	400
S63097	10G2,5	18,4	510
S63098	12G2,5	18,4	540
S63099	14G2,5	19,4	610
S62523	16G2,5	20,5	685
S62524	18G2,5	21,6	765
S63173	21G2,5	22,8	870
S62525	25G2,5	26,1	1070
S63174	30G2,5	27,1	1200
S63175	32G2,5	28,2	1290
S63176	34G2,5	29,5	1400
S63177	37G2,5	29,5	1450
S63178	42G2,5	33,3	1700
S63179	52G2,5	35,0	2000
S63180	61G2,5	37,2	2300
S62526	2x4	12,8	265
S62527	3G4	13,4	310
S63181	3x4	13,4	310
S62528	4G4	14,6	375
S62529	5G4	15,7	445
S62530	7G4	17,1	545
S63182	10G4	22,0	820
S63183	14G4	23,7	1010
S63184	2x6	14,0	330
S62532	3G6	14,7	395
S62533	4G6	16,4	490
S62534	5G6	17,5	580
S62535	7G6	18,9	715
S63185	10G6	25,1	1110
S62536	3G10	18,1	630
S62537	4G10	20,2	785
S62538	5G10	21,6	925
S62539	7G10	23,6	1160
S62540	3G16	20,5	860
S62541	4G16	22,8	1080
S62542	5G16	24,5	1280
S62543	7G16	26,8	1630
S62544	3G25	25,1	1310
S62545	4G25	27,8	1620
S62546	5G25	30,2	1950
S62547	3G35	27,3	1660
S62548	4G35	30,4	2090
S62549	5G35	33,1	2520
S62550	3G50	32,6	2290
S62551	4G50	36,4	2890
S62552	5G50	39,5	3480
S62553	3G70	36,7	3120
S62554	4G70	41,2	3960
S62555	5G70	44,8	4790
S62556	3G95	41,6	4070
S62557	4G95	46,5	5150
S62558	5G95	50,9	6100
S62559	3G120	44,6	4930
S62560	4G120	49,9	6260
S62561	4G150	56,5	7770
S62562	4G185	63,1	9400
S62563	4G240	70,2	12340

BiT 1000®

Flexible, control and power supply cables, rated 0,6/1 kV

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0001	2x2x0,5	10,8	130
BS0002	3x2x0,5	12,0	142
BS0003	4x2x0,5	12,9	168
BS0004	5x2x0,5	13,9	210
BS0005	6x2x0,5	14,3	220
BS0006	7x2x0,5	16,0	255
BS0007	8x2x0,5	16,7	280
BS0008	10x2x0,5	17,9	325
BS0009	12x2x0,5	19,0	375
BS0010	14x2x0,5	20,2	425
BS0011	16x2x0,5	21,6	490
BS0012	18x2x0,5	22,8	530
BS0013	20x2x0,5	23,5	580
BS0014	24x2x0,5	24,2	660
BS0015	2x2x0,75	11,5	146
BS0016	3x2x0,75	12,7	164
BS0017	4x2x0,75	13,8	198
BS0018	5x2x0,75	14,8	245
BS0019	6x2x0,75	15,3	260
BS0020	7x2x0,75	17,1	300
BS0021	8x2x0,75	17,8	330
BS0022	10x2x0,75	19,1	390
BS0023	12x2x0,75	20,4	455
BS0024	14x2x0,75	21,7	515
BS0025	16x2x0,75	23,4	600
BS0026	18x2x0,75	24,4	645
BS0027	20x2x0,75	25,4	715
BS0028	24x2x0,75	26,1	820
BS0029	2x2x1,0	11,9	164
BS0030	3x2x1,0	13,3	184
BS0031	4x2x1,0	14,4	225
BS0032	5x2x1,0	15,5	280
BS0033	6x2x1,0	16,0	300

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0034	7x2x1,0	17,9	345
BS0035	8x2x1,0	18,7	380
BS0036	10x2x1,0	20,0	450
BS0037	12x2x1,0	21,4	520
BS0038	14x2x1,0	22,9	605
BS0039	16x2x1,0	24,6	695
BS0040	18x2x1,0	25,8	760
BS0041	20x2x1,0	26,7	830
BS0042	24x2x1,0	27,5	955
BS0043	2x2x1,5	13,2	205
BS0044	3x2x1,5	14,8	230
BS0045	4x2x1,5	16,0	285
BS0046	5x2x1,5	17,3	360
BS0047	6x2x1,5	17,9	380
BS0048	7x2x1,5	20,0	440
BS0049	8x2x1,5	21,0	490
BS0050	10x2x1,5	22,7	595
BS0051	12x2x1,5	24,3	695
BS0052	14x2x1,5	26,0	805
BS0053	16x2x1,5	27,9	925
BS0054	18x2x1,5	29,3	1010
BS0055	20x2x1,5	30,3	1110
BS0056	24x2x1,5	31,4	1300
BS0057	2x2x2,5	15,0	270
BS0058	3x2x2,5	16,8	310
BS0059	4x2x2,5	18,3	385
BS0060	5x2x2,5	19,7	490
BS0061	6x2x2,5	20,5	525
BS0062	7x2x2,5	23,2	620
BS0063	8x2x2,5	24,3	690
BS0064	10x2x2,5	26,3	840
BS0065	12x2x2,5	28,4	995
BS0066	14x2x2,5	30,2	1135
BS0067	16x2x2,5	32,6	1330

single core cables

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S62500	1x1,5	5,8	49
S62501	1x2,5	6,4	63
S62502	1x4	6,8	82
S62503	1x6	7,4	105
S62504	1x10	8,7	160
S62505	1x16	9,7	226
S62506	1x25	11,4	340
S62507	1x35	12,5	450
S62508	1x50	14,7	625
S62509	1x70	16,6	840
S62510	1x95	18,7	1125
S62511	1x120	20,5	1380
S62512	1x150	22,5	1730
S62513	1x185	25,1	2130
S62579	1x240	28,1	2460
S62582	1x300	31,8	3148
S62586	1x400	35,5	4290
S62588	1x500	40,8	5200

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S62564	1G1,5	5,8	49
S62565	1G2,5	6,4	63
S62566	1G4	6,8	82
S62567	1G6	7,4	105
S62568	1G10	8,7	160
S62569	1G16	9,7	226
S62570	1G25	11,4	340
S62571	1G35	12,5	450
S62572	1G50	14,7	625
S62573	1G70	16,6	840
S62574	1G95	18,7	1125
S62575	1G120	20,5	1380
S62576	1G150	22,5	1730
S62577	1G185	25,1	2130
S62581	1G240	28,1	2460
S62583	1G300	31,8	3148
S62587	1G400	35,5	4290
S62589	1G500	40,6	5200

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000^{°C}



Power control cables 0,6/1 kV

Flexible, screened, control and power supply cables, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage (50 Hz): 4000 V

Insulation resistance: 20 MΩ.km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 5 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective tinned copper marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Screen:

tinned copper wire braid, coverage ≥85%

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2), UV resistant; colour: black

Application:

BiT 1000^{°C} cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BiT 1000^{°C} cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installations - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Properly connected screen ensures full electromagnetic compatibility (EMC). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0100	2x0,5	8,6	99
BS0101	3G0,5	9,0	108
BS0102	3x0,5	9,0	108
BS0103	4G0,5	9,6	126
BS0104	4x0,5	9,6	126
BS0105	5G0,5	10,2	144
BS0106	5x0,5	10,2	144
BS0107	6G0,5	11,0	165
BS0108	7G0,5	11,0	168
BS0109	7x0,5	11,0	168
BS0110	8G0,5	11,9	192
BS0111	8x0,5	11,9	192
BS0112	10G0,5	13,7	245
BS0113	12G0,5	13,7	250
BS0114	12x0,5	13,7	250
BS0115	14G0,5	14,2	275
BS0116	16G0,5	14,9	305
BS0117	18G0,5	15,7	335
BS0118	19G0,5	15,7	340
BS0119	21G0,5	16,4	370
BS0120	25G0,5	18,4	445
BS0121	30G0,5	19,0	485
BS0122	34G0,5	20,4	560
BS0123	37G0,5	20,4	570
BS0124	42G0,5	22,9	670
BS0125	52G0,5	23,8	765
BS0126	61G0,5	25,5	880

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0127	2x0,75	9,0	110
BS0128	3G0,75	9,4	125
BS0129	3x0,75	9,4	122
BS0130	4G0,75	10,1	142
BS0131	4x0,75	10,1	142
BS0132	5G0,75	10,8	164
BS0133	5x0,75	10,8	164
BS0134	6G0,75	11,6	188
BS0135	6x0,75	11,6	188
BS0136	7G0,75	11,6	194
BS0137	7x0,75	11,6	194
BS0138	8G0,75	12,6	225
BS0139	8x0,75	12,6	225
BS0140	10G0,75	14,5	280
BS0141	12G0,75	14,5	290
BS0142	12x0,75	14,5	290
BS0143	14G0,75	15,1	325
BS0144	16G0,75	15,9	360
BS0145	18G0,75	16,7	400
BS0146	19G0,75	16,7	405
BS0147	21G0,75	17,4	440
BS0148	25G0,75	19,6	525
BS0149	30G0,75	20,2	585
BS0150	34G0,75	21,8	670
BS0151	37G0,75	21,8	690
BS0152	42G0,75	24,5	805
BS0153	52G0,75	25,7	940
BS0154	61G0,75	27,3	1075

BiT 1000[®]C

Flexible, screened, control and power supply cables, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0155	2x1,0	9,3	120
BS0156	3G1,0	9,7	132
BS0157	3x1,0	9,7	132
BS0158	4G1,0	10,4	156
BS0159	4x1,0	10,4	156
BS0160	5G1,0	11,2	182
BS0161	5x1,0	11,2	182
BS0162	6G1,0	12,0	210
BS0163	6x1,0	12,0	210
BS0164	7G1,0	12,0	220
BS0165	7x1,0	12,0	220
BS0166	8G1,0	13,1	250
BS0167	10G1,0	15,1	315
BS0168	10x1,0	15,1	315
BS0169	12G1,0	15,1	330
BS0170	12x1,0	15,1	330
BS0171	14G1,0	15,8	365
BS0172	16G1,0	16,6	410
BS0173	18G1,0	17,4	455
BS0174	18G1,0	17,4	455
BS0175	19G1,0	17,4	460
BS0176	21G1,0	18,2	505
BS0177	25G1,0	20,5	605
BS0178	30G1,0	21,2	670
BS0179	34G1,0	23,0	785
BS0180	37G1,0	23,0	805
BS0181	42G1,0	25,9	940
BS0182	52G1,0	27,0	1090
BS0183	61G1,0	28,8	1255
BS0184	2x1,5	10,1	140
BS0185	3G1,5	10,4	158
BS0186	3x1,5	10,4	158
BS0187	4G1,5	11,4	190
BS0188	4x1,5	11,4	190
BS0189	5G1,5	12,3	230
BS0190	5x1,5	12,3	230
BS0191	6G1,5	13,2	265
BS0192	6x1,5	13,2	265
BS0193	7G1,5	13,2	275
BS0194	7x1,5	13,2	275

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0195	8G1,5	14,4	315
BS0196	10G1,5	16,8	395
BS0197	10x1,5	16,8	395
BS0198	12G1,5	16,8	415
BS0199	12x1,5	16,8	415
BS0200	14G1,5	17,5	470
BS0201	16G1,5	18,5	525
BS0202	18G1,5	19,4	580
BS0203	19G1,5	19,4	595
BS0204	21G1,5	20,3	650
BS0205	25G1,5	23,2	790
BS0206	30G1,5	24,0	885
BS0207	34G1,5	26,0	1035
BS0208	37G1,5	26,0	1065
BS0209	42G1,5	29,3	1240
BS0210	52G1,5	30,7	1470
BS0211	61G1,5	32,8	1695
BS0212	2x2,5	11,2	174
BS0213	3G2,5	11,7	200
BS0214	3x2,5	11,7	200
BS0215	4G2,5	12,8	250
BS0216	4x2,5	12,8	250
BS0217	5G2,5	13,8	295
BS0218	5x2,5	13,8	295
BS0219	6G2,5	14,9	345
BS0220	6x2,5	14,9	345
BS0221	7G2,5	14,9	360
BS0222	7x2,5	14,9	360
BS0223	10G2,5	19,0	535
BS0224	12G2,5	19,0	565
BS0225	12x2,5	19,0	565
BS0226	14G2,5	20,0	635
BS0227	16G2,5	21,1	720
BS0228	18G2,5	22,4	810
BS0229	21G2,5	23,4	910
BS0230	25G2,5	26,7	1105
BS0231	30G2,5	27,7	1240
BS0232	34G2,5	30,3	1480
BS0233	37G2,5	30,3	1525
BS0234	42G2,5	33,9	1775
BS0235	52G2,5	35,8	2090

BIT 1000[®]C

Flexible, screened, control and power supply cables, rated 0,6/1 kV

Power control cables 0,6/1 kV

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0245	2x2x0,5	11,4	165
BS0246	3x2x0,5	12,6	180
BS0247	4x2x0,5	13,5	210
BS0248	5x2x0,5	14,5	250
BS0249	6x2x0,5	14,9	265
BS0250	7x2x0,5	16,6	305
BS0251	8x2x0,5	17,3	330
BS0252	10x2x0,5	18,5	385
BS0253	12x2x0,5	19,6	435
BS0254	14x2x0,5	20,8	490
BS0255	16x2x0,5	22,4	565
BS0256	18x2x0,5	23,4	605
BS0257	20x2x0,5	24,1	650
BS0258	24x2x0,5	24,8	740
BS0259	2x2x0,75	12,1	180
BS0260	3x2x0,75	13,3	205
BS0261	4x2x0,75	14,4	240
BS0262	5x2x0,75	15,4	290
BS0263	6x2x0,75	15,9	310
BS0264	7x2x0,75	17,7	355
BS0265	8x2x0,75	18,4	390
BS0266	10x2x0,75	19,7	450
BS0267	12x2x0,75	21,0	515
BS0268	14x2x0,75	22,5	595
BS0269	16x2x0,75	24,0	675
BS0270	18x2x0,75	25,2	735
BS0271	20x2x0,75	26,0	795
BS0272	24x2x0,75	26,7	905
BS0273	2x2x1,0	12,5	200
BS0274	3x2x1,0	13,9	225
BS0275	4x2x1,0	15,0	270
BS0276	5x2x1,0	16,1	330
BS0277	6x2x1,0	16,6	345

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0278	7x2x1,0	18,5	400
BS0279	8x2x1,0	19,3	440
BS0280	10x2x1,0	20,6	515
BS0281	12x2x1,0	22,0	590
BS0282	14x2x1,0	23,5	675
BS0283	16x2x1,0	25,4	785
BS0284	18x2x1,0	26,4	840
BS0285	20x2x1,0	27,3	915
BS0286	24x2x1,0	28,3	1060
BS0287	2x2x1,5	13,8	245
BS0288	3x2x1,5	15,4	275
BS0289	4x2x1,5	16,6	335
BS0290	5x2x1,5	17,9	410
BS0291	6x2x1,5	18,5	440
BS0292	7x2x1,5	20,6	505
BS0293	8x2x1,5	21,6	555
BS0294	10x2x1,5	23,3	670
BS0295	12x2x1,5	24,9	770
BS0296	14x2x1,5	26,6	885
BS0297	16x2x1,5	28,7	1030
BS0298	18x2x1,5	30,1	1130
BS0299	20x2x1,5	31,3	1240
BS0300	24x2x1,5	32,2	1420
BS0301	2x2x2,5	15,6	315
BS0302	3x2x2,5	17,4	360
BS0303	4x2x2,5	18,9	440
BS0304	5x2x2,5	20,3	550
BS0305	6x2x2,5	21,1	590
BS0306	7x2x2,5	23,8	690
BS0307	8x2x2,5	24,9	765
BS0308	10x2x2,5	26,9	925
BS0309	12x2x2,5	29,0	1085
BS0310	14x2x2,5	31,0	1260
BS0311	16x2x2,5	33,4	1460

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x - cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®]CY



Flexible, screened, control and power supply cables, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:
fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV
Test voltage (50 Hz): 4000 V
Insulation resistance: 20 MΩxkm

Mechanical parameters:

Min. bending radius:
flexible connections: $12 \times \varnothing$
fixed installation: $6 \times \varnothing$

Design:

Conductors: bare copper conductors, multi-stranded class 5 acc. to EN 60228
Insulation: PVC compound
Core identification: black, numbered conductors, cables with protective earth conductor marked G (e.g. 7G1,5)
Core arrangement: cores twisted together
Inner sheath: PVC compound (single core cables without inner sheath)
Screen: tinned copper wire braid with coverage $\geq 85\%$
Outer sheath: PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2), UV resistant; colour: black

Application:

BiT 1000[®]CY cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BiT 1000[®]CY cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Properly connected screen ensures full electromagnetic compatibility (EMC). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S65900	2x0,5	9,6	136
S65901	3G0,5	10,0	148
S65902	4G0,5	10,6	168
S65903	5G0,5	11,2	190
S65904	6G0,5	12,0	216
S65905	7G0,5	12,0	220
S65906	8G0,5	13,1	255
S65907	10G0,5	14,9	315
S65908	12G0,5	14,9	320
S65909	14G0,5	15,4	345
S65910	16G0,5	16,3	390
S65911	18G0,5	17,1	425
S65961	19G0,5	17,1	425
S65962	20G0,5	17,8	460
S65912	21G0,5	17,8	460
S62591	25G0,5	20,0	555
S65913	30G0,5	20,6	600
S65963	37G0,5	22,2	700
S62592	2x0,75	9,8	150
S62593	3G0,75	10,2	166
S62594	4G0,75	10,9	190
S62595	5G0,75	11,8	220
S65915	6G0,75	12,6	245
S62596	7G0,75	12,6	250
S65916	8G0,75	13,8	290
S65917	10G0,75	15,7	355
S62597	12G0,75	15,7	370

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S65918	14G0,75	16,5	410
S65919	16G0,75	17,3	450
S62598	18G0,75	18,1	490
S65964	19G0,75	18,1	495
S65965	20G0,75	19,0	545
S65920	21G0,75	19,0	550
S62599	25G0,75	21,2	645
S62647	2x1,0	10,1	162
S62648	3G1,0	10,8	182
S62649	4G1,0	11,2	210
S62642	5G1,0	12,2	240
S65927	6G1,0	13,2	275
S62643	7G1,0	13,2	280
S65928	8G1,0	14,3	320
S62634	10G1,0	16,5	405
S62644	12G1,0	16,5	420
S65929	14G1,0	17,2	460
S65930	16G1,0	18,0	505
S62645	18G1,0	18,8	555
S65966	19G1,0	18,8	560
S65967	20G1,0	19,8	610
S65931	21G1,0	19,8	615
S62646	25G1,0	22,3	750
S62635	2x1,5	11,1	192
S62636	3G1,5	11,4	215
S62637	4G1,5	12,4	260
S62638	5G1,5	13,5	295

BiT 1000[®]CY

Flexible, screened, control and power supply cables, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S65941	6G1,5	14,4	335
S62639	7G1,5	14,4	345
S65942	8G1,5	15,6	395
S65943	10G1,5	18,2	500
S62640	12G1,5	18,2	520
S62650	2x2,5	12,2	234
S62651	3G2,5	12,9	270
S62652	4G2,5	13,9	317
S62653	5G2,5	15,0	375
S62654	7G2,5	16,3	454
S62655	10G2,5	20,6	622
S62656	14G2,5	21,6	813
S62657	16G2,5	22,9	914
S62658	18G2,5	24,5	1008
S62659	25G2,5	29,0	1267
S62660	2x4	13,4	289
S62661	3G4	14,0	342
S62662	4G4	15,2	408
S62663	5G4	16,5	488
S62664	7G4	17,7	618
S62665	10G4	22,8	865
S62666	3G6	15,3	431
S62667	4G6	16,9	541
S62668	5G6	18,1	644
S62669	7G6	19,7	798
S62670	3G10	18,7	687
S62671	4G10	20,8	832

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S62672	5G10	22,2	1004
S62673	7G10	24,2	1256
S62674	3G16	21,1	933
S62675	4G16	23,4	1142
S62676	5G16	25,3	1389
S62677	7G16	27,4	1790
S62678	3G25	25,7	1423
S62679	4G25	28,6	1790
S62680	5G25	30,8	2159
S62681	3G35	27,9	1855
S62682	4G35	31,4	2316
S62683	5G35	33,9	2795
S62684	3G50	33,0	2532
S62685	4G50	36,8	3164
S62686	5G50	39,9	3861
S62687	3G70	37,7	3393
S62688	4G70	42,0	4245
S62689	5G70	45,6	5164
S62690	3G95	42,4	4439
S62691	4G95	47,5	5578
S62692	5G95	52,1	6807
S62693	3G120	44,9	5330
S62694	4G120	50,9	6730
S62695	4G150	57,5	8509
S62696	4G185	64,1	10495
S62697	4G240	71,1	13153

single core cables

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S62600	1x1,5	7,8	90
S62601	1x2,5	8,4	110
S62602	1x4	10,1	176
S62603	1x6	10,7	210
S62604	1x10	12,0	291
S62605	1x16	13,2	387
S62606	1x25	15,0	453
S62607	1x35	16,0	550
S62608	1x50	18,5	748
S62609	1x70	20,5	976
S62610	1x95	23,0	1268
S62611	1x120	24,5	1536
S62612	1x150	27,2	1875
S62613	1x185	30,2	2242
S62614	1x240	33,2	2883
S62615	1x300	36,7	3618

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S62616	1G1,5	7,8	90
S62617	1G2,5	8,4	110
S62618	1G4	10,1	176
S62619	1G6	10,7	210
S62620	1G10	12,0	291
S62621	1G16	13,2	387
S62622	1G25	15,0	453
S62623	1G35	16,0	550
S62624	1G50	18,5	748
S62625	1G70	20,5	976
S62626	1G95	23,0	1268
S62627	1G120	24,5	1536
S62628	1G150	27,2	1875
S62629	1G185	30,2	2242
S62630	1G240	33,2	2883
S62631	1G300	36,7	3618

*Outer diameter tolerance: +/-5%
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 G - cables with green/yellow earthing conductor
 x- cables without green/yellow earthing conductor
 Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®]FR



Flexible, highly flame retardant control and power supply cables, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C
occasional flexing: -15 °C* to 80 °C

Electrical parameters:

Operating voltage: $U_n/U = 0,6/1$ kV

Test voltage (50 Hz): 4000 V

Insulation resistance: 20 M Ω xkm

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x \varnothing
fixed installation: 5 x \varnothing

* minimum temperature for occasional flexing with bending radius not smaller than 15 x D. Bending test at low temperature (-15 °C acc. to EN 60811-504)

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, numbered conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together

Inner sheath:

PVC compound for sections over 2,5 mm² (single core or paired cables without inner sheath)

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant, LOI>29; colour: black

Application:

BiT 1000[®]FR cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BiT 1000[®] FR cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms, especially in applications in places with increased fire safety requirements (limited flame propagation). Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** - Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66150	2x0,5	8,0	83	S66177	2x0,75	8,4	94
S66151	3G0,5	8,4	95	S66178	3G0,75	8,8	109
S66152	3x0,5	8,4	95	S66179	3x0,75	8,8	109
S66153	4G0,5	9,0	110	S66180	4G0,75	9,5	129
S66154	4x0,5	9,0	110	S66181	4x0,75	9,5	129
S66155	5G0,5	9,6	129	S66182	5G0,75	10,2	150
S66156	5x0,5	9,6	129	S66183	5x0,75	10,2	150
S66157	6G0,5	10,4	149	S66184	6G0,75	11,0	173
S66158	7G0,5	10,4	153	S66185	6x0,75	11,0	173
S66159	7x0,5	10,4	153	S66186	7G0,75	11,0	179
S66160	8G0,5	11,3	176	S66187	7x0,75	11,0	179
S66161	8x0,5	11,3	176	S66188	8G0,75	12,0	207
S66162	10G0,5	13,1	225	S66189	8x0,75	12,0	207
S66163	12G0,5	13,1	232	S66190	10G0,75	13,9	260
S66164	12x0,5	13,1	232	S66191	12G0,75	13,9	275
S66165	14G0,5	13,6	255	S66192	12x0,75	13,9	275
S66166	16G0,5	14,3	285	S66193	14G0,75	14,5	305
S66167	18G0,5	15,1	315	S66194	16G0,75	15,3	340
S66168	21G0,5	15,8	350	S66195	18G0,75	16,1	380
S66169	25G0,5	17,8	420	S66196	21G0,75	16,8	420
S66170	30G0,5	18,4	465	S66197	25G0,75	19,0	505
S66171	32G0,5	19,0	495	S66198	30G0,75	19,6	565
S66172	34G0,5	19,8	540	S66199	32G0,75	20,4	605
S66173	37G0,5	19,8	550	S66200	34G0,75	21,2	650
S66174	42G0,5	22,1	640	S66201	37G0,75	21,2	670
S66175	52G0,5	23,2	745	S66202	42G0,75	23,9	790
S66176	61G0,5	24,7	855	S66203	52G0,75	24,9	915
				S66204	61G0,75	26,7	1060

BIT 1000[®]FR

Flexible, highly flame retardant control and power supply cables, rated 0,6/1 kV

Power control cables 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66205	2x1,0	8,7	104
S66206	3G1,0	9,2	122
S66207	3x1,0	9,2	122
S66208	4G1,0	9,8	144
S66209	4x1,0	9,8	144
S66210	5G1,0	10,6	168
S66211	5x1,0	10,6	168
S66212	6G1,0	11,4	195
S66213	7G1,0	11,4	203
S66214	7x1,0	11,4	203
S66215	8G1,0	12,5	182
S66216	10G1,0	14,5	300
S66217	10x1,0	14,5	300
S66218	12G1,0	14,5	310
S66219	12x1,0	14,5	310
S66220	14G1,0	15,2	350
S66221	16G1,0	16,0	390
S66222	18G1,0	16,8	435
S66223	21G1,0	17,6	485
S66224	25G1,0	19,9	585
S66225	30G1,0	20,6	650
S66226	32G1,0	21,4	705
S66227	34G1,0	22,4	765
S66228	37G1,0	22,4	790
S66229	42G1,0	25,1	915
S66230	52G1,0	26,4	1075
S66231	61G1,0	28,0	1235
S66232	2x1,5	9,5	127
S66233	3G1,5	10,0	150
S66234	3x1,5	10,0	150
S66235	4G1,5	10,8	181
S66236	4x1,5	10,8	181
S66237	5G1,5	11,7	213
S66238	5x1,5	11,7	213
S66239	6G1,5	12,6	248
S66240	7G1,5	12,6	255
S66241	7x1,5	12,6	255
S66242	8G1,5	13,8	300
S66243	10G1,5	16,2	380
S66244	12G1,5	16,2	405
S66245	12x1,5	16,2	405
S66246	14G1,5	16,9	455
S66247	16G1,5	17,9	510
S66248	18G1,5	18,8	570
S66249	21G1,5	19,7	640
S66250	25G1,5	22,6	780
S66251	30G1,5	23,4	875
S66252	32G1,5	24,3	940
S66253	34G1,5	25,2	1010
S66254	37G1,5	25,2	1045
S66255	42G1,5	28,7	1240
S66256	52G1,5	29,9	1445
S66257	61G1,5	32,0	1675
S66258	2x2,5	10,6	166
S66259	3G2,5	11,1	198
S66260	3x2,5	11,1	198
S66261	4G2,5	12,1	241
S66262	4x2,5	12,2	241
S66263	5G2,5	13,2	285

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66264	5x2,5	13,2	335
S66265	7G2,5	14,3	350
S66266	7x2,5	14,3	350
S66267	8G2,5	15,7	410
S66268	10G2,5	18,4	525
S66269	12G2,5	18,4	560
S66270	14G2,5	19,4	630
S66271	16G2,5	20,5	710
S66272	18G2,5	21,6	795
S66273	21G2,5	22,8	905
S66274	25G2,5	26,1	1105
S66275	30G2,5	27,1	1245
S66276	32G2,5	28,2	1340
S66277	34G2,5	29,5	1455
S66278	37G2,5	29,5	1505
S66279	42G2,5	33,3	1760
S66280	52G2,5	35,0	2080
S66281	61G2,5	37,2	2400
S66282	2x4	12,8	265
S66283	3G4	13,4	315
S66284	3x4	13,4	315
S66285	4G4	14,6	385
S66286	5G4	15,7	450
S66287	7G4	17,1	560
S66288	10G4	22,0	830
S66289	14G4	23,7	1035
S66290	2x6	14,0	335
S66291	3G6	14,7	400
S66292	4G6	16,3	500
S66293	5G6	17,5	590
S66294	7G6	18,9	730
S66295	10G6	25,1	1130
S66296	3G10	18,1	630
S66297	4G10	20,2	790
S66298	5G10	21,6	930
S66299	7G10	23,6	1170
S66300	3G16	20,5	865
S66301	4G16	22,8	1080
S66302	5G16	24,5	1285
S66303	7G16	26,8	1635
S66304	3G25	25,1	1330
S66305	4G25	27,8	1650
S66306	5G25	30,2	1985
S66307	3G35	27,3	1655
S66308	4G35	30,4	2080
S66309	5G35	33,1	2505
S66310	3G50	32,6	2345
S66311	4G50	36,4	2955
S66312	5G50	39,5	3560
S66313	3G70	36,7	3120
S66314	4G70	41,2	3960
S66315	5G70	44,8	4780
S66316	3G95	41,6	4105
S66317	4G95	46,5	5195
S66318	5G95	50,6	6300
S66319	3G120	44,6	4805
S66320	4G120	49,9	6140
S66321	4G150	56,5	7660
S66322	4G185	63,1	9225
S66323	4G240	70,2	11980

BiT 1000[®]FR

Flexible, highly flame retardant control and power supply cables, rated 0,6/1 kV

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66325	2x2x0,5	10,8	133
S66326	3x2x0,5	12,0	146
S66327	4x2x0,5	12,9	175
S66328	5x2x0,5	13,9	216
S66329	6x2x0,5	14,3	228
S66330	7x2x0,5	16,0	260
S66331	8x2x0,5	16,7	285
S66332	10x2x0,5	17,9	340
S66333	12x2x0,5	19,0	390
S66334	14x2x0,5	20,2	440
S66335	16x2x0,5	21,6	505
S66336	18x2x0,5	22,8	555
S66337	20x2x0,5	23,5	600
S66338	24x2x0,5	24,2	690
S66339	2x2x0,75	11,5	150
S66340	3x2x0,75	12,7	169
S66341	4x2x0,75	13,8	204
S66342	5x2x0,75	14,8	255
S66343	6x2x0,75	15,3	270
S66344	7x2x0,75	17,1	310
S66345	8x2x0,75	17,8	340
S66346	10x2x0,75	19,1	405
S66347	12x2x0,75	20,4	470
S66348	14x2x0,75	21,7	530
S66349	16x2x0,75	23,4	625
S66350	18x2x0,75	24,4	670
S66351	20x2x0,75	25,4	745
S66352	24x2x0,75	26,1	855
S66353	2x2x1,0	11,9	168
S66354	3x2x1,0	13,3	190
S66355	4x2x1,0	14,4	231
S66356	5x2x1,0	15,5	285
S66357	6x2x1,0	16,0	305
S66358	7x2x1,0	17,9	355

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66359	8x2x1,0	18,7	390
S66360	10x2x1,0	20,0	465
S66361	12x2x1,0	21,4	540
S66362	14x2x1,0	22,9	625
S66363	16x2x1,0	24,6	720
S66364	18x2x1,0	25,8	790
S66365	20x2x1,0	26,7	860
S66366	24x2x1,0	27,5	995
S66367	2x2x1,5	13,2	208
S66368	3x2x1,5	14,8	238
S66369	4x2x1,5	16,0	290
S66370	5x2x1,5	17,3	365
S66371	6x2x1,5	17,9	395
S66372	7x2x1,5	20,0	455
S66373	8x2x1,5	21,0	505
S66374	10x2x1,5	22,7	615
S66375	12x2x1,5	24,3	720
S66376	14x2x1,5	26,0	830
S66377	16x2x1,5	27,9	960
S66378	18x2x1,5	29,3	1050
S66379	20x2x1,5	30,3	1145
S66380	24x2x1,5	31,4	1345
S66381	2x2x2,5	15,0	270
S66382	3x2x2,5	16,8	315
S66383	4x2x2,5	18,3	395
S66384	5x2x2,5	19,7	500
S66385	6x2x2,5	20,5	540
S66386	7x2x2,5	23,2	635
S66387	8x2x2,5	24,3	710
S66388	10x2x2,5	26,3	870
S66389	12x2x2,5	28,4	1030
S66390	14x2x2,5	30,2	1175
S66391	16x2x2,5	32,6	1375

single core cables

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66500	1x1,5	5,8	51
S66501	1x2,5	6,2	65
S66502	1x4	6,8	84
S66503	1x6	7,4	107
S66504	1x10	8,7	154
S66505	1x16	9,7	215
S66506	1x25	11,4	310
S66507	1x35	12,5	405
S66508	1x50	14,7	570
S66509	1x70	16,6	775
S66510	1x95	18,7	1015
S66511	1x120	20,5	1245
S66512	1x150	22,5	1535
S66513	1x185	25,1	1875
S66514	1x240	28,1	2435
S66515	1x300	31,8	3180
S66516	1x400	35,5	4110
S66517	1x500	40,6	5165

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66518	1G1,5	5,8	51
S66519	1G2,5	6,2	65
S66520	1G4	6,8	84
S66521	1G6	7,4	107
S66522	1G10	8,7	154
S66523	1G16	9,7	215
S66524	1G25	11,4	310
S66525	1G35	12,5	405
S66526	1G50	14,7	570
S66527	1G70	16,6	775
S66528	1G95	18,7	1015
S66529	1G120	20,5	1245
S66530	1G150	22,5	1535
S66531	1G185	25,1	1875
S66532	1G240	28,1	2435
S66533	1G300	31,8	3180
S66534	1G400	35,5	4110
S66535	1G500	40,6	5165

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®] (St) FR



Power control cables 0,6/1 kV

Flexible, screened, highly flame retardant control cables, rated 0,6/1 kV



Technical data:

Thermal parameters:
Operating temperature:
 fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C

Electrical parameters:
Operating voltage: $U_0/U = 0,6/1$ kV
Test voltage (50 Hz): 4000 V
Insulation resistance: 20 MΩxkm

Mechanical parameters:
Min. bending radius:
 flexible connections: $12 \times \varnothing$
 fixed installation: $6 \times \varnothing$

Design:

Conductors: bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation: PVC compound

Core identification: black, numbered conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement: cores twisted together or pairs twisted together

Collective screen: aluminum backed polyester tape with tinned copper drain wire

Outer sheath: PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, IEC 60332-3 cat.C), UV resistant, LOI>29; colour: black

Application:

BiT 1000[®] FR cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BiT 1000[®] FR cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms, especially in applications in places with increased fire safety requirements (limited flame propagation). Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0930	2x0,5	8,4	85
BS0931	3G0,5	8,8	95
BS0932	3x0,5	8,8	95
BS0933	4G0,5	9,4	110
BS0934	4x0,5	9,4	110
BS0935	5G0,5	10,0	130
BS0936	5x0,5	10,0	130
BS0937	6G0,5	10,8	149
BS0938	7G0,5	10,8	154
BS0939	7x0,5	10,8	154
BS0940	8G0,5	11,7	177
BS0941	8x0,5	11,7	177
BS0942	10G0,5	13,5	221
BS0943	12G0,5	13,5	230
BS0944	12x0,5	13,5	230
BS0945	14G0,5	14,0	255
BS0946	16G0,5	14,7	285
BS0947	18G0,5	15,5	315
BS0948	19G0,5	15,5	320
BS0949	21G0,5	16,2	350
BS0950	25G0,5	18,2	415
BS0951	27G0,5	18,2	425
BS0952	30G0,5	18,8	460
BS0953	34G0,5	20,2	535
BS0954	37G0,5	20,2	545
BS0955	40G0,5	20,9	585
BS0956	42G0,5	22,7	640
BS0957	52G0,5	23,6	740
BS0958	61G0,5	25,1	850

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0959	2x0,75	8,6	93
BS0960	3G0,75	9,0	105
BS0961	3x0,75	9,0	105
BS0962	4G0,75	9,7	126
BS0963	4x0,75	9,7	126
BS0964	5G0,75	10,4	148
BS0965	5x0,75	10,4	148
BS0966	6G0,75	11,2	171
BS0967	6x0,75	11,2	171
BS0968	7G0,75	11,2	177
BS0969	7x0,75	11,2	177
BS0970	8G0,75	12,4	206
BS0971	8x0,75	12,4	206
BS0972	10G0,75	14,3	255
BS0973	12G0,75	14,3	270
BS0974	12x0,75	14,3	270
BS0975	14G0,75	14,9	300
BS0976	16G0,75	15,7	340
BS0977	18G0,75	16,5	375
BS0978	19G0,75	16,5	380
BS0979	21G0,75	17,2	420
BS0980	25G0,75	19,4	500
BS0981	27G0,75	19,4	510
BS0982	30G0,75	20,0	555
BS0983	34G0,75	21,6	645
BS0984	37G0,75	21,6	665
BS0985	40G0,75	22,5	725
BS0986	42G0,75	24,3	775
BS0987	52G0,75	25,5	915
BS0988	61G0,75	27,1	1050

BiT 1000[®] (St) FR

Flexible, screened, highly flame retardant control cables, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0989	2x1,0	8,9	104
BS0990	3G1,0	9,3	118
BS0991	3x1,0	9,3	118
BS0992	4G1,0	10,0	142
BS0993	4x1,0	10,0	142
BS0994	5G1,0	11,0	167
BS0995	5x1,0	11,0	167
BS0996	6G1,0	11,6	196
BS0997	6x1,0	11,6	196
BS0998	7G1,0	11,6	203
BS0999	7x1,0	11,6	203
BS1000	8G1,0	12,9	235
BS1001	10G1,0	14,9	295
BS1002	10x1,0	14,9	295
BS1003	12G1,0	14,9	310
BS1004	12x1,0	14,9	310
BS1005	14G1,0	15,6	345
BS1006	16G1,0	16,4	390
BS1007	18G1,0	17,2	430
BS1008	18x1,0	17,2	430
BS1009	19G1,0	17,2	440
BS1010	21G1,0	18,0	485
BS1011	25G1,0	20,3	580
BS1012	27G1,0	20,3	590
BS1013	30G1,0	21,0	645
BS1014	34G1,0	22,8	760
BS1015	37G1,0	22,8	780
BS1016	40G1,0	23,6	845
BS1017	42G1,0	25,7	915
BS1018	52G1,0	26,8	1070
BS1019	61G1,0	28,6	1240
BS1020	2x1,5	9,7	125
BS1021	3G1,5	10,2	144
BS1022	3x1,5	10,2	144
BS1023	4G1,5	11,2	175
BS1024	4x1,5	11,2	175
BS1025	5G1,5	12,1	210
BS1026	5x1,5	12,1	210
BS1027	6G1,5	13,0	246
BS1028	6x1,5	13,0	246
BS1029	7G1,5	13,0	255
BS1030	7x1,5	13,0	255

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1031	8G1,5	14,2	295
BS1032	10G1,5	16,6	375
BS1033	10x1,5	16,6	375
BS1034	12G1,5	16,6	395
BS1035	12x1,5	16,6	395
BS1036	14G1,5	17,3	445
BS1037	16G1,5	18,3	500
BS1038	18G1,5	19,2	560
BS1039	19G1,5	19,2	570
BS1040	21G1,5	20,1	630
BS1041	25G1,5	23,0	765
BS1042	27G1,5	23,0	790
BS1043	30G1,5	23,8	860
BS1044	34G1,5	25,8	1010
BS1045	37G1,5	25,8	1045
BS1046	40G1,5	26,7	1125
BS1047	42G1,5	29,1	1220
BS1048	52G1,5	30,3	1430
BS1049	61G1,5	32,4	1660
BS1050	2x2,5	10,8	159
BS1051	3G2,5	11,3	185
BS1052	3x2,5	11,3	185
BS1053	4G2,5	12,3	231
BS1054	4x2,5	12,3	231
BS1055	5G2,5	13,6	275
BS1056	5x2,5	13,6	275
BS1057	6G2,5	14,7	325
BS1058	6x2,5	14,7	325
BS1059	7G2,5	14,7	340
BS1060	7x2,5	14,7	340
BS1061	10G2,5	18,8	505
BS1062	12G2,5	18,8	540
BS1063	12x2,5	18,8	540
BS1064	14G2,5	19,8	615
BS1065	16G2,5	20,9	695
BS1066	18G2,5	22,0	775
BS1067	21G2,5	23,2	890
BS1068	25G2,5	26,5	1080
BS1069	30G2,5	27,5	1220
BS1070	34G2,5	29,9	1430
BS1071	37G2,5	29,9	1485
BS1072	42G2,5	33,7	1730

BiT 1000[®] (St) FR

Flexible, screened, highly flame retardant control cables, rated 0,6/1 kV

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1080	2x2x0,5	11,2	145
BS1081	3x2x0,5	12,4	159
BS1082	4x2x0,5	13,3	188
BS1083	5x2x0,5	14,3	230
BS1084	6x2x0,5	14,7	242
BS1085	7x2x0,5	16,4	275
BS1086	8x2x0,5	17,1	300
BS1087	10x2x0,5	18,3	355
BS1088	12x2x0,5	19,4	405
BS1089	14x2x0,5	20,6	460
BS1090	16x2x0,5	22,2	535
BS1091	18x2x0,5	23,2	575
BS1092	20x2x0,5	23,9	620
BS1093	24x2x0,5	24,6	710
BS1094	2x2x0,75	11,9	193
BS1095	3x2x0,75	13,1	182
BS1096	4x2x0,75	14,2	218
BS1097	5x2x0,75	15,2	265
BS1098	6x2x0,75	15,7	285
BS1099	7x2x0,75	17,5	325
BS1100	8x2x0,75	18,2	360
BS1101	10x2x0,75	19,5	420
BS1102	12x2x0,75	20,8	485
BS1103	14x2x0,75	22,3	560
BS1104	16x2x0,75	23,8	645
BS1105	18x2x0,75	24,8	690
BS1106	20x2x0,75	25,8	765
BS1107	24x2x0,75	26,5	875
BS1108	2x2x1,0	12,3	183
BS1109	3x2x1,0	13,7	205
BS1110	4x2x1,0	14,8	247
BS1111	5x2x1,0	15,9	305
BS1112	6x2x1,0	16,4	320

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1113	7x2x1,0	18,3	370
BS1114	8x2x1,0	19,1	410
BS1115	10x2x1,0	20,4	485
BS1116	12x2x1,0	21,8	560
BS1117	14x2x1,0	23,3	645
BS1118	16x2x1,0	25,2	755
BS1119	18x2x1,0	26,2	810
BS1120	20x2x1,0	27,1	885
BS1121	24x2x1,0	27,9	1020
BS1122	2x2x1,5	13,6	223
BS1123	3x2x1,5	15,2	255
BS1124	4x2x1,5	16,4	305
BS1125	5x2x1,5	17,7	385
BS1126	6x2x1,5	18,3	410
BS1127	7x2x1,5	20,4	475
BS1128	8x2x1,5	21,4	525
BS1129	10x2x1,5	23,1	640
BS1130	12x2x1,5	24,7	740
BS1131	14x2x1,5	26,4	855
BS1132	16x2x1,5	28,5	1000
BS1133	18x2x1,5	29,7	1075
BS1134	20x2x1,5	30,7	1175
BS1135	24x2x1,5	31,8	1375
BS1136	2x2x2,5	15,4	290
BS1137	3x2x2,5	17,2	335
BS1138	4x2x2,5	18,7	410
BS1139	5x2x2,5	20,1	520
BS1140	6x2x2,5	20,9	560
BS1141	7x2x2,5	23,6	660
BS1142	8x2x2,5	24,7	730
BS1143	10x2x2,5	26,7	890
BS1144	12x2x2,5	28,8	1055
BS1145	14x2x2,5	30,6	1200
BS1146	16x2x2,5	33,0	1400

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®]2(St) FR

Flexible, individually and collectively screened, highly flame retardant control cables, rated 0,6/1 kV LVD 2014/35/EU



industrial application



internal application



external application



underground installation



EN 60332-1-2



EN 60332-3-4



oxygen index



high flexibility



UV resistance



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV
Test voltage (50 Hz): 4000 V
Insulation resistance: 20 MΩxkm

Mechanical parameters:

Min. bending radius:
flexible connections: 12 x Ø
fixed installation: 6 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, numbered conductors

Core arrangement:

twisted screened pairs

Individual screen:

aluminium backed polyester tape with tinned copper drain wire

Collective screen:

aluminium backed polyester tape with tinned copper drain wire

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, IEC 60332-3 cat. C), UV resistant, LOI>29; colour: black

Application:

BiT 1000[®]2(St) FR cables are designed for connections in control and signalling circuits, as well as in places exposed to vibrations. Insulation compounds and construction of BiT 1000[®]2(St) FR cable enable easy and fast connections and ensure their high durability. They are suitable for operation in dry and damp rooms, outdoor installations (outer sheath is UV resistant) as well as **direct burial in ground**. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1160	2x2x0,5	11,2	155
BS1161	3x2x0,5	12,4	176
BS1162	4x2x0,5	13,8	215
BS1163	5x2x0,5	14,3	255
BS1164	6x2x0,5	14,7	275
BS1165	7x2x0,5	16,4	315
BS1166	8x2x0,5	17,1	350
BS1167	10x2x0,5	18,3	415
BS1168	12x2x0,5	19,9	480
BS1169	14x2x0,5	21,1	545
BS1170	16x2x0,5	22,7	635
BS1171	18x2x0,5	23,6	685
BS1172	20x2x0,5	24,6	750
BS1173	24x2x0,5	26,5	875
BS1174	2x2x0,75	11,9	173
BS1175	3x2x0,75	13,1	200
BS1176	4x2x0,75	14,7	246
BS1177	5x2x0,75	15,2	295
BS1178	6x2x0,75	15,7	320
BS1179	7x2x0,75	17,5	365
BS1180	8x2x0,75	18,2	405
BS1181	10x2x0,75	19,5	485
BS1182	12x2x0,75	21,3	565
BS1183	14x2x0,75	22,8	650
BS1184	16x2x0,75	24,3	745
BS1185	18x2x0,75	25,3	805
BS1186	20x2x0,75	26,5	895
BS1187	24x2x0,75	28,6	1045

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1188	2x2x1,0	12,3	198
BS1189	3x2x1,0	13,7	229
BS1190	4x2x1,0	15,3	280
BS1191	5x2x1,0	15,9	345
BS1192	6x2x1,0	16,4	370
BS1193	7x2x1,0	18,3	425
BS1194	8x2x1,0	19,1	475
BS1195	10x2x1,0	20,4	565
BS1196	12x2x1,0	22,3	665
BS1197	14x2x1,0	23,9	765
BS1198	16x2x1,0	25,7	890
BS1199	18x2x1,0	26,8	965
BS1200	20x2x1,0	27,9	1055
BS1201	24x2x1,0	30,0	1240
BS1202	2x2x1,5	13,6	238
BS1203	3x2x1,5	15,2	275
BS1204	4x2x1,5	17,0	345
BS1205	5x2x1,5	17,7	425
BS1206	6x2x1,5	18,3	460
BS1207	7x2x1,5	20,4	530
BS1208	8x2x1,5	21,4	595
BS1209	10x2x1,5	23,1	720
BS1210	12x2x1,5	25,3	845
BS1211	14x2x1,5	27,0	980
BS1212	16x2x1,5	29,1	1140
BS1213	18x2x1,5	30,3	1235
BS1214	20x2x1,5	31,6	1350
BS1215	24x2x1,5	34,3	1605

BiT 1000[®] 2(St) FR

Flexible, individually and collectively screened, highly flame retardant control cables, rated 0,6/1 kV

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1217	2x2x2,5	15,4	305
BS1218	3x2x2,5	17,2	360
BS1219	4x2x2,5	19,4	450
BS1220	5x2x2,5	20,1	565
BS1221	6x2x2,5	20,9	610

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1222	7x2x2,5	23,6	720
BS1223	8x2x2,5	24,7	805
BS1224	10x2x2,5	26,7	980
BS1225	12x2x2,5	29,5	1165
BS1226	14x2x2,5	31,3	1335
BS1227	16x2x2,5	33,7	1550

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®] C FR



Flexible, screened, highly flame retardant control and power supply cables, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: U_i/U_e = 0,6/1 kV
Test voltage (50 Hz): 4000 V
Insulation resistance: 20 MΩxkm

Mechanical parameters:

Min. bending radius:

flexible connections: 12 x Ø
fixed installation: 6 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5

acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Screen:

tinned copper wire braid, coverage ≥85%

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant, LOI>29; colour: black

Application:

BiT 1000[®] C FR cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BiT 1000[®] C FR cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms, especially in applications in places with increased fire safety requirements (limited flame propagation). Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Properly connected screen ensures full electromagnetic compatibility (EMC). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0710	2x0,5	8,6	100
BS0711	3G0,5	9,0	110
BS0712	3x0,5	9,0	110
BS0713	4G0,5	9,6	127
BS0714	4x0,5	9,6	127
BS0715	5G0,5	10,2	147
BS0716	5x0,5	10,2	147
BS0717	6G0,5	11,0	170
BS0718	7G0,5	11,0	174
BS0719	7x0,5	11,0	174
BS0720	8G0,5	11,9	199
BS0721	8x0,5	11,9	199
BS0722	10G0,5	13,7	250
BS0723	12G0,5	13,7	255
BS0724	12x0,5	13,7	155
BS0725	14G0,5	14,2	285
BS0726	16G0,5	14,9	315
BS0727	18G0,5	15,7	350
BS0728	19G0,5	15,7	350
BS0729	21G0,5	16,4	385
BS0730	25G0,5	18,4	460
BS0731	30G0,5	19,0	505
BS0732	34G0,5	20,4	585
BS0733	37G0,5	20,4	595
BS0734	42G0,5	22,9	700
BS0735	52G0,5	23,8	800
BS0736	61G0,5	25,5	925

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0737	2x0,75	9,0	110
BS0738	3G0,75	9,4	124
BS0739	3x0,75	9,4	124
BS0740	4G0,75	10,1	145
BS0741	4x0,75	10,1	145
BS0742	5G0,75	10,8	170
BS0743	5x0,75	10,8	170
BS0744	6G0,75	11,6	194
BS0745	6x0,75	11,6	194
BS0746	7G0,75	11,6	201
BS0747	7x0,75	11,6	201
BS0748	8G0,75	12,6	234
BS0749	8x0,75	12,6	234
BS0750	10G0,75	14,5	285
BS0751	12G0,75	14,5	300
BS0752	12x0,75	14,5	300
BS0753	14G0,75	15,1	335
BS0754	16G0,75	15,9	375
BS0755	18G0,75	16,7	410
BS0756	19G0,75	16,7	420
BS0757	21G0,75	17,4	460
BS0758	25G0,75	19,6	545
BS0759	30G0,75	20,2	605
BS0760	34G0,75	21,8	695
BS0761	37G0,75	21,8	715
BS0762	42G0,75	24,5	835
BS0763	52G0,75	25,7	980
BS0764	61G0,75	27,3	1120

BiT 1000[®]C FR

Flexible, screened, highly flame retardant control and power supply cables, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0765	2x1,0	9,3	121
BS0766	3G1,0	9,7	134
BS0767	3x1,0	9,7	134
BS0768	4G1,0	10,4	160
BS0769	4x1,0	10,4	160
BS0770	5G1,0	11,2	187
BS0771	5x1,0	11,2	187
BS0772	6G1,0	12,0	217
BS0773	6x1,0	12,0	217
BS0774	7G1,0	12,0	225
BS0775	7x1,0	12,0	225
BS0776	8G1,0	13,1	260
BS0777	10G1,0	15,1	325
BS0778	10x1,0	15,1	325
BS0779	12G1,0	15,1	340
BS0780	12x1,0	15,1	340
BS0781	14G1,0	15,8	380
BS0782	16G1,0	16,6	425
BS0783	18G1,0	17,4	470
BS0785	19G1,0	17,4	475
BS0786	21G1,0	18,2	525
BS0787	25G1,0	20,6	625
BS0788	30G1,0	21,2	695
BS0789	34G1,0	23,0	815
BS0790	37G1,0	23,0	835
BS0791	42G1,0	25,9	980
BS0792	52G1,0	27,0	1135
BS0793	61G1,0	28,8	1310
BS0794	2x1,5	10,1	143
BS0795	3G1,5	10,6	152
BS0796	3x1,5	10,6	152
BS0797	4G1,5	11,4	196
BS0798	4x1,5	11,4	196
BS0799	5G1,5	12,3	234
BS0800	5x1,5	12,3	234
BS0801	6G1,5	13,2	270
BS0802	6x1,5	13,2	270
BS0803	7G1,5	13,2	280
BS0804	7x1,5	13,2	280

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0805	8G1,5	14,4	320
BS0806	10G1,5	16,8	405
BS0807	10x1,5	16,8	405
BS0808	12G1,5	16,8	430
BS0809	12x1,5	16,8	430
BS0810	14G1,5	17,5	485
BS0811	16G1,5	18,5	545
BS0812	18G1,5	19,4	605
BS0813	19G1,5	19,4	615
BS0814	21G1,5	20,3	675
BS0815	25G1,5	23,2	820
BS0816	30G1,5	24,0	920
BS0817	34G1,5	26,0	1075
BS0818	37G1,5	26,0	1105
BS0819	42G1,5	29,3	1290
BS0820	52G1,5	30,7	1530
BS0821	61G1,5	32,8	1770
BS0822	2x2,5	11,2	179
BS0823	3G2,5	11,7	207
BS0824	3x2,5	11,7	207
BS0825	4G2,5	12,7	255
BS0826	4x2,5	12,7	255
BS0827	5G2,5	13,2	305
BS0828	5x2,5	13,2	305
BS0829	6G2,5	14,9	355
BS0830	6x2,5	14,9	355
BS0831	7G2,5	14,9	370
BS0832	7x2,5	14,9	370
BS0833	10G2,5	19,0	550
BS0834	12G2,5	19,0	580
BS0835	12x2,5	19,0	580
BS0836	14G2,5	20,0	660
BS0837	16G2,5	21,1	745
BS0838	18G2,5	22,4	840
BS0839	21G2,5	23,4	945
BS0840	25G2,5	26,7	1145
BS0841	30G2,5	27,7	1290
BS0842	34G2,5	30,3	1530
BS0843	37G2,5	30,3	1585
BS0844	42G2,5	33,9	1840
BS0845	52G2,5	35,8	2175

BiT 1000[®] C FR

Flexible, screened, highly flame retardant control and power supply cables, rated 0,6/1 kV

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0850	2x2x0,5	11,4	168
BS0851	3x2x0,5	12,6	184
BS0852	4x2x0,5	13,5	217
BS0853	5x2x0,5	14,5	260
BS0854	6x2x0,5	14,9	275
BS0855	7x2x0,5	16,6	315
BS0856	8x2x0,5	17,3	340
BS0857	10x2x0,5	18,5	400
BS0858	12x2x0,5	19,6	455
BS0859	14x2x0,5	20,8	510
BS0860	16x2x0,5	22,4	590
BS0861	18x2x0,5	23,4	630
BS0862	20x2x0,5	24,1	680
BS0863	24x2x0,5	24,8	775
BS0864	2x2x0,75	12,1	186
BS0865	3x2x0,75	13,3	211
BS0866	4x2x0,75	14,4	249
BS0867	5x2x0,75	15,4	300
BS0868	6x2x0,75	15,9	320
BS0869	7x2x0,75	17,7	365
BS0870	8x2x0,75	18,4	400
BS0871	10x2x0,75	19,7	470
BS0872	12x2x0,75	21,0	540
BS0873	14x2x0,75	22,5	615
BS0874	16x2x0,75	24,0	705
BS0875	18x2x0,75	25,2	765
BS0876	20x2x0,75	26,0	830
BS0877	24x2x0,75	26,7	945
BS0878	2x2x1,0	12,5	206
BS0879	3x2x1,0	13,9	233
BS0880	4x2x1,0	15,0	275
BS0881	5x2x1,0	16,1	340
BS0882	6x2x1,0	16,6	360

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS0883	7x2x1,0	18,5	410
BS0884	8x2x1,0	19,3	455
BS0885	10x2x1,0	20,6	535
BS0886	12x2x1,0	22,0	615
BS0887	14x2x1,0	23,5	705
BS0888	16x2x1,0	25,4	815
BS0889	18x2x1,0	26,4	875
BS0890	20x2x1,0	27,3	950
BS0891	24x2x1,0	28,3	1105
BS0892	2x2x1,5	13,8	250
BS0893	3x2x1,5	15,4	285
BS0894	4x2x1,5	16,6	345
BS0895	5x2x1,5	17,9	425
BS0896	6x2x1,5	18,5	455
BS0897	7x2x1,5	20,6	520
BS0898	8x2x1,5	21,6	575
BS0899	10x2x1,5	23,3	695
BS0900	12x2x1,5	24,9	800
BS0901	14x2x1,5	26,6	920
BS0902	16x2x1,5	28,7	1070
BS0903	18x2x1,5	30,1	1175
BS0904	20x2x1,5	31,3	1290
BS0905	24x2x1,5	32,2	1480
BS0906	2x2x2,5	15,6	320
BS0907	3x2x2,5	17,4	370
BS0908	4x2x2,5	18,9	455
BS0909	5x2x2,5	20,3	565
BS0910	6x2x2,5	21,1	610
BS0911	7x2x2,5	23,8	715
BS0912	8x2x2,5	24,9	795
BS0913	10x2x2,5	26,9	960
BS0914	12x2x2,5	29,0	1125
BS0915	14x2x2,5	31,0	1305
BS0916	16x2x2,5	33,4	1515

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®]CY FR

Flexible, screened, highly flame retardant control and power supply cables, rated 0,6/1 kV



Power control cables 0,6/1 kV

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_n/U = 0,6/1$ kV

Test voltage (50 Hz): 4000 V

Insulation resistance: 20 MΩxkm

Mechanical parameters:

Min. bending radius:

flexible connections: $12 \times \varnothing$
fixed installation: $6 \times \varnothing$

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, numbered conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together

Inner sheath:

PVC compound (single core cables without inner sheath)

Screen:

tinned copper wire braid with coverage $\geq 85\%$

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant, LOI>29; colour: black

Application:

BiT 1000[®]CY FR cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BiT 1000[®]CY FR cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms, especially in applications in places with increased fire safety requirements (limited flame propagation). Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Properly connected screen ensures full electromagnetic compatibility (EMC). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66560	2x0,5	9,6	138
S66561	3G0,5	10,0	152
S66562	4G0,5	10,6	172
S66563	5G0,5	11,2	195
S66564	6G0,5	12,0	223
S66565	7G0,5	12,0	227
S66566	8G0,5	13,1	260
S66567	10G0,5	14,9	320
S66568	12G0,5	14,9	325
S66569	14G0,5	15,4	355
S66570	16G0,5	16,3	400
S66571	18G0,5	17,1	435
S66572	19G0,5	17,1	440
S66573	20G0,5	17,8	470
S66574	21G0,5	17,8	475
S66575	25G0,5	20,0	570
S66576	30G0,5	20,6	620
S66577	37G0,5	22,2	720
S66578	2x0,75	10,0	144
S66579	3G0,75	10,4	161
S66580	4G0,75	10,9	184
S66581	5G0,75	11,8	224
S66582	6G0,75	12,6	250
S66583	7G0,75	12,6	255
S66584	8G0,75	13,8	295
S66585	10G0,75	15,7	365

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66586	12G0,75	15,7	375
S66587	14G0,75	16,5	420
S66588	16G0,75	17,3	465
S66589	18G0,75	18,1	505
S66590	19G0,75	18,1	510
S66591	20G0,75	19,0	560
S66592	21G0,75	19,0	565
S66593	25G0,75	21,2	665
S66594	2x1,0	10,1	157
S66595	3G1,0	10,6	186
S66596	4G1,0	11,4	201
S66597	5G1,0	12,2	244
S66598	6G1,0	13,2	280
S66599	7G1,0	13,2	285
S66600	8G1,0	14,3	325
S66601	10G1,0	16,5	415
S66602	12G1,0	16,5	430
S66603	14G1,0	17,2	470
S66604	16G1,0	18,0	520
S66605	18G1,0	18,8	570
S66606	19G1,0	18,8	575
S66607	20G1,0	19,8	625
S66608	21G1,0	19,8	635
S66609	25G1,0	22,3	770
S66610	2x1,5	10,9	195
S66611	3G1,5	11,4	209

BIT 1000[®] CY FR

Flexible, screened, highly flame retardant control and power supply cables, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66612	4G1,5	12,4	250
S66613	5G1,5	13,5	300
S66614	6G1,5	14,4	340
S66615	7G1,5	14,4	350
S66616	8G1,5	15,6	405
S66617	10G1,5	18,2	510
S66618	12G1,5	18,2	535
S66620	16G1,5	20,2	655
S66400	2x2,5	12,2	231
S66401	3G2,5	12,9	285
S66402	4G2,5	13,9	330
S66403	5G2,5	15,0	385
S66404	7G2,5	16,3	450
S66405	10G2,5	20,8	685
S66406	14G2,5	21,8	795
S66407	16G2,5	23,1	900
S66408	18G2,5	24,7	1025
S66409	25G2,5	29,0	1385
S66410	2x4	13,4	305
S66411	3G4	14,0	355
S66412	4G4	15,2	430
S66413	5G4	16,5	505
S66414	7G4	17,7	610
S66415	10G4	22,8	915
S66416	3G6	15,3	445
S66417	4G6	16,9	550
S66418	5G6	18,1	640
S66419	7G6	19,7	795

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66420	3G10	18,7	690
S66421	4G10	20,8	855
S66422	5G10	22,2	995
S66423	7G10	24,2	1245
S66424	3G16	21,1	925
S66425	4G16	23,4	1155
S66426	5G16	25,3	1375
S66427	7G16	27,4	1720
S66428	3G25	25,7	1410
S66429	4G25	28,6	1755
S66430	5G25	30,8	2080
S66431	3G35	27,9	1740
S66432	4G35	31,4	2220
S66433	5G35	33,9	2645
S66434	3G50	33,0	2440
S66435	4G50	36,8	3055
S66436	5G50	39,9	3670
S66437	3G70	37,7	3285
S66438	4G70	42,0	4125
S66439	5G70	45,6	4960
S66440	3G95	42,4	4275
S66441	4G95	47,5	5405
S66442	5G95	51,4	6580
S66443	3G120	45,4	4985
S66444	4G120	50,9	6365
S66445	4G150	57,5	7945
S66446	4G185	64,1	9540
S66447	4G240	71,1	12330

single core cables

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66630	1x1,5	8,9	90
S66631	1x2,5	9,5	110
S66632	1x4	9,9	176
S66633	1x6	10,5	210
S66634	1x10	11,8	291
S66635	1x16	13,0	387
S66636	1x25	14,9	453
S66637	1x35	16,2	550
S66638	1x50	18,4	748
S66639	1x70	20,5	976
S66640	1x95	22,8	1268
S66641	1x120	24,6	1536
S66642	1x150	26,8	1875
S66643	1x185	29,4	2242
S66644	1x240	32,6	2883
S66645	1x300	36,7	3618

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66646	1G1,5	8,9	90
S66647	1G2,5	9,5	110
S66648	1G4	9,9	176
S66649	1G6	10,5	210
S66650	1G10	11,8	291
S66651	1G16	13,0	387
S66652	1G25	14,9	453
S66653	1G35	16,2	550
S66654	1G50	18,4	748
S66655	1G70	20,5	976
S66656	1G95	22,8	1268
S66657	1G120	24,6	1536
S66658	1G150	26,8	1875
S66659	1G185	29,4	2242
S66660	1G240	32,6	2883
S66661	1G300	36,7	3618

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®]OR



Power control cables 0,6/1 kV

Flexible, highly flame retardant, oil resistant control and power supply cables, rated 0,6/1 kV



Technical data:

Thermal parameters:
Operating temperature:
 fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C
 occasional flexing: -15 °C* to 80 °C

Electrical parameters:
Operating voltage: U₀/U = 0,6/1 kV
Test voltage (50 Hz): 4000 V
Insulation resistance: 20 MΩxkm

Mechanical parameters:

Min. bending radius:
 flexible connections: 10 x Ø
 fixed installation: 5 x Ø

Design:

Conductors: bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation: PVC compound

Core identification: black, numbered conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement: cores twisted together

Inner sheath: PVC compound for sections over 2,5 mm² (single core or paired cables without inner sheath)

Outer sheath: PVC compound, oil resistant (EN 60811-404), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant, LOI>29; colour: black

Application:

BiT 1000[®]OR cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BiT 1000[®]OR cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms, especially in applications in places with increased fire safety requirements (limited flame propagation) and in places exposed to oil or industrial coolants. Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S65975	2x0,5	8,0	83
S65976	3G0,5	8,4	95
S66700	3x0,5	8,4	95
S65977	4G0,5	9,0	110
S66701	4x0,5	9,0	110
S65978	5G0,5	9,6	129
S66702	5x0,5	9,6	129
S65979	6G0,5	10,4	149
S65980	7G0,5	10,4	153
S66703	7x0,5	10,4	153
S65981	8G0,5	11,3	176
S66704	8x0,5	11,3	176
S65982	10G0,5	13,1	225
S65983	12G0,5	13,1	232
S66705	12x0,5	13,1	232
S65984	14G0,5	13,6	255
S65985	16G0,5	14,3	285
S65986	18G0,5	15,1	315
S65988	21G0,5	15,8	350
S65989	25G0,5	17,8	420
S65990	30G0,5	18,4	465
S65991	32G0,5	19,0	495
S65992	34G0,5	19,8	540
S66706	37G0,5	19,8	550
S66707	42G0,5	22,1	640
S66708	52G0,5	23,2	745
S66709	61G0,5	24,7	855

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S65993	2x0,75	8,4	94
S65994	3G0,75	8,8	109
S66710	3x0,75	8,8	109
S65995	4G0,75	9,5	129
S66711	4x0,75	9,5	129
S65996	5G0,75	10,2	150
S66712	5x0,75	10,2	150
S65997	6G0,75	11,0	173
S66713	6x0,75	11,0	173
S65998	7G0,75	11,0	179
S66714	7x0,75	11,0	179
S65999	8G0,75	12,0	207
S66715	8x0,75	12,0	207
S66000	10G0,75	13,9	260
S66001	12G0,75	13,9	275
S66716	12x0,75	13,9	275
S66002	14G0,75	14,5	305
S66003	16G0,75	15,3	340
S66004	18G0,75	16,1	380
S66006	21G0,75	16,8	420
S66007	25G0,75	19,0	505
S66008	30G0,75	19,6	565
S66009	32G0,75	20,4	605
S66010	34G0,75	21,2	650
S66717	37G0,75	21,2	670
S66718	42G0,75	23,9	790
S66719	52G0,75	24,9	915
S66720	61G0,75	26,7	1060

BiT 1000[®] OR

Flexible, highly flame retardant, oil resistant control and power supply cables, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66011	2x1,0	8,7	104
S66012	3G1,0	9,2	122
S66721	3x1,0	9,2	122
S66013	4G1,0	9,8	144
S66722	4x1,0	9,8	144
S66014	5G1,0	10,6	168
S66723	5x1,0	10,6	168
S66015	6G1,0	11,4	195
S66016	7G1,0	11,4	203
S66724	7x1,0	11,4	203
S66017	8G1,0	12,5	182
S66018	10G1,0	14,5	300
S66725	10x1,0	14,5	300
S66019	12G1,0	14,5	310
S66726	12x1,0	14,5	310
S66020	14G1,0	15,2	350
S66021	16G1,0	16,0	390
S66022	18G1,0	16,8	435
S66024	21G1,0	17,6	485
S66025	25G1,0	19,9	585
S66026	30G1,0	20,6	650
S66027	32G1,0	21,4	705
S66028	34G1,0	22,2	765
S66727	37G1,0	22,4	790
S66728	42G1,0	25,1	915
S66729	52G1,0	26,4	1075
S66730	61G1,0	28,0	1235
S66731	2x1,5	9,5	127
S66732	3G1,5	10,0	150
S66733	3x1,5	10,0	150
S66734	4G1,5	10,8	181
S66735	4x1,5	10,8	181
S66736	5G1,5	11,7	213
S66737	5x1,5	11,7	213
S66738	6G1,5	12,6	248
S66739	7G1,5	12,6	255
S66740	7x1,5	12,6	255
S66741	8G1,5	13,8	300
S66742	10G1,5	16,2	380
S66743	12G1,5	16,2	405
S66744	12x1,5	16,2	405
S66745	14G1,5	16,9	455
S66746	16G1,5	17,9	510
S66747	18G1,5	18,8	570
S66748	21G1,5	19,7	640
S66749	25G1,5	22,6	780
S66750	30G1,5	23,4	875
S66751	32G1,5	24,3	940
S66752	34G1,5	25,2	1010
S66753	37G1,5	25,2	1045
S66754	42G1,5	28,7	1240
S66755	52G1,5	29,9	1445
S66756	61G1,5	32,0	1675
S66029	2x2,5	10,6	166
S66030	3G2,5	11,1	198
S66031	3x2,5	11,1	198
S66032	4G2,5	12,1	241
S66033	4x2,5	12,1	241
S66034	5G2,5	13,2	285
S66035	5x2,5	13,2	335

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66036	7G2,5	14,3	350
S66757	7x2,5	14,3	350
S66758	8G2,5	15,7	410
S66759	10G2,5	18,4	525
S66760	12G2,5	18,4	560
S66761	14G2,5	19,4	630
S66038	16G2,5	20,5	710
S66039	18G2,5	21,6	795
S66762	21G2,5	22,8	905
S66040	25G2,5	26,1	1105
S66763	30G2,5	27,1	1245
S66764	32G2,5	28,2	1340
S66765	34G2,5	29,5	1455
S66766	37G2,5	29,5	1505
S66767	42G2,5	33,3	1760
S66768	52G2,5	35,0	2080
S66769	61G2,5	37,2	2400
S66041	2x4	12,8	265
S66042	3G4	13,4	315
S66770	3x4	13,4	315
S66043	4G4	14,6	385
S66044	5G4	15,7	450
S66045	7G4	17,1	560
S66771	10G4	22,0	830
S66772	14G4	23,7	1035
S66773	2x6	14,0	335
S66047	3G6	14,7	400
S66048	4G6	16,3	500
S66049	5G6	17,5	590
S66050	7G6	18,9	730
S66774	10G6	25,2	1130
S66051	3G10	18,1	630
S66052	4G10	20,2	790
S66053	5G10	21,6	930
S66054	7G10	23,6	1170
S66055	3G16	20,5	865
S66056	4G16	22,8	1080
S66057	5G16	24,5	1285
S66058	7G16	26,8	1635
S66059	3G25	25,1	1330
S66060	4G25	27,8	1650
S66061	5G25	30,2	1985
S66062	3G35	27,3	1655
S66063	4G35	30,4	2080
S66064	5G35	33,1	2505
S66065	3G50	32,2	2345
S66066	4G50	36,0	2955
S66067	5G50	39,1	3560
S66068	3G70	36,7	3120
S66069	4G70	41,2	3960
S66070	5G70	44,8	4780
S66071	3G95	41,6	4105
S66072	4G95	46,5	5195
S66073	5G95	50,6	6300
S66074	3G120	44,6	4805
S66075	4G120	49,9	6140
S66076	4G150	56,5	7660
S66077	4G185	63,1	9225
S66078	4G240	70,2	11980

BIT 1000[®] OR

Flexible, highly flame retardant, oil resistant control and power supply cables, rated 0,6/1 kV

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66830	2x2x0,5	10,8	133
S66831	3x2x0,5	12,0	146
S66832	4x2x0,5	12,9	175
S66833	5x2x0,5	13,9	216
S66834	6x2x0,5	14,3	228
S66835	7x2x0,5	16,0	260
S66836	8x2x0,5	16,7	285
S66837	10x2x0,5	17,9	340
S66838	12x2x0,5	19,0	390
S66839	14x2x0,5	20,2	440
S66840	16x2x0,5	21,6	505
S66841	18x2x0,5	22,8	555
S66842	20x2x0,5	23,5	600
S66843	24x2x0,5	24,2	690
S66844	2x2x0,75	11,5	150
S66845	3x2x0,75	12,7	169
S66846	4x2x0,75	13,8	204
S66847	5x2x0,75	14,8	255
S66848	6x2x0,75	15,3	270
S66849	7x2x0,75	17,1	310
S66850	8x2x0,75	17,8	340
S66851	10x2x0,75	19,1	405
S66852	12x2x0,75	20,4	470
S66853	14x2x0,75	21,7	530
S66854	16x2x0,75	23,4	625
S66855	18x2x0,75	24,4	670
S66856	20x2x0,75	25,4	745
S66857	24x2x0,75	26,1	855
S66858	2x2x1,0	11,9	168
S66859	3x2x1,0	13,3	190
S66860	4x2x1,0	14,4	231
S66861	5x2x1,0	15,5	285
S66862	6x2x1,0	16,0	305
S66863	7x2x1,0	17,9	355

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66864	8x2x1,0	18,7	390
S66865	10x2x1,0	20,0	465
S66866	12x2x1,0	21,4	540
S66867	14x2x1,0	22,9	625
S66868	16x2x1,0	24,6	720
S66869	18x2x1,0	25,8	790
S66870	20x2x1,0	26,7	860
S66871	24x2x1,0	27,5	995
S66872	2x2x1,5	13,2	208
S66873	3x2x1,5	14,8	238
S66874	4x2x1,5	16,0	290
S66875	5x2x1,5	17,3	365
S66876	6x2x1,5	17,9	395
S66877	7x2x1,5	20,0	455
S66878	8x2x1,5	21,0	505
S66879	10x2x1,5	22,7	615
S66880	12x2x1,5	24,3	720
S66881	14x2x1,5	26,0	830
S66882	16x2x1,5	27,9	960
S66883	18x2x1,5	29,3	1050
S66884	20x2x1,5	30,3	1145
S66885	24x2x1,5	31,4	1345
S66886	2x2x2,5	15,0	270
S66887	3x2x2,5	16,8	315
S66888	4x2x2,5	18,3	395
S66889	5x2x2,5	19,7	500
S66890	6x2x2,5	20,5	540
S66891	7x2x2,5	23,2	635
S66892	8x2x2,5	24,3	710
S66893	10x2x2,5	26,3	870
S66894	12x2x2,5	28,4	1030
S66895	14x2x2,5	30,2	1175
S66896	16x2x2,5	32,6	1375

Power control cables 0,6/1 kV

single core cables

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66780	1x1,5	5,8	51
S66781	1x2,5	6,4	65
S66782	1x4	6,7	84
S66783	1x6	7,4	107
S66784	1x10	8,7	154
S66785	1x16	9,7	215
S66786	1x25	11,4	310
S66787	1x35	12,5	405
S66788	1x50	14,7	570
S66789	1x70	16,6	775
S66790	1x95	18,7	1015
S66791	1x120	20,5	1245
S66792	1x150	22,5	1535
S66793	1x185	25,1	1875
S66794	1x240	28,1	2435
S66795	1x300	31,8	3180
S66796	1x400	35,5	4110
S66797	1x500	40,8	5165

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66798	1G1,5	5,8	51
S66799	1G2,5	6,4	65
S66800	1G4	6,7	84
S66801	1G6	7,4	107
S66802	1G10	8,7	154
S66803	1G16	9,7	215
S66804	1G25	11,4	310
S66805	1G35	12,5	405
S66806	1G50	14,7	570
S66807	1G70	16,6	775
S66808	1G95	18,7	1015
S66809	1G120	20,5	1245
S66810	1G150	22,5	1535
S66811	1G185	25,1	1875
S66812	1G240	28,1	2435
S66813	1G300	31,8	3180
S66814	1G400	35,5	4110
S66815	1G500	40,8	5165

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000^{°C} OR



Flexible, screened, highly flame retardant, oil resistant control and power supply cables, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:
fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV
Test voltage (50 Hz): 4000 V
Insulation resistance: 20 MΩxkm

Mechanical parameters:

Min. bending radius:
flexible connections: $12 \times \varnothing$
fixed installation: $6 \times \varnothing$

Design:

Conductors: bare copper conductors, multi-stranded class 5 acc. to EN 60228
Insulation: PVC compound
Core identification: black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)
Core arrangement: cores twisted together or pairs twisted together
Screen: tinned copper wire braid, coverage $\geq 85\%$
Outer sheath: PVC compound, oil resistant (EN 60811-404), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant, LOI>29; colour: black

Application:

BiT 1000^{°C} OR cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BiT 1000^{°C} OR cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms, especially in applications in places with increased fire safety requirements (limited flame propagation) and in places exposed to oil or industrial coolants. Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Properly connected screen ensures full electromagnetic compatibility (EMC). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1300	2x0,5	8,6	100
BS1301	3G0,5	9,0	110
BS1302	3x0,5	9,0	110
BS1303	4G0,5	9,6	127
BS1304	4x0,5	9,6	127
BS1305	5G0,5	10,2	147
BS1306	5x0,5	10,2	147
BS1307	6G0,5	11,0	170
BS1308	7G0,5	11,0	174
BS1309	7x0,5	11,0	174
BS1310	8G0,5	11,9	199
BS1311	8x0,5	11,9	199
BS1312	10G0,5	13,7	250
BS1313	12G0,5	13,7	255
BS1314	12x0,5	13,7	155
BS1315	14G0,5	14,2	285
BS1316	16G0,5	14,9	315
BS1317	18G0,5	15,7	350
BS1318	19G0,5	15,7	350
BS1319	21G0,5	16,4	385
BS1320	25G0,5	18,4	460
BS1321	30G0,5	19,0	505
BS1322	34G0,5	20,4	585
BS1323	37G0,5	20,4	595
BS1324	42G0,5	22,9	700
BS1325	52G0,5	23,8	800
BS1326	61G0,5	25,5	925

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1327	2x0,75	9,0	110
BS1328	3G0,75	9,4	124
BS1329	3x0,75	9,4	124
BS1330	4G0,75	10,1	145
BS1331	4x0,75	10,1	145
BS1332	5G0,75	10,8	170
BS1333	5x0,75	10,8	170
BS1334	6G0,75	11,6	194
BS1335	6x0,75	11,6	194
BS1336	7G0,75	11,6	201
BS1337	7x0,75	11,6	201
BS1338	8G0,75	12,6	234
BS1339	8x0,75	12,6	234
BS1340	10G0,75	14,5	285
BS1341	12G0,75	14,5	300
BS1342	12x0,75	14,5	300
BS1343	14G0,75	15,1	335
BS1344	16G0,75	15,9	375
BS1345	18G0,75	16,7	410
BS1346	19G0,75	16,7	420
BS1347	21G0,75	17,4	460
BS1348	25G0,75	19,6	545
BS1349	30G0,75	20,2	605
BS1350	34G0,75	21,8	695
BS1351	37G0,75	21,8	715
BS1352	42G0,75	24,5	835
BS1353	52G0,75	25,7	980
BS1354	61G0,75	27,3	1120

BiT 1000[®]C OR

Flexible, screened, highly flame retardant, oil resistant control and power supply cables, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1355	2x1,0	9,3	121
BS1356	3G1,0	9,7	134
BS1357	3x1,0	9,7	134
BS1358	4G1,0	10,4	160
BS1359	4x1,0	10,4	160
BS1360	5G1,0	11,2	187
BS1361	5x1,0	11,2	187
BS1362	6G1,0	12,0	217
BS1363	6x1,0	12,0	217
BS1364	7G1,0	12,0	225
BS1365	7x1,0	12,0	225
BS1366	8G1,0	13,1	260
BS1367	10G1,0	15,1	325
BS1368	10x1,0	15,1	325
BS1369	12G1,0	15,1	340
BS1370	12x1,0	15,1	340
BS1371	14G1,0	15,8	380
BS1372	16G1,0	16,6	425
BS1373	18G1,0	17,4	470
BS1375	19G1,0	17,4	475
BS1376	21G1,0	18,2	525
BS1377	25G1,0	20,5	625
BS1378	30G1,0	21,2	695
BS1379	34G1,0	23,0	815
BS1380	37G1,0	23,0	835
BS1381	42G1,0	25,9	980
BS1382	52G1,0	27,0	1135
BS1383	61G1,0	28,8	1310
BS1384	2x1,5	10,1	143
BS1385	3G1,5	10,6	152
BS1386	3x1,5	10,6	152
BS1387	4G1,5	11,4	196
BS1388	4x1,5	11,4	196
BS1389	5G1,5	12,3	234
BS1390	5x1,5	12,3	234
BS1391	6G1,5	13,2	270
BS1392	6x1,5	13,2	270
BS1393	7G1,5	13,2	280
BS1394	7x1,5	13,2	280
BS1395	8G1,5	14,4	320

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1396	10G1,5	16,8	405
BS1397	10x1,5	16,8	405
BS1398	12G1,5	16,8	430
BS1399	12x1,5	16,8	430
BS1400	14G1,5	17,5	485
BS1401	16G1,5	18,5	545
BS1402	18G1,5	19,4	605
BS1403	19G1,5	19,4	615
BS1404	21G1,5	20,3	675
BS1405	25G1,5	23,2	820
BS1406	30G1,5	24,0	920
BS1407	34G1,5	26,0	1075
BS1408	37G1,5	26,0	1105
BS1409	42G1,5	29,3	1290
BS1410	52G1,5	30,7	1530
BS1411	61G1,5	32,8	1770
BS1412	2x2,5	11,2	179
BS1413	3G2,5	11,7	207
BS1414	3x2,5	11,7	207
BS1415	4G2,5	12,7	255
BS1416	4x2,5	12,7	255
BS1417	5G2,5	13,2	305
BS1418	5x2,5	13,2	305
BS1419	6G2,5	14,9	355
BS1420	6x2,5	14,9	355
BS1421	7G2,5	14,9	370
BS1422	7x2,5	14,9	370
BS1423	10G2,5	19,0	550
BS1424	12G2,5	19,0	580
BS1425	12x2,5	19,0	580
BS1426	14G2,5	20,0	660
BS1427	16G2,5	21,1	745
BS1428	18G2,5	22,4	840
BS1429	21G2,5	23,4	945
BS1430	25G2,5	26,7	1145
BS1431	30G2,5	27,7	1290
BS1432	34G2,5	30,3	1530
BS1433	37G2,5	30,3	1585
BS1434	42G2,5	33,9	1840
BS1435	52G2,5	35,8	2175

BiT 1000[®] C OR

Flexible, screened, highly flame retardant, oil resistant control and power supply cables, rated 0,6/1 kV

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1445	2x2x0,5	11,4	168
BS1446	3x2x0,5	12,6	184
BS1447	4x2x0,5	13,5	217
BS1448	5x2x0,5	14,5	260
BS1449	6x2x0,5	14,9	275
BS1450	7x2x0,5	16,6	315
BS1451	8x2x0,5	17,3	340
BS1452	10x2x0,5	18,5	400
BS1453	12x2x0,5	19,6	455
BS1454	14x2x0,5	20,8	510
BS1455	16x2x0,5	22,4	590
BS1456	18x2x0,5	23,4	630
BS1457	20x2x0,5	24,1	680
BS1458	24x2x0,5	24,8	775
BS1459	2x2x0,75	12,1	186
BS1460	3x2x0,75	13,3	211
BS1461	4x2x0,75	14,4	249
BS1462	5x2x0,75	15,4	300
BS1463	6x2x0,75	15,9	320
BS1464	7x2x0,75	17,7	365
BS1465	8x2x0,75	18,4	400
BS1466	10x2x0,75	19,7	470
BS1467	12x2x0,75	21,0	540
BS1468	14x2x0,75	22,5	615
BS1469	16x2x0,75	24,0	705
BS1470	18x2x0,75	25,2	765
BS1471	20x2x0,75	26,0	830
BS1472	24x2x0,75	26,7	945
BS1473	2x2x1,0	12,5	206
BS1474	3x2x1,0	13,9	233
BS1475	4x2x1,0	15,0	275
BS1476	5x2x1,0	16,1	340
BS1477	6x2x1,0	16,6	360

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS1478	7x2x1,0	18,5	410
BS1479	8x2x1,0	19,3	455
BS1480	10x2x1,0	20,6	535
BS1481	12x2x1,0	22,0	615
BS1482	14x2x1,0	23,5	705
BS1483	16x2x1,0	25,4	815
BS1484	18x2x1,0	26,4	875
BS1485	20x2x1,0	27,3	950
BS1486	24x2x1,0	28,3	1105
BS1487	2x2x1,5	13,8	250
BS1488	3x2x1,5	15,4	285
BS1489	4x2x1,5	16,6	345
BS1490	5x2x1,5	17,9	425
BS1491	6x2x1,5	18,5	455
BS1492	7x2x1,5	20,6	520
BS1493	8x2x1,5	21,6	575
BS1494	10x2x1,5	23,3	695
BS1495	12x2x1,5	24,9	800
BS1496	14x2x1,5	26,6	920
BS1497	16x2x1,5	28,7	1070
BS1498	18x2x1,5	30,1	1175
BS1499	20x2x1,5	31,3	1290
BS1500	24x2x1,5	32,2	1480
BS1501	2x2x2,5	15,6	320
BS1502	3x2x2,5	17,4	370
BS1503	4x2x2,5	18,9	455
BS1504	5x2x2,5	20,3	565
BS1505	6x2x2,5	21,1	610
BS1506	7x2x2,5	23,8	715
BS1507	8x2x2,5	24,9	795
BS1508	10x2x2,5	29,6	960
BS1509	12x2x2,5	29,0	1125
BS1510	14x2x2,5	31,0	1305
BS1511	16x2x2,5	33,4	1515

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

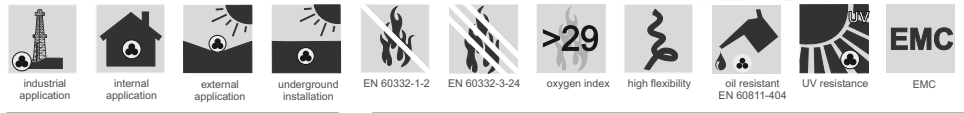
Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] BiT 1000[®] CY OR

RoHS 2015/863/EU
 CE
 LVD 2014/35/EU
 CPR
 CPR 305/2011
 24 months warranty

Power control cables 0,6/1 kV

Flexible, screened, highly flame retardant, oil resistant control and power supply cables, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV
 Test voltage (50 Hz): 4000 V
 Insulation resistance: 20 M Ω xkm

Mechanical parameters:

Min. bending radius:

flexible connections: 12 x \varnothing
 fixed installation: 6 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, numbered conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together

Inner sheath:

PVC compound (single core cables without inner sheath)

Screen:

tinned copper wire braid with coverage $\geq 85\%$

Outer sheath:

PVC compound, oil resistant (EN 60811-404), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant, LOI>29; colour: black

Application:

BiT 1000[®] CY OR cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BIT 1000[®] CY OR cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms, especially in applications in places with increased fire safety requirements (limited flame propagation) and in places exposed to oil or industrial coolants. Cables suitable for outdoor installation - outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Properly connected screen ensures full electromagnetic compatibility (EMC). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66900	2x0,5	9,6	138
S66901	3G0,5	10,0	152
S66902	4G0,5	10,6	172
S66903	5G0,5	11,2	195
S66904	6G0,5	12,0	223
S66905	7G0,5	12,0	227
S66906	8G0,5	13,1	260
S66907	10G0,5	14,9	320
S66908	12G0,5	14,9	325
S66909	14G0,5	15,4	355
S66910	16G0,5	16,3	400
S66911	18G0,5	17,1	435
S66912	19G0,5	17,1	440
S66913	20G0,5	17,8	470
S66914	21G0,5	17,8	475
S66915	25G0,5	20,0	570
S66916	30G0,5	20,6	620
S66917	37G0,5	22,2	720
S66918	2x0,75	10,0	144
S66919	3G0,75	10,4	161
S66920	4G0,75	10,9	184
S66921	5G0,75	11,8	224
S66922	6G0,75	12,6	250
S66923	7G0,75	12,6	255
S66924	8G0,75	13,8	295

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66925	10G0,75	15,7	365
S66926	12G0,75	15,7	375
S66927	14G0,75	16,5	420
S66928	16G0,75	17,3	465
S66929	18G0,75	18,1	505
S66930	19G0,75	18,1	510
S66931	20G0,75	19,0	560
S66932	21G0,75	19,0	565
S66933	25G0,75	21,2	665
S66934	2x1,0	10,1	157
S66935	3G1,0	10,8	186
S66936	4G1,0	11,4	201
S66937	5G1,0	12,2	244
S66938	6G1,0	13,2	280
S66939	7G1,0	13,2	285
S66940	8G1,0	14,3	325
S66941	10G1,0	16,5	415
S66942	12G1,0	16,5	430
S66943	14G1,0	17,2	470
S66944	16G1,0	18,0	520
S66945	18G1,0	18,8	570
S66946	19G1,0	18,8	575
S66947	20G1,0	19,8	625
S66948	21G1,0	19,8	635
S66949	25G1,0	22,3	770

BiT 1000[®] CY OR

Flexible, screened, highly flame retardant, oil resistant control and power supply cables, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66081	2x1,5	11,1	195
S66082	3G1,5	11,4	209
S66083	4G1,5	12,4	250
S66084	5G1,5	13,5	300
S66085	6G1,5	14,4	340
S66086	7G1,5	14,4	350
S66087	8G1,5	15,6	405
S66088	10G1,5	18,2	510
S66089	12G1,5	18,2	535
S66090	2x2,5	12,2	231
S66091	3G2,5	12,9	285
S66092	4G2,5	13,9	330
S66093	5G2,5	15,0	385
S66094	7G2,5	16,3	450
S66095	10G2,5	20,8	685
S66096	14G2,5	21,8	795
S66097	16G2,5	23,1	900
S66098	18G2,5	24,7	1025
S66099	25G2,5	29,0	1385
S66100	2x4	13,4	305
S66101	3G4	14,0	355
S66102	4G4	15,2	430
S66103	5G4	16,5	505
S66104	7G4	17,7	610
S66105	10G4	22,8	915
S66106	3G6	15,3	445
S66107	4G6	16,9	550
S66108	5G6	18,1	640
S66109	7G6	19,7	795

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66110	3G10	18,7	690
S66111	4G10	20,8	855
S66112	5G10	22,2	995
S66113	7G10	24,2	1245
S66114	3G16	21,1	925
S66115	4G16	23,4	1155
S66116	5G16	25,3	1375
S66117	7G16	27,4	1720
S66118	3G25	25,7	1410
S66119	4G25	28,6	1755
S66120	5G25	30,8	2080
S66121	3G35	27,9	1740
S66122	4G35	31,4	2220
S66123	5G35	33,9	2645
S66124	3G50	33,0	2440
S66125	4G50	36,8	3055
S66126	5G50	39,9	3670
S66127	3G70	37,7	3285
S66128	4G70	42,0	4125
S66129	5G70	45,6	4960
S66130	3G95	42,4	4275
S66131	4G95	47,5	5405
S66132	5G95	52,1	6580
S66133	3G120	45,4	4985
S66134	4G120	50,9	6365
S66135	4G150	57,5	7945
S66136	4G185	64,1	9540
S66137	4G240	71,1	12330

single core cables

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66950	1x1,5	8,9	90
S66951	1x2,5	9,5	110
S66952	1x4	9,9	176
S66953	1x6	10,5	210
S66954	1x10	11,8	291
S66955	1x16	13	387
S66956	1x25	14,9	453
S66957	1x35	16,2	550
S66958	1x50	18,4	748
S66959	1x70	20,5	976
S66960	1x95	22,8	1268
S66961	1x120	24,6	1536
S66962	1x150	26,8	1875
S66963	1x185	29,4	2242
S66964	1x240	32,6	2883
S66965	1x300	36,7	3618

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S66966	1G1,5	8,9	90
S66967	1G2,5	9,5	110
S66968	1G4	9,9	176
S66969	1G6	10,5	210
S66970	1G10	11,8	291
S66971	1G16	13	387
S66972	1G25	14,9	453
S66973	1G35	16,2	550
S66974	1G50	18,4	748
S66975	1G70	20,5	976
S66976	1G95	22,8	1268
S66977	1G120	24,6	1536
S66978	1G150	26,8	1875
S66979	1G185	29,4	2242
S66980	1G240	32,6	2883
S66981	1G300	36,7	3618

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x - cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®]H



Power control cables 0,6/1 kV

Flexible, halogen-free control and power supply cables, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV
Test voltage (50 Hz): 4000 V
Insulation resistance: 20 M Ω xkm

Mechanical parameters:

Min. bending radius:

flexible connections: 12 x \varnothing
fixed installation: 6 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

black, numbered conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together

Inner sheath:

special halogen-free compound for sections over 2,5 mm² (single core or paired cables without inner sheath)

Outer sheath:

special halogen-free compound, self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C); UV resistant, colour: black

Application:

BiT 1000[®]H cables are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms, especially in applications in places with increased fire safety requirements (limited flame propagation). **Cables designed also for direct burial in ground.** Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H60750	2x0,5	8,0	86
H60751	3G0,5	8,4	97
H63000	3x0,5	8,4	97
H60752	4G0,5	9,0	113
H63001	4x0,5	9,0	113
H60753	5G0,5	9,6	132
H63002	5x0,5	9,6	132
H60754	6G0,5	10,4	151
H60755	7G0,5	10,4	155
H63003	7x0,5	10,4	155
H60756	8G0,5	11,3	179
H63004	8x0,5	11,3	179
H60757	10G0,5	13,1	228
H60758	12G0,5	13,1	236
H63005	12x0,5	13,1	236
H60759	14G0,5	13,6	260
H60760	16G0,5	14,3	290
H60761	18G0,5	15,1	320
H61500	21G0,5	15,8	355
H61501	25G0,5	17,8	425
H61502	30G0,5	18,4	470
H63006	32G0,5	19,0	505
H61503	34G0,5	19,8	540
H63007	37G0,5	19,8	555
H63008	42G0,5	22,1	645
H63009	52G0,5	23,2	755
H63010	61G0,5	24,7	860
H60763	2x0,75	8,4	97
H60764	3G0,75	8,8	111
H63011	3x0,75	8,8	111

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H60765	4G0,75	9,5	132
H63012	4x0,75	9,5	132
H60766	5G0,75	10,2	153
H63013	5x0,75	10,2	153
H60767	6G0,75	11,0	175
H63014	6x0,75	11,0	175
H60768	7G0,75	11,0	182
H63015	7x0,75	11,0	182
H60769	8G0,75	12,0	211
H63016	8x0,75	12,0	211
H60770	10G0,75	13,9	265
H60771	12G0,75	13,9	280
H63017	12x0,75	13,9	280
H60772	14G0,75	14,5	310
H60773	16G0,75	15,3	345
H60774	18G0,75	16,1	380
H61504	21G0,75	16,8	425
H61505	25G0,75	19,0	510
H61506	30G0,75	19,6	570
H63018	32G0,75	20,4	615
H61507	34G0,75	21,2	655
H61508	37G0,75	21,2	675
H61509	42G0,75	23,9	795
H61510	52G0,75	24,9	920
H61511	61G0,75	26,7	1070
H60776	2x1,0	8,7	106
H60777	3G1,0	9,2	125
H63019	3x1,0	9,2	125
H60778	4G1,0	9,8	147
H63020	4x1,0	9,8	147

BiT 1000[®]H

Flexible, halogen-free control and power supply cables, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H60779	5G1,0	10,6	171
H63021	5x1,0	10,6	171
H60780	6G1,0	11,4	199
H60781	7G1,0	11,4	206
H63022	7x1,0	11,4	206
H60782	8G1,0	12,5	186
H60783	10G1,0	14,5	300
H63023	10x1,0	14,5	300
H60784	12G1,0	14,5	315
H63024	12x1,0	14,5	315
H60785	14G1,0	15,2	355
H60786	16G1,0	16,0	395
H60787	18G1,0	16,8	440
H61512	21G1,0	17,6	490
H61513	25G1,0	19,9	590
H61514	30G1,0	20,6	660
H63025	32G1,0	21,4	710
H61515	34G1,0	22,4	775
H61516	37G1,0	22,4	795
H61517	42G1,0	25,1	925
H61518	52G1,0	26,4	1085
H61519	61G1,0	28,0	1245
H60789	2x1,5	9,5	131
H60790	3G1,5	10,0	153
H63026	3x1,5	10,0	153
H60791	4G1,5	10,8	184
H63027	4x1,5	10,8	184
H60792	5G1,5	11,7	216
H63028	5x1,5	11,7	216
H60793	6G1,5	12,6	252
H60794	7G1,5	12,6	260
H63029	7x1,5	12,6	260
H60795	8G1,5	13,8	305
H60796	10G1,5	16,2	390
H60797	12G1,5	16,2	410
H63030	12x1,5	16,2	410
H60798	14G1,5	16,9	460
H60799	16G1,5	17,9	515
H60800	18G1,5	18,8	575
H61520	21G1,5	19,7	645
H61521	25G1,5	22,6	785
H61522	30G1,5	23,4	880
H63031	32G1,5	24,3	950
H61523	34G1,5	25,2	1020
H61524	37G1,5	25,2	1050
H61525	42G1,5	28,7	1250
H61526	52G1,5	29,9	1455
H61527	61G1,5	32,0	1690
H60802	2x2,5	10,6	169
H60803	3G2,5	11,1	202
H63032	3x2,5	11,1	202
H60804	4G2,5	12,1	245
H63033	4x2,5	12,1	245
H60805	5G2,5	13,2	290
H63034	5x2,5	13,2	290
H60806	7G2,5	14,3	355
H63035	7x2,5	14,3	355

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61529	8G2,5	15,7	415
H61530	10G2,5	18,4	530
H60807	12G2,5	18,4	565
H61531	14G2,5	19,4	635
H60808	16G2,5	20,5	720
H60809	18G2,5	21,6	800
H61532	21G2,5	22,8	915
H61533	25G2,5	26,1	1115
H61534	30G2,5	27,1	1250
H63036	32G2,5	28,2	1350
H63037	34G2,5	29,5	1465
H63038	37G2,5	29,5	1515
H63039	42G2,5	33,3	1775
H63040	52G2,5	35,0	2095
H63041	61G2,5	37,2	2415
H60811	2x4	12,8	275
H60812	3G4	13,4	320
H63042	3x4	13,4	390
H60813	4G4	14,6	460
H60814	5G4	15,9	565
H60815	7G4	17,1	845
H61535	10G4	22,2	1040
H61536	14G4	23,7	108
H63043	2x6	14,0	340
H60817	3G6	14,7	410
H60818	4G6	16,3	505
H60819	5G6	17,5	595
H60820	7G6	18,9	735
H61537	10G6	25,1	1135
H60821	3G10	18,1	640
H60822	4G10	20,2	800
H60823	5G10	21,6	940
H60824	7G10	23,6	1185
H60825	3G16	20,5	875
H60826	4G16	22,8	1095
H60827	5G16	24,5	1300
H60828	7G16	26,8	1650
H60829	3G25	25,1	1345
H60830	4G25	27,8	1670
H60831	5G25	30,2	2005
H60832	3G35	27,3	1670
H60833	4G35	30,4	2100
H60834	5G35	33,1	2530
H60835	3G50	32,2	2335
H60836	4G50	36,0	2935
H60837	5G50	39,1	3540
H60838	3G70	36,7	3150
H60839	4G70	41,2	3995
H60840	5G70	44,8	4820
H60841	3G95	41,6	4145
H60842	4G95	46,5	5235
H60843	5G95	51,3	6415
H60844	3G120	44,6	5035
H60845	4G120	49,9	6390
H60846	4G150	56,5	7975
H60847	4G185	61,6	9610
H60848	4G240	70,2	12380

BIT 1000[®]H

Flexible, halogen-free control and power supply cables, rated 0,6/1 kV

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61560	2x2x0,5	10,8	144
H61561	3x2x0,5	12,0	156
H61562	4x2x0,5	12,9	185
H61563	5x2x0,5	13,9	226
H61564	6x2x0,5	14,3	237
H61565	7x2x0,5	16,0	270
H61566	8x2x0,5	16,7	295
H61567	10x2x0,5	17,9	345
H61568	12x2x0,5	19,0	395
H61569	14x2x0,5	20,2	445
H61570	16x2x0,5	21,6	520
H61571	18x2x0,5	22,8	555
H61572	20x2x0,5	23,5	600
H61573	24x2x0,5	24,2	685
H61574	2x2x0,75	11,5	161
H61575	3x2x0,75	12,7	180
H61576	4x2x0,75	13,8	214
H61577	5x2x0,75	14,8	260
H61578	6x2x0,75	15,3	275
H61579	7x2x0,75	17,1	315
H61580	8x2x0,75	17,8	350
H61581	10x2x0,75	19,1	410
H61582	12x2x0,75	20,4	475
H61583	14x2x0,75	21,7	545
H61584	16x2x0,75	23,4	625
H61585	18x2x0,75	24,4	670
H61586	20x2x0,75	25,4	740
H61587	24x2x0,75	26,1	850
H61588	2x2x1,0	11,9	181
H61589	3x2x1,0	13,3	202
H61590	4x2x1,0	14,4	242
H61591	5x2x1,0	15,5	300
H61592	6x2x1,0	16,0	315

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61593	7x2x1,0	17,9	360
H61594	8x2x1,0	18,7	400
H61595	10x2x1,0	20,0	475
H61596	12x2x1,0	21,4	545
H61597	14x2x1,0	22,9	630
H61598	16x2x1,0	24,6	735
H61599	18x2x1,0	25,8	790
H61600	20x2x1,0	26,7	860
H61601	24x2x1,0	27,5	990
H61602	2x2x1,5	13,2	221
H61603	3x2x1,5	14,8	251
H61604	4x2x1,5	16,0	300
H61605	5x2x1,5	17,3	375
H61606	6x2x1,5	17,9	400
H61607	7x2x1,5	20,0	465
H61608	8x2x1,5	21,0	515
H61609	10x2x1,5	22,7	625
H61610	12x2x1,5	24,3	720
H61611	14x2x1,5	26,0	835
H61612	16x2x1,5	27,9	970
H61613	18x2x1,5	29,3	1045
H61614	20x2x1,5	30,3	1140
H61615	24x2x1,5	31,4	1335
H61616	2x2x2,5	15,0	285
H61617	3x2x2,5	16,8	330
H61618	4x2x2,5	18,3	405
H61619	5x2x2,5	19,7	510
H61620	6x2x2,5	20,5	550
H61621	7x2x2,5	23,2	645
H61622	8x2x2,5	24,3	715
H61623	10x2x2,5	26,3	875
H61624	12x2x2,5	28,4	1030
H61625	14x2x2,5	30,2	1175
H61626	16x2x2,5	32,6	1370

single core cables

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H60850	1x1,5	5,8	52
H60851	1x2,5	6,4	66
H60852	1x4	6,8	85
H60853	1x6	7,4	108
H60854	1x10	8,7	156
H60855	1x16	9,7	216
H60856	1x25	11,4	310
H60857	1x35	12,5	410
H60858	1x50	14,7	575
H60859	1x70	16,6	775
H60860	1x95	18,7	1020
H60861	1x120	20,5	1250
H60862	1x150	22,5	1545
H60863	1x185	25,1	885
H60864	1x240	28,1	2440
H60865	1x300	31,8	3190
H60882	1x400	35,5	4135
H60884	1x500	40,8	5180

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H60866	1G1,5	5,8	52
H60867	1G2,5	6,4	66
H60868	1G4	6,8	85
H60869	1G6	7,4	108
H60870	1G10	8,7	156
H60871	1G16	9,7	216
H60872	1G25	11,4	310
H60873	1G35	12,5	410
H60874	1G50	14,7	575
H60875	1G70	16,6	775
H60876	1G95	18,7	1020
H60877	1G120	20,5	1250
H60878	1G150	22,5	1545
H60879	1G185	25,1	885
H60880	1G240	28,1	2440
H60881	1G300	31,8	3190
H60883	1G400	35,5	4135
H60885	1G500	40,8	5180

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

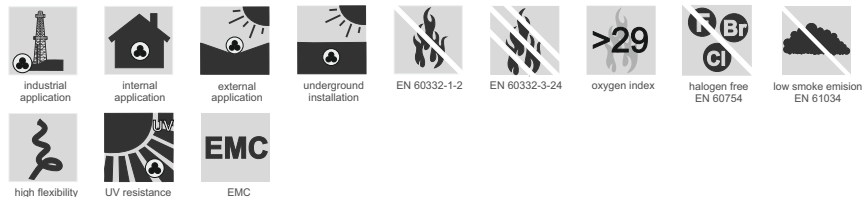
x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®]CH



Flexible, screened, halogen-free control and power supply cables, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage (50 Hz): 4000 V

Insulation resistance: 20 MΩxkm

Mechanical parameters:

Min. bending radius:

flexible connections: 12 x Ø
fixed installation: 6 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together

Screen:

tinned copper wire braid, coverage $\geq 85\%$

Outer sheath:

special halogen-free, self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant; colour: black

Application:

BiT 1000[®]CH cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BiT 1000[®]CH cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms, especially in applications in places with increased fire safety requirements (limited flame propagation and no emission of corrosive gases under fire conditions). **Cables designed also for direct burial in ground.** Properly connected screen ensures full electromagnetic compatibility (EMC). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H63050	2x0,5	8,4	100
H63051	3G0,5	9,0	110
H63052	3x0,5	9,0	110
H63053	4G0,5	9,4	127
H63054	4x0,5	9,4	127
H63055	5G0,5	10,2	147
H63056	5x0,5	10,2	147
H63057	6G0,5	11,0	170
H63058	7G0,5	11,0	174
H63059	7x0,5	11,0	174
H63060	8G0,5	11,9	199
H63061	8x0,5	11,9	199
H63062	10G0,5	13,7	250
H63063	12G0,5	13,7	255
H63064	12x0,5	13,7	255
H63065	14G0,5	14,2	285
H63066	16G0,5	14,9	315
H63067	18G0,5	15,7	350
H63068	19G0,5	15,7	350
H63069	21G0,5	16,4	385
H63070	25G0,5	18,4	460
H63071	30G0,5	19,0	505

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H63072	34G0,5	20,4	585
H63073	37G0,5	20,4	595
H63074	42G0,5	22,9	700
H63075	52G0,5	23,8	800
H63076	61G0,5	25,5	925
H63077	2x0,75	8,8	110
H63078	3G0,75	9,4	124
H63079	3x0,75	9,4	124
H63080	4G0,75	9,9	145
H63081	4x0,75	9,9	145
H63082	5G0,75	10,8	170
H63083	5x0,75	10,8	170
H63084	6G0,75	11,4	194
H63085	6x0,75	11,4	194
H63086	7G0,75	11,4	201
H63087	7x0,75	11,4	201
H63088	8G0,75	12,6	234
H63089	8x0,75	12,6	234
H63090	10G0,75	14,5	285
H63091	12G0,75	14,5	300
H63092	12x0,75	14,5	300
H63093	14G0,75	15,1	335

BIT 1000[®] CH

Flexible, screened, halogen-free control and power supply cables, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H63094	16G0,75	15,9	375
H63095	18G0,75	16,7	410
H63096	19G0,75	16,7	420
H63097	21G0,75	17,4	460
H63098	25G0,75	19,6	545
H63099	30G0,75	20,2	605
H63100	34G0,75	21,8	695
H63101	37G0,75	21,8	715
H63102	42G0,75	24,5	835
H63103	52G0,75	25,7	980
H63104	61G0,75	27,3	1120
H63105	2x1,0	9,1	121
H63106	3G1,0	9,5	134
H63107	3x1,0	9,5	134
H63108	4G1,0	10,2	160
H63109	4x1,0	10,2	160
H63110	5G1,0	11,0	187
H63111	5x1,0	11,0	187
H63112	6G1,0	11,8	217
H63113	6x1,0	11,8	217
H63114	7G1,0	11,8	225
H63115	7x1,0	11,8	225
H63116	8G1,0	13,1	260
H63117	10G1,0	15,1	325
H63118	10x1,0	15,1	325
H63119	12G1,0	15,1	340
H63120	12x1,0	15,1	340
H63121	14G1,0	15,8	380
H63122	16G1,0	16,6	425
H63123	18G1,0	17,4	470
H63125	19G1,0	17,4	475
H63126	21G1,0	18,2	525
H63127	25G1,0	20,5	625
H63128	30G1,0	21,2	695
H63129	34G1,0	23,0	815
H63130	37G1,0	23,0	835
H63131	42G1,0	25,9	980
H63132	52G1,0	27,0	1135
H63133	61G1,0	28,8	1310
H63134	2x1,5	9,9	143
H63135	3G1,5	10,4	152
H63136	3x1,5	10,4	152
H63137	4G1,5	11,2	196
H63138	4x1,5	11,2	196
H63139	5G1,5	12,1	234
H63140	5x1,5	12,1	234

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H63141	6G1,5	13,0	270
H63142	6x1,5	13,0	270
H63143	7G1,5	13,0	280
H63144	7x1,5	13,0	280
H63145	8G1,5	14,4	320
H63146	10G1,5	16,8	405
H63147	10x1,5	16,8	405
H63148	12G1,5	16,8	430
H63149	12x1,5	16,8	430
H63150	14G1,5	17,5	485
H63151	16G1,5	18,5	545
H63152	18G1,5	19,4	605
H63153	19G1,5	19,4	615
H63154	21G1,5	20,3	675
H63155	25G1,5	23,2	820
H63156	30G1,5	24,0	920
H63157	34G1,5	26,0	1075
H63158	37G1,5	26,0	1105
H63159	42G1,5	29,3	1290
H63160	52G1,5	30,7	1530
H63161	61G1,5	32,8	1770
H63162	2x2,5	11,0	179
H63163	3G2,5	11,5	207
H63164	3x2,5	11,5	207
H63165	4G2,5	12,5	255
H63166	4x2,5	12,5	255
H63167	5G2,5	13,8	305
H63168	5x2,5	13,8	305
H63169	6G2,5	14,9	355
H63170	6x2,5	14,9	355
H63171	7G2,5	14,9	370
H63172	7x2,5	14,9	370
H63173	10G2,5	19,0	550
H63174	12G2,5	19,1	580
H63175	12x2,5	19,1	580
H63176	14G2,5	20,0	660
H63177	16G2,5	21,1	745
H63178	18G2,5	22,4	840
H63179	21G2,5	23,4	945
H63180	25G2,5	26,7	1145
H63181	30G2,5	27,7	1290
H63182	34G2,5	30,3	1530
H63183	37G2,5	30,3	1585
H63184	42G2,5	33,9	1840
H63185	52G2,5	35,8	2175

BiT 1000[®] CH

Flexible, screened, halogen-free control and power supply cables, rated 0,6/1 kV

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61300	2x2x0,5	11,4	168
H61301	3x2x0,5	12,6	184
H61302	4x2x0,5	13,5	217
H61303	5x2x0,5	14,5	260
H61304	6x2x0,5	14,9	275
H61305	7x2x0,5	16,6	315
H61306	8x2x0,5	17,3	340
H61307	10x2x0,5	18,5	400
H61308	12x2x0,5	19,6	455
H61309	14x2x0,5	20,8	510
H61310	16x2x0,5	22,4	590
H61311	18x2x0,5	23,4	630
H61312	20x2x0,5	24,1	680
H61313	24x2x0,5	24,8	775
H61314	2x2x0,75	12,1	186
H61315	3x2x0,75	13,3	211
H61316	4x2x0,75	14,4	249
H61317	5x2x0,75	15,4	300
H61318	6x2x0,75	15,9	320
H61319	7x2x0,75	17,7	365
H61320	8x2x0,75	18,4	400
H61321	10x2x0,75	19,7	470
H61322	12x2x0,75	21,0	540
H61323	14x2x0,75	22,5	615
H61324	16x2x0,75	24,0	705
H61325	18x2x0,75	25,2	765
H61326	20x2x0,75	26,0	830
H61327	24x2x0,75	26,7	945
H61328	2x2x1,0	12,3	206
H61329	3x2x1,0	13,9	233
H61330	4x2x1,0	15,0	275
H61331	5x2x1,0	16,1	340
H61332	6x2x1,0	16,6	360

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61333	7x2x1,0	18,5	410
H61334	8x2x1,0	19,3	455
H61335	10x2x1,0	20,6	535
H61336	12x2x1,0	22,0	615
H61337	14x2x1,0	23,5	705
H61338	16x2x1,0	25,4	815
H61339	18x2x1,0	26,4	875
H61340	20x2x1,0	27,3	950
H61341	24x2x1,0	28,3	1105
H61342	2x2x1,5	13,8	250
H61343	3x2x1,5	15,4	285
H61344	4x2x1,5	16,6	345
H61345	5x2x1,5	17,9	425
H61346	6x2x1,5	18,5	455
H61347	7x2x1,5	20,6	520
H61348	8x2x1,5	21,6	575
H61349	10x2x1,5	23,3	695
H61350	12x2x1,5	24,9	800
H61351	14x2x1,5	26,6	920
H61352	16x2x1,5	28,7	1070
H61353	18x2x1,5	30,1	1175
H61354	20x2x1,5	31,3	1290
H61355	24x2x1,5	32,2	1480
H61356	2x2x2,5	15,6	320
H61357	3x2x2,5	17,4	370
H61358	4x2x2,5	18,9	455
H61359	5x2x2,5	20,3	565
H61360	6x2x2,5	21,1	610
H61361	7x2x2,5	23,8	715
H61362	8x2x2,5	24,9	795
H61363	10x2x2,5	26,9	960
H61364	12x2x2,5	29,0	1125
H61365	14x2x2,5	31,0	1305
H61366	16x2x2,5	33,4	1515

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

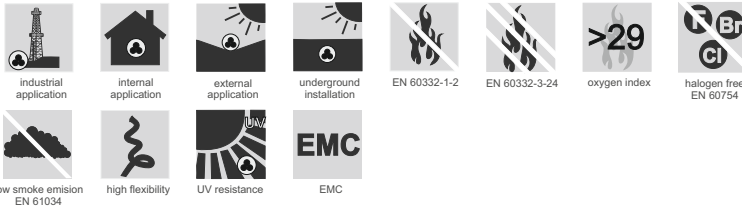
Note: on customer's request other cross sections or number of cores can be produced

BITNER® BIT 1000® HCH



Power control cables 0,6/1 kV

Flexible, screened, halogen-free, control and power supply cables, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage (50 Hz): 4000 V

Insulation resistance: 20 MΩxkm

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 6 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

black, numbered conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together

Inner sheath:

special halogen-free compound (single core cables without inner sheath)

Screen:

tinned copper wire braid with coverage ≥85%

Outer sheath:

special halogen-free, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), LOI>29; colour: black

Application:

BIT 1000® HCH cables are designed for connections in control and signalling circuits, as power supply cables for mobile and portable devices in places exposed to vibrations. Insulation compounds and construction of BIT 1000® HCH cable enable easy and fast connections and ensure their high durability. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms, especially in applications in places with increased fire safety requirements ((limited flame propagation and no emission of corrosive gases under fire conditions)). Properly connected screen ensures full electromagnetic compatibility (EMC). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61050	2x0,5	9,6	138
H61051	3G0,5	10,0	152
H61052	4G0,5	10,6	172
H61053	5G0,5	11,2	195
H61054	6G0,5	12,0	223
H61055	7G0,5	12,0	227
H61056	8G0,5	13,1	260
H61057	10G0,5	14,9	320
H61058	12G0,5	14,9	325
H61059	14G0,5	15,4	355
H61060	16G0,5	16,3	400
H61061	18G0,5	17,1	435
H61062	19G0,5	17,1	440
H61063	20G0,5	17,8	470
H61064	21G0,5	17,8	475
H61065	25G0,5	20,0	570
H61066	30G0,5	20,6	620
H61067	37G0,5	22,2	720
H61068	2x0,75	10,0	144
H61069	3G0,75	10,2	161

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61070	4G0,75	11,1	184
H61071	5G0,75	11,8	224
H61072	6G0,75	12,6	250
H61073	7G0,75	12,6	255
H61074	8G0,75	13,8	295
H61075	10G0,75	15,7	365
H61076	12G0,75	15,7	375
H61077	14G0,75	16,5	420
H61078	16G0,75	17,3	465
H61079	18G0,75	18,1	505
H61080	19G0,75	18,1	510
H61081	20G0,75	19,0	560
H61082	21G0,75	19,0	565
H61083	25G0,75	21,2	665
H61084	2x1,0	10,3	157
H61085	3G1,0	10,7	186
H61086	4G1,0	11,4	201
H61087	5G1,0	12,2	244
H61088	6G1,0	13,2	280
H61089	7G1,0	13,2	285

BIT 1000[®] HCH

Flexible, screened, halogen-free, control and power supply cables, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61090	8G1,0	14,3	325
H61091	10G1,0	16,5	415
H61092	12G1,0	16,5	430
H61093	14G1,0	17,2	470
H61094	16G1,0	18,0	520
H61095	18G1,0	18,8	570
H61096	19G1,0	18,8	575
H61097	20G1,0	19,8	625
H61098	21G1,0	19,8	635
H61099	25G1,0	22,3	770
H61100	2x1,5	11,1	195
H61101	3G1,5	11,6	209
H61102	4G1,5	12,6	250
H61103	5G1,5	13,5	300
H61104	6G1,5	14,4	340
H61105	7G1,5	14,4	350
H61106	8G1,5	15,6	405
H61107	10G1,5	18,2	510
H61108	12G1,5	18,2	535
H60900	2x2,5	12,2	231
H60901	3G2,5	12,9	285
H60902	4G2,5	13,9	330
H60903	5G2,5	15,0	385
H60904	7G2,5	16,3	465
H60905	10G2,5	20,6	685
H60906	14G2,5	21,6	795
H60907	16G2,5	22,9	900
H60908	18G2,5	24,5	1025
H60909	25G2,5	29,0	1385
H60910	2x4	13,5	305
H60911	3G4	14,1	355
H60912	4G4	15,3	430
H60913	5G4	16,4	505
H60914	7G4	17,6	610

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H60915	10G4	22,7	915
H60916	3G6	15,2	445
H60917	4G6	16,8	550
H60918	5G6	18,0	640
H60919	7G6	20,0	795
H60920	3G10	18,6	690
H60921	4G10	20,7	855
H60922	5G10	22,3	995
H60923	7G10	24,3	1245
H60924	3G16	21,0	925
H60925	4G16	23,4	1155
H60926	5G16	25,7	1375
H60927	7G16	27,5	1720
H60928	3G25	25,6	1410
H60929	4G25	28,7	1755
H60930	5G25	30,9	2080
H60931	3G35	28,0	1740
H60932	4G35	31,1	2220
H60933	5G35	33,8	2645
H60934	3G50	33,3	2440
H60935	4G50	37,1	3055
H60936	5G50	40,4	3670
H60937	3G70	38,0	3285
H60938	4G70	41,9	4125
H60939	5G70	46,1	4960
H60940	3G95	42,3	4275
H60941	4G95	47,6	5405
H60942	5G95	52,2	6580
H60943	3G120	45,3	4985
H60944	4G120	51,0	6365
H60945	4G150	57,4	7945
H60946	4G185	64,6	9540
H60947	4G240	71,3	12330

single core cables

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61150	1x1,5	7,8	90
H61151	1x2,5	8,4	110
H61152	1x4	9,9	176
H61153	1x6	10,5	210
H61154	1x10	11,8	291
H61155	1x16	13,0	387
H61156	1x25	14,9	453
H61157	1x35	16,2	550
H61158	1x50	18,4	748
H61159	1x70	20,5	976
H61160	1x95	22,8	1268
H61161	1x120	24,6	1536
H61162	1x150	26,8	1875
H61163	1x185	29,4	2242
H61164	1x240	32,6	2883
H61165	1x300	36,7	3618

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61166	1G1,5	7,8	90
H61167	1G2,5	8,4	110
H61168	1G4	9,9	176
H61169	1G6	10,5	210
H61170	1G10	11,8	291
H61171	1G16	13,0	387
H61172	1G25	14,9	453
H61173	1G35	16,2	550
H61174	1G50	18,4	748
H61175	1G70	20,5	976
H61176	1G95	22,8	1268
H61177	1G120	24,6	1536
H61178	1G150	26,8	1875
H61179	1G185	29,4	2242
H61180	1G240	32,6	2883
H61181	1G300	36,7	3618

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®](St)H



Flexible, halogen-free, screened control cables with number coded conductors, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_i/U = 0,6/1$ kV
Test voltage (50 Hz): 4000 V
Insulation resistance: 20 M Ω xkm

Mechanical parameters:

Min. bending radius:

flexible connections: $12 \times \varnothing$
fixed installation: $6 \times \varnothing$

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together or pairs twisted together

Screen:

aluminum backed polyester tape with tinned copper drain wire

Outer sheath:

special halogen-free compound, self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C); colour: black, UV resistant

Application:

Flexible, halogen-free power and control cables designed for operation in control and protective devices as well as in control circuits. Common screen improves protection of transmitted signals against external electromagnetic field. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. **Cables suitable for outdoor installation – outer sheath is UV resistant. Cables designed also for direct burial in ground.** Cables are halogen-free, low smoke and significantly limit flame propagation. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61800	2x0,5	8,4	85
H61801	3G0,5	8,8	95
H61750	3x0,5	8,8	95
H61802	4G0,5	9,4	110
H61751	4x0,5	9,4	110
H61803	5G0,5	10,0	130
H61752	5x0,5	10,0	130
H61804	6G0,5	10,8	149
H61805	7G0,5	10,8	154
H61753	7x0,5	10,8	154
H61806	8G0,5	11,7	177
H61754	8x0,5	11,7	177
H61807	10G0,5	13,5	221
H61808	12G0,5	13,5	230
H61755	12x0,5	13,5	230
H61809	14G0,5	14,0	255
H61810	16G0,5	14,7	285
H61811	18G0,5	15,5	315
H61756	19G0,5	15,5	320
H61812	21G0,5	16,2	350
H61813	25G0,5	18,2	415
H61757	27G0,5	18,2	425
H61814	30G0,5	18,8	460
H61815	34G0,5	20,2	535
H61758	37G0,5	20,2	545
H61759	40G0,5	20,9	585
H61760	42G0,5	22,7	640
H61761	52G0,5	23,6	740
H61762	61G0,5	25,1	850

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61816	2x0,75	8,6	93
H61817	3G0,75	9,0	105
H61763	3x0,75	9,0	105
H61818	4G0,75	9,7	126
H61764	4x0,75	9,7	126
H61819	5G0,75	10,4	148
H61765	5x0,75	10,4	148
H61820	6G0,75	11,2	171
H61766	6x0,75	11,2	171
H61821	7G0,75	11,2	177
H61767	7x0,75	11,2	177
H61822	8G0,75	12,4	206
H61768	8x0,75	12,4	206
H61823	10G0,75	14,3	255
H61769	12G0,75	14,3	270
H61824	12x0,75	14,3	270
H61825	14G0,75	14,9	300
H61826	16G0,75	15,7	340
H61827	18G0,75	16,5	375
H61770	19G0,75	16,5	380
H61828	21G0,75	17,2	420
H61829	25G0,75	19,4	500
H61771	27G0,75	19,4	510
H61830	30G0,75	20,0	555
H61831	34G0,75	21,6	645
H61832	37G0,75	21,6	665
H61772	40G0,75	22,5	725
H61833	42G0,75	24,3	775
H61834	52G0,75	25,2	915
H61835	61G0,75	27,1	1050

BiT 1000[®](St)H

Flexible, halogen-free, screened control cables with number coded conductors, rated 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61836	2x1,0	8,9	102
H61837	3G1,0	9,3	114
H61773	3x1,0	9,3	114
H61838	4G1,0	10,0	138
H61774	4x1,0	10,0	138
H61839	5G1,0	10,8	160
H61775	5x1,0	10,8	160
H61840	6G1,0	11,8	186
H61776	6x1,0	11,8	186
H61841	7G1,0	11,8	194
H61777	7x1,0	11,8	194
H61842	8G1,0	12,9	220
H61843	10G1,0	14,9	285
H61778	10x1,0	14,9	285
H61844	12G1,0	14,9	300
H61779	12x1,0	14,9	300
H61845	14G1,0	15,6	335
H61846	16G1,0	16,4	375
H61847	18G1,0	17,2	415
H61780	18x1,0	17,2	415
H61781	19G1,0	17,2	425
H61848	21G1,0	18,0	460
H61849	25G1,0	20,3	555
H61782	27G1,0	20,3	570
H61850	30G1,0	21,0	620
H61851	34G1,0	22,8	730
H61852	37G1,0	22,8	750
H61783	40G1,0	23,6	800
H61853	42G1,0	25,7	880
H61854	52G1,0	26,8	1020
H61855	61G1,0	28,6	1185
H61856	2x1,5	9,7	120
H61857	3G1,5	10,2	138
H61784	3x1,5	10,2	138
H61858	4G1,5	11,0	168
H61785	4x1,5	11,0	168
H61859	5G1,5	12,1	200
H61786	5x1,5	12,1	200
H61860	6G1,5	13,0	235
H61787	6x1,5	13,0	235
H61861	7G1,5	13,0	245
H61788	7x1,5	13,0	245

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61862	8G1,5	14,2	295
H61863	10G1,5	16,6	375
H61789	10x1,5	16,6	375
H61864	12G1,5	16,6	395
H61790	12x1,5	16,6	395
H61865	14G1,5	17,3	445
H61866	16G1,5	18,3	500
H61867	18G1,5	19,2	560
H61791	19G1,5	19,2	570
H61868	21G1,5	20,1	630
H61869	25G1,5	23,0	765
H61792	27G1,5	23,0	790
H61870	30G1,5	23,8	860
H61871	34G1,5	25,8	1010
H61872	37G1,5	25,8	1045
H61793	40G1,5	26,7	1125
H61873	42G1,5	29,1	1220
H61874	52G1,5	30,3	1430
H61875	61G1,5	32,4	1660
H61876	2x2,5	10,8	159
H61877	3G2,5	11,3	185
H61794	3x2,5	11,3	185
H61878	4G2,5	12,5	231
H61795	4x2,5	12,5	231
H61879	5G2,5	13,6	275
H61796	5x2,5	13,6	275
H61880	6G2,5	14,7	325
H61797	6x2,5	14,7	325
H61881	7G2,5	14,7	340
H61798	7x2,5	14,7	340
H61883	10G2,5	18,8	505
H61884	12G2,5	18,8	540
H61799	12x2,5	18,8	540
H61885	14G2,5	19,8	615
H61886	16G2,5	20,9	695
H61887	18G2,5	22,0	775
H61888	21G2,5	23,2	890
H61889	25G2,5	26,5	1080
H61890	30G2,5	27,5	1220
H61891	34G2,5	29,9	1430
H61892	37G2,5	29,9	1485
H61893	42G2,5	33,7	1730

BiT 1000[®](St)H

Flexible, halogen-free, screened control cables with number coded conductors, rated 0,6/1 kV

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61900	2x2x0,5	11,2	145
H61901	3x2x0,5	12,4	159
H61902	4x2x0,5	13,3	188
H61903	5x2x0,5	14,3	230
H61904	6x2x0,5	14,7	242
H61905	7x2x0,5	16,4	275
H61906	8x2x0,5	17,1	300
H61907	10x2x0,5	18,3	355
H61908	12x2x0,5	19,4	405
H61909	14x2x0,5	20,6	460
H61910	16x2x0,5	22,2	535
H61911	18x2x0,5	23,2	575
H61912	20x2x0,5	23,9	620
H61913	24x2x0,5	24,6	710
H61914	2x2x0,75	11,9	193
H61915	3x2x0,75	13,1	182
H61916	4x2x0,75	14,2	218
H61917	5x2x0,75	15,2	265
H61918	6x2x0,75	15,7	285
H61919	7x2x0,75	17,5	325
H61920	8x2x0,75	18,2	360
H61921	10x2x0,75	19,5	420
H61922	12x2x0,75	20,8	485
H61923	14x2x0,75	22,3	560
H61924	16x2x0,75	23,8	645
H61925	18x2x0,75	24,8	690
H61926	20x2x0,75	25,8	765
H61927	24x2x0,75	26,5	875
H61928	2x2x1,0	12,3	183
H61929	3x2x1,0	13,7	205
H61930	4x2x1,0	14,8	247
H61931	5x2x1,0	15,9	305
H61932	6x2x1,0	16,4	320

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H61933	7x2x1,0	18,3	370
H61934	8x2x1,0	19,1	410
H61935	10x2x1,0	20,4	485
H61936	12x2x1,0	21,8	560
H61937	14x2x1,0	23,3	645
H61938	16x2x1,0	25,2	755
H61939	18x2x1,0	26,2	810
H61940	20x2x1,0	27,1	885
H61941	24x2x1,0	27,9	1020
H61942	2x2x1,5	13,6	223
H61943	3x2x1,5	15,2	255
H61944	4x2x1,5	16,4	305
H61945	5x2x1,5	17,7	385
H61946	6x2x1,5	18,3	410
H61947	7x2x1,5	20,4	475
H61948	8x2x1,5	21,4	525
H61949	10x2x1,5	23,1	640
H61950	12x2x1,5	24,7	740
H61951	14x2x1,5	26,4	855
H61952	16x2x1,5	28,5	1000
H61953	18x2x1,5	29,7	1075
H61954	20x2x1,5	30,7	1175
H61955	24x2x1,5	31,8	1375
H61956	2x2x2,5	15,4	290
H61957	3x2x2,5	17,2	335
H61958	4x2x2,5	18,7	410
H61959	5x2x2,5	20,1	520
H61960	6x2x2,5	20,9	560
H61961	7x2x2,5	23,6	660
H61962	8x2x2,5	24,7	730
H61963	10x2x2,5	26,7	890
H61964	12x2x2,5	28,8	1055
H61965	14x2x2,5	30,6	1200
H61966	16x2x2,5	33,0	1400

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

G - cables with green/yellow earthing conductor

x- cables without green/yellow earthing conductor

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®] 2(St)H

Halogen-free, individually and collectively screened flexible control cables, rated 0,6/1 kV



industrial application



internal application



external application



underground installation



EN 60332-1-2



EN 60332-3-24



oxygen index >29



halogen-free
EN EN 60754



low smoke emission
EN 61034



high flexibility



UV resistance



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_i/U = 0,6/1$ kV
Test voltage (50 Hz): 4000 V
Insulation resistance: 20 M Ω xkm

Mechanical parameters:

Min. bending radius:

flexible connections: 12 x \varnothing
fixed installation: 6 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

special halogen-free compound

Core identification:

black, number coded conductors

Core arrangement:

cores twisted together or pairs twisted together

Individual screen:

aluminium backed polyester tape with tinned copper drain wire underneath each pair

Collective screen:

aluminium backed polyester tape with tinned copper drain wire

Outer sheath:

special halogen-free compound, self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C); colour: black, UV resistant

Application:

Flexible, halogen-free power and control cables designed for operation in control and protective devices as well as in control circuits. Common screen improves protection of transmitted signals against external electromagnetic field. Designed especially for installation in industrial areas with increased fire safety requirements (limited flame propagation). They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables suitable for outdoor installation – outer sheath is UV resistant. Cables designed also for direct burial in ground. Cables are halogen-free, low smoke and significantly limit flame propagation. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H62010	2x2x0,5	11,2	157
H62011	3x2x0,5	12,4	178
H62012	4x2x0,5	13,8	217
H62013	5x2x0,5	14,3	260
H62014	6x2x0,5	14,7	280
H62015	7x2x0,5	16,4	320
H62016	8x2x0,5	17,3	355
H62017	10x2x0,5	18,3	415
H62018	12x2x0,5	19,9	485
H62019	14x2x0,5	21,1	550
H62020	16x2x0,5	22,7	640
H62021	18x2x0,5	23,6	690
H62022	20x2x0,5	24,6	755
H62023	24x2x0,5	26,7	890
H62024	2x2x0,75	11,9	175
H62025	3x2x0,75	13,1	202
H62026	4x2x0,75	14,7	249
H62027	5x2x0,75	15,2	300
H62028	6x2x0,75	15,7	320
H62029	7x2x0,75	17,5	370
H62030	8x2x0,75	18,5	410
H62031	10x2x0,75	19,5	485
H62032	12x2x0,75	21,3	570
H62033	14x2x0,75	22,8	655
H62034	16x2x0,75	24,3	750

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H62035	18x2x0,75	25,5	825
H62036	20x2x0,75	26,5	900
H62037	24x2x0,75	28,8	1065
H62038	2x2x1,0	12,3	200
H62039	3x2x1,0	13,7	231
H62040	4x2x1,0	15,3	285
H62041	5x2x1,0	15,9	345
H62042	6x2x1,0	16,4	375
H62043	7x2x1,0	18,3	430
H62044	8x2x1,0	19,4	480
H62045	10x2x1,0	20,4	570
H62046	12x2x1,0	22,5	680
H62047	14x2x1,0	23,9	770
H62048	16x2x1,0	25,7	900
H62049	18x2x1,0	26,8	970
H62050	20x2x1,0	27,9	1060
H62051	24x2x1,0	30,2	1260
H62052	2x2x1,5	13,6	240
H62053	3x2x1,5	15,2	280
H62054	4x2x1,5	17,0	350
H62055	5x2x1,5	17,7	430
H62056	6x2x1,5	18,3	465
H62057	7x2x1,5	20,4	535
H62058	8x2x1,5	21,7	600
H62059	10x2x1,5	23,1	725

BiT 1000[®]2(St)H

Halogen-free, individually and collectively screened flexible control cables, rated 0,6/1 kV

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H62060	12x2x1,5	25,5	865
H62061	14x2x1,5	27,0	985
H62062	16x2x1,5	29,1	1145
H62063	18x2x1,5	30,3	1240
H62064	20x2x1,5	31,8	1375
H62065	24x2x1,5	34,5	1630
H62066	2x2x2,5	15,4	305
H62067	3x2x2,5	17,2	360

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
H62068	4x2x2,5	19,4	455
H62069	5x2x2,5	20,1	565
H62070	6x2x2,5	20,9	615
H62071	7x2x2,5	23,6	725
H62072	8x2x2,5	25,1	810
H62073	10x2x2,5	26,7	985
H62074	12x2x2,5	29,5	1175
H62075	14x2x2,5	31,5	1355
H62076	16x2x2,5	33,7	1560

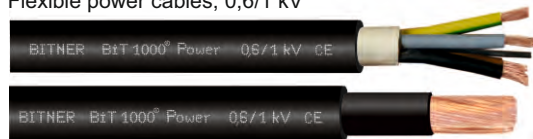
*Outer diameter tolerance: +/- 5%;

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®] Power

Flexible power cables, 0,6/1 kV



industrial application



internal application



external application



underground installation



EN 60332-1-2



high flexibility



UV resistance



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C

flexible connections: -5 °C to 80 °C

Max. conductor operating temp.: 90 °C

Max. conductor temperature in short-circuit: 250 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage (50 Hz): 4000 V

Mechanical parameters:

Min. bending radius:

flexible connections: $10 \times \varnothing$

fixed installation: $6 \times \varnothing$

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

XLPE

Core identification:

coloured conductors (see the table with conductor insulation colours), cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together

Inner sheath:

PVC compound (cables up to 10 mm² and single core cables are manufactured without inner sheath)

Outer sheath:

PVC compound, oil resistant (see table of chemical resistance), self-extinguishing and flame retardant (acc. to EN 60332-1-2), UV resistant; colour: black

Application:

BiT 1000[®]Power cables are designed for supplying power to electric devices and working in low voltage energy networks. Flexible construction enables easy and fast connections as well as application as power supply cables for portable devices. Cables are suitable for operation in dry and damp rooms as well as for outdoor installations. Outer sheath is UV resistant. **Cables designed also for direct burial in ground.** Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EM9050	2x1,5	9,1	112
EM9051	3G1,5	9,5	130
EM9052	3x1,5	9,5	130
EM9053	4G1,5	10,4	155
EM9054	4x1,5	10,4	155
EM9055	5G1,5	11,1	179
EM9056	2x2,5	10,2	147
EM9057	3G2,5	10,7	174
EM9058	3x2,5	10,7	174
EM9059	4G2,5	11,8	211
EM9060	4x2,5	11,8	211
EM9061	5G2,5	12,6	246
EM9062	2x4,0	11,1	192
EM9063	3G4,0	11,7	233
EM9064	3x4,0	11,7	233
EM9065	4G4,0	12,9	285
EM9066	4x4,0	12,9	285
EM9067	5G4,0	13,8	335
EM9068	2x6,0	12,3	249
EM9069	3G6,0	13,0	305
EM9070	3x6,0	13,0	305
EM9071	4G6,0	14,3	380
EM9072	4x6,0	14,3	380
EM9073	5G6,0	15,5	450
EM9074	2x10	14,1	360
EM9075	3G10	14,9	455
EM9076	3x10	14,9	455
EM9077	4G10	16,5	570
EM9078	4x10	16,5	570

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EM9079	5G10	17,9	685
EM9080	2x16	17,4	555
EM9081	3G16	18,4	705
EM9082	3x16	18,4	705
EM9083	4G16	20,7	900
EM9084	4x16	20,7	900
EM9085	5G16	22,5	1085
EM9086	2x25	21,8	870
EM9087	3G25	23,2	1115
EM9088	3x25	23,2	1115
EM9089	4G25	25,9	1410
EM9090	4x25	25,9	1410
EM9091	5G25	27,9	1085
EM9092	2x35	24,0	1105
EM9093	3G35	25,6	1430
EM9094	3x35	25,6	1430
EM9095	4G35	28,5	1810
EM9096	4x35	28,5	1810
EM9097	5G35	30,8	2175
EM9098	2x50	28,0	1525
EM9099	3G50	29,9	1975
EM9100	3x50	29,9	1975
EM9101	4G50	34,4	2590
EM9102	4x50	34,4	2590
EM9103	5G50	37,2	3110
EM9104	3G70	35,4	2795
EM9105	3x70	35,4	2795
EM9106	4G70	39,5	3545
EM9107	4x70	39,5	3545

BiT 1000[®] Power

Flexible power cables, 0,6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EM9108	5G70	43,0	4290
EM9109	3G95	39,2	3615
EM9110	3x95	39,2	3615
EM9111	4G95	43,9	4605
EM9112	4x95	43,9	4605
EM9113	5G95	48,0	5605
EM9114	3G120	43,0	4525
EM9115	3x120	43,0	4525
EM9116	4G120	48,3	5790
EM9117	4x120	48,3	5790
EM9118	5G120	52,6	7040
EM9119	3G150	48,4	5595
EM9120	3x150	48,4	5595

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EM9121	4G150	54,4	7165
EM9122	4x150	54,4	7165
EM9123	5G150	59,4	8795
EM9124	3G185	54,8	6830
EM9125	3x185	54,8	6830
EM9126	4G185	61,5	8720
EM9127	4x185	61,5	8720
EM9128	5G185	67,3	10600
EM9129	3G240	60,3	8785
EM9130	3x240	60,3	8785
EM9131	4G240	67,9	11280
EM9132	4x240	67,9	11280
EM9133	5G240	74,0	13800

Single core cables with protective core

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EM9145	1G1,5	5,6	44
EM9146	1G2,5	6,1	56
EM9147	1G4,0	6,6	75
EM9148	1G6,0	7,2	97
EM9149	1G10	8,1	136
EM9150	1G16	9,1	194
EM9151	1G25	10,8	280
EM9152	1G35	11,9	375
EM9153	1G50	13,9	525
EM9154	1G70	15,8	720
EM9155	1G95	17,7	945
EM9156	1G120	19,7	1175
EM9157	1G150	21,5	1445
EM9158	1G185	24,1	1765
EM9159	1G240	26,9	2290
EM9160	1G300	30,4	2995
EM9161	1G400	34,1	4110

Single core cables without protective core

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EM9162	1x1,5	5,6	44
EM9163	1x2,5	6,1	56
EM9164	1x4,0	6,6	75
EM9165	1x6,0	7,2	97
EM9166	1x10	8,1	136
EM9167	1x16	9,1	194
EM9168	1x25	10,8	280
EM9169	1x35	11,9	375
EM9170	1x50	13,9	525
EM9171	1x70	15,8	720
EM9172	1x95	17,7	945
EM9173	1x120	19,7	1175
EM9174	1x150	21,5	1445
EM9175	1x185	24,1	1765
EM9176	1x240	26,9	2290
EM9177	1x300	30,4	2995
EM9178	1x400	34,1	4110

Cables without protective conductor are marked with x (e.g. 3x50)
Cables with protective conductor are marked with G (e.g. 3G50)

*Outer diameter tolerance: +/- 5%
Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

Number of conductors	Conductor insulation colours
Cables without protective conductor	
1	black
2	blue, brown
3	brown, black, grey
4	blue, brown, black, grey
5	blue, brown, black, grey, black
Cables with protective conductor	
3	green-yellow, blue, brown
4	green-yellow, brown, black, grey
5	green-yellow, blue, brown, black, grey

BiT 1000[®] Power

Flexible power cables, 0,6/1 kV

Long term current rating for 3-, 4- and 5-core cables laid as single in air or in ground, operating in 3-phase symmetrical systems

Section mm ²	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240
air 30 °C	23	32	42	53	75	100	133	162	197	250	308	359	412	475	564
ground 20 °C	31	40	52	64	86	112	145	174	206	254	305	348	392	444	517

Long term current rating of single core cables laid in air or ground as single cable operating in DC systems with distant protective conductor

Section mm ²	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400
air 30 °C	33	43	57	72	99	131	177	217	265	336	415	485	557	646	774	900	1060
ground 20 °C	41	63	82	102	136	176	229	275	326	400	480	548	616	698	815	927	1064

Long term current rating of single core cables laid in air or ground in triangle, operating in 3-phase symmetrical systems

Section mm ²	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400
air 30 °C	26	34	44	56	77	102	138	170	207	263	325	380	437	507	604	697	811
ground 20 °C	33	42	54	67	89	115	148	177	209	256	307	349	393	445	517	583	663

Correction factors for ambient temperature other than 30 °C

ambient temperature °C	10	15	20	25	30	35	40	45	50	55	60	65	70	75
correction factor	1,18	1,14	1,10	1,05	1,00	0,95	0,89	0,84	0,77	0,71	0,63	0,55	0,45	0,32

BiT 1000[®]H Power

Halogen-free, flexible power cables, 0,6/1 kV



Power control cables 0,6/1 kV

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C do 80 °C

flexible installation: -5 °C do 80 °C

Max. core temp. during operation: 90 °C

Max. core temp. during short-circuit: 250 °C

Electrical parameters:

Nominal voltage: $U_n/U = 0,6/1$ kV

Test voltage 50 Hz: 4000 V

Insulation Resistance: > 2000 MΩxkm

Mechanical parameters:

Min. bendig radius:

flexible installation: 10 x Ø

fixed installation: 6 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

XLPE

Core identification:

color coded (acc. to table), G – protective core (green-yellow)

Core arrangement:

cores twisted together

Inner sheath:

special halogen-free compound (cables with cross sections up to 10 mm² and single core are performed without inner sheath)

Outer sheath:

special halogen-free compound, selfextinguishing and flame retardant acc. to EN 60332-1-2
multi-core cables: EN 60332-3- 24, cat. C
multi-core cables with cross-section ≥ 16 mm²: EN 60332-3-23, IEC 60332-3 cat. B, UV resistant; colour: black

Application:

BiT 1000[®]H Power cables are designed for supplying power to electric devices and working in low voltage energy networks. Flexible construction enables easy and fast connections as well as application as power supply cables for portable devices. Cables are suitable for operation in dry and damp rooms as well as for outdoor installations and direct burial. Outer sheath is UV resistant. The cables are completely halogen-free, do not emit dense smoke and corrosive gases during combustion. Cables classified according to **EN 50575 (CPR)**.

Tests:

Single core cables:

Flame resistance of a single cable (fire resistance):

Emission of corrosive gases released during combustion:

Emission of smoke density during combustion:

Multicore cables:

Flame resistance of a single cable (fire resistance):

Flame resistance of the cable bundle:

Flame resistance of the cable bundle (only for multi-core cables with a conductor cross section ≥ 16 mm²):

Emission of corrosive gases during combustion:

Emission of smoke density during combustion:

EN 60332-1-2, IEC 60332-1-2, DIN- VDE 0482-332-1

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

EN 60332-1-2, IEC 60332-1-2, DIN- VDE 0482-332-1

EN 60332-3-24, IEC 60332-3 cat. C

EN 60332-3-23, IEC 60332-3 cat. B

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

Single core cables with protective core (green-yellow) (flammability test EN 60332-1, EN 60332-1, IEC 60332-1)

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EM9700	1G1,5	5,6	45
EM9701	1G2,5	6,1	57
EM9702	1G4	6,6	76
EM9703	1G6	7,2	98
EM9704	1G10	8,1	137
EM9705	1G16	9,1	195
EM9706	1G25	10,8	285
EM9707	1G35	11,9	375

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EM9708	1G50	13,9	525
EM9709	1G70	15,8	720
EM9710	1G95	17,7	945
EM9711	1G120	19,7	1180
EM9712	1G150	21,5	1445
EM9713	1G185	24,1	1765
EM9714	1G240	26,9	2295
EM9715	1G300	30,4	3000
EM9716	1G400	34,1	4120

BiT 1000[®]H Power

Halogen-free, flexible power cables, 0,6/1 kV

Single core cables without protective core (green-yellow) (flammability test EN 60332-1, EN 60332-1, IEC 60332-1)

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EM9719	1x1,5	5,6	45	EM9727	1x50	13,9	525
EM9720	1x2,5	6,1	57	EM9728	1x70	15,8	720
EM9721	1x4	6,6	76	EM9729	1x95	17,7	945
EM9722	1x6	7,2	98	EM9730	1x120	19,7	1180
EM9723	1x10	8,1	137	EM9731	1x150	21,5	1445
EM9724	1x16	9,1	195	EM9732	1x185	24,1	1765
EM9725	1x25	10,8	285	EM9733	1x240	26,9	2295
EM9726	1x35	11,9	375	EM9734	1x300	30,4	3000
				EM9735	1x400	34,1	4120

Multi core cables

Cross-section < 16 mm² (flammability test EN 60332-1, IEC 60332-1, EN 60332-3-24, IEC 60332-3 cat. C)

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EM9738	2x1,5	9,1	112	EM9753	4G4	12,9	285
EM9739	3G1,5	9,5	130	EM9754	4x4	12,9	285
EM9740	3x1,5	9,5	130	EM9755	5G4	13,8	335
EM9741	4G1,5	10,4	155	EM9756	2x6	12,3	249
EM9742	4x1,5	10,4	155	EM9757	3G6	13,0	305
EM9743	5G1,5	11,1	179	EM9758	3x6	13,0	305
EM9744	2x2,5	10,2	147	EM9759	4G6	14,3	380
EM9745	3G2,5	10,7	174	EM9760	4x6	14,3	380
EM9746	3x2,5	10,7	174	EM9761	5G6	15,5	450
EM9747	4G2,5	11,8	211	EM9762	2x10	14,1	360
EM9748	4x2,5	11,8	211	EM9763	3G10	14,9	455
EM9749	5G2,5	12,6	246	EM9764	3x10	14,9	455
EM9750	2x4	11,1	192	EM9765	4G10	16,5	570
EM9751	3G4	11,7	233	EM9766	4x10	16,5	570
EM9752	3x4	11,7	233	EM9767	5G10	17,9	685

Cross-section ≥ 16 mm² (flammability test EN 60332-1, IEC 60332-1, EN 60332-3-24, IEC 60332-3 cat. C, EN 60332-3-23, IEC 60332-3 cat. B)

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EM9768	2x16	17,4	595	EM9795	4x70	39,5	3695
EM9769	3G16	18,4	740	EM9796	5G70	43,0	4440
EM9770	3x16	18,4	740	EM9797	3G95	39,2	3785
EM9771	4G16	20,7	935	EM9798	3x95	39,2	3785
EM9772	4x16	20,7	935	EM9799	4G95	43,9	4785
EM9773	5G16	22,5	1125	EM9800	4x95	43,9	4785
EM9774	2x25	21,8	935	EM9801	5G95	48,0	5785
EM9775	3G25	23,2	1175	EM9802	3G120	43,0	4735
EM9776	3x25	23,2	1175	EM9803	3x120	43,0	4735
EM9777	4G25	25,9	1475	EM9804	4G120	48,3	6010
EM9778	4x25	25,9	1475	EM9805	4x120	48,3	6010
EM9779	5G25	27,9	1750	EM9806	5G120	52,6	7260
EM9780	2x35	24,0	1180	EM9807	3G150	48,4	5855
EM9781	3G35	25,6	1500	EM9808	3x150	48,4	5855
EM9782	3x35	25,6	1500	EM9809	4G150	54,4	7435
EM9783	4G35	28,5	1885	EM9810	4x150	54,4	7435
EM9784	4x35	28,5	1885	EM9811	5G150	59,4	8910
EM9785	5G35	30,8	2250	EM9812	3G185	54,8	7165
EM9786	2x50	28,0	1625	EM9813	3x185	54,8	7165
EM9787	3G50	29,9	2070	EM9814	4G185	61,5	9075
EM9788	3x50	29,9	2070	EM9815	4x185	61,5	9075
EM9789	4G50	34,4	2705	EM9816	5G185	67,2	10950
EM9790	4x50	34,4	2705	EM9817	3G240	60,3	9195
EM9791	5G50	37,2	3230	EM9818	3x240	60,3	9195
EM9792	3G70	35,4	2930	EM9819	4G240	67,9	11705
EM9793	3x70	35,4	2930	EM9820	4x240	67,9	11705
EM9794	4G70	39,5	3695	EM9821	5G240	74,0	14120

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®]H Power

Halogen-free, flexible power cables, 0,6/1 kV

Power control cables 0,6/1 kV

Number of cores	Cores colors
Cables without protective core	
1	black
2	blue, brown
3	brown, black, grey
4	blue, brown, black, grey
5	blue, brown, black, grey, black
Cables with protective core	
1	green-yellow
3	green-yellow, blue, brown
4	green-yellow, brown, black, grey
5	green-yellow, blue, brown, black, grey
> 5	green-yellow, numbered

Long term current rating for 3-, 4- and 5-core cables laid as single in air or in ground, operating in 3-phase symmetrical systems

Section mm ²	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240
air 30 °C	23	32	42	53	75	100	133	162	197	250	308	359	412	475	564
ground 20 °C	31	40	52	64	86	112	145	174	206	254	305	348	392	444	517

Long term current rating of single core cables laid in air or ground as single cable operating in DC systems with distant protective conductor

Section mm ²	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400
air 30 °C	33	43	57	72	99	131	177	217	265	336	415	485	557	646	774	900	1060
ground 20 °C	41	63	82	102	136	176	229	275	326	400	480	548	616	698	815	927	1064

Long term current rating of single core cables laid in air or ground in triangle, operating in 3-phase symmetrical systems

Section mm ²	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400
air 30 °C	26	34	44	56	77	102	138	170	207	263	325	380	437	507	604	697	811
ground 20 °C	33	42	54	67	89	115	148	177	209	256	307	349	393	445	517	583	663

Correction factors for ambient temperature other than 30 °C

ambient temperature °C	10	15	20	25	30	35	40	45	50	55	60	65	70	75
correction factor	1,18	1,14	1,10	1,05	1,00	0,95	0,89	0,84	0,77	0,71	0,63	0,55	0,45	0,32

BIT 1000[®] PP PUR

Flexible power cable for very high mechanical requirements 0,6/1 kV



industrial application

internal application

external application

EN 60332-1-2

high flexibility

oil resistant
EN 60811-404

mechanical resistance

halogen-free
EN 60754

UV resistance

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 90 °C
flexible connections: -20 °C to 90 °C
temp. at conductor: 90 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV
Test voltage 50 Hz: 4000 V

Mechanical parameters:

Min. bending radius:
flexible connections: $6 \times \varnothing$
fixed installations: $6 \times \varnothing$

Design:

Conductor:

bare copper conductors, multi-stranded class 6
acc. to IEC 60228

Insulation:

PP

Core identification:

white with black numerals with or without GNYE;
single cores black or GNYE

Core arrangement:

cores stranded in layers

Outer sheath:

PUR (EN 60332-1-2, IEC 60332-1-2); colour: black

Application:

Halogen-free power cable for high mechanical requirements and frequent bending. Especially for use in trolley systems, drag chains on moving parts of machines, conveyor facilities (for travelling speed on cable trolleys up to 240 m/min). Permanent tensile load without supporting element max. 25 N/mm² of dynamic load. Suitable for dry and damp rooms and for outdoor use. Cables classified according to EN 50575 (CPR).

Single core cables

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS2150	1x16	9,6	206
BS2151	1x25	11,4	290
BS2152	1x35	12,7	395
BS2153	1x50	14,8	570
BS2154	1x70	16,9	770

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS2155	1x95	19,0	1005
BS2156	1x120	19,9	1285
BS2157	1x150	22,8	1545
BS2158	1x185	25,4	1820
BS2159	1x240	28,6	2395

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS2161	3x1,5	8,3	94
BS2162	4x1,5	9,0	114
BS2164	7x1,5	11,2	176
BS2165	12x1,5	13,8	280
BS2166	18x1,5	16,0	395
BS2167	24x1,5	18,5	510
BS2168	30x1,50	19,6	610
BS2170	3x2,5	9,6	138
BS2171	4x2,5	10,4	170
BS2172	5x2,5	11,3	203
BS2173	7x2,5	12,3	260
BS2174	12x2,5	16,3	435
BS2175	18x2,5	19,0	620

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS2176	24x2,5	22,1	810
BS2177	30x2,5	23,4	980
BS2178	4x4	11,5	242
BS2179	5x4	12,5	290
BS2180	4x6	12,7	305
BS2181	5x6	13,9	370
BS2182	4x10	16,0	490
BS2183	5x10	17,5	590
BS2184	4x16	18,6	770
BS2185	5x16	20,5	940
BS2186	4x25	23,0	1120
BS2187	5x25	25,3	1370
BS2188	4x35	26,5	1575
BS2189	4x50	31,6	2300

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiT 1000[®] PP C-PUR



Power control cables 0,6/1 kV

Flexible power cable for very high mechanical requirements 0,6/1 kV



Technical Data:

Thermal parameters:

Operating temperature:
fixed systems: -40 °C to 90 °C
mobile systems: -20 °C to 90 °C
temp. at conductor: 90 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV
Test voltage 50 Hz: 4000 V

Mechanical parameters:

Min. bending radius:
flexible connections: 6 x \varnothing
fixed installations: 6 x \varnothing

Design:

Conductor: bare copper conductors, multi-stranded class 6 acc. to IEC 60228
Insulation: PP
Core identification: white with black numerals with or without GNYE; single cores black or GNYE
Core arrangement: cores stranded in layers
Inner sheath: PUR, only cables with 2, 3, 4 and 5 cores
Overall shield: copper braid tinned, coverage ca. 85 %
Outer sheath: PUR (EN 60332-1-2, IEC 60332-1-2); colour: black

Application:

Halogen-free power cable for high mechanical requirements and frequent bending. Especially for use in trolley systems, drag chains on moving parts of machines, conveyor facilities (for travelling speed on cable trolleys up to 240 m/min). Permanent tensile load without supporting element max. 25 N/mm² of dynamic load. Suitable for dry and damp rooms and for outdoor use. Cables classified according to **EN 50575 (CPR)**.

Single core cables

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS2101	1x25	12,4	340
BS2102	1x35	13,7	450
BS2103	1x50	15,8	635
BS2104	1x70	17,9	835
BS2105	1x95	20,2	1100

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS2106	1x120	21,3	1390
BS2107	1x150	24,0	1655
BS2108	1x185	26,6	1975
BS2109	1x240	31,3	2600

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS2110	2x1,5	10,7	151
BS2113	4x1,5	11,8	193
BS2112	5x1,5	12,5	222
BS2114	7x1,5	12,2	229
BS2115	12x1,5	14,6	340
BS2116	18x1,5	16,8	380
BS2121	4x2,5	13,4	265
BS2122	5x2,5	14,3	310
BS2124	12x2,5	17,3	515

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BS2125	18x2,5	20,0	710
BS2128	4x4	14,5	350
BS2129	5x4	15,5	410
BS2130	4x6	15,7	425
BS2132	4x10	18,6	630
BS2134	4x16	21,8	970
BS2136	4x25	26,8	1415
BS2138	4x35	30,3	1935
BS2139	4x50	35,8	2740

*Outer diameter tolerance: +/- 5%
Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

BiTinstal[®] H 0,6/1 kV



RoHS 2015/863/EU



LVD 2014/35/EU



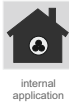
CPR 305/2011



Halogen-free power cable 0,6/1 kV



Industrial application



Internal application



EN 60332-1-2



EN 60332-3-24



oxygen index >29



halogen free EN 60754



low smoke emission EN 61034



CPR class B2ca

Technical data:

Thermal parameters:

Operating temperature:

operation temperature: -40 °C to 90 °C

installation temperature -5 °C to 50 °C

Max core temp. during operation: 90 °C

Max core temp. during short-circuit: 250 °C

Electrical parameters:

Nominal voltage: $U_0/U = 0,6/1$ kV

Test voltage: 4 kV

Mechanical parameters:

Min. bending radius:

for single-core cables: $15 \times \varnothing$ for multi-core cables: $12 \times \varnothing$

Design:

Conductors:

solid bare copper conductors singlewires class 1 (RE) or multiwires class 2 (RM) acc. to EN 60228

Insulation:

XLPE, special cross-linked, halogen-free compound color coded (acc. to table), G - protective core (green-yellow)

Core identification:

cores twisted together

Core arrangement:

special halogen-free compound (multi-core cables only)

Inner sheath:

special halogen-free compound; colour: black

Outer sheath:

Application:

Halogen-free installation cable for power and lighting installations in facilities with increased fire protection requirements. The cable is suitable for installation in dry and damp rooms, and can be installed under, on or in plaster, as well as in brick walls and directly in concrete (fixed installation only). In outdoor applications, the cable should be protected against direct sunlight and weather conditions, and should be placed in cable ducts or pipes when installed underground. Cables classified according to EN 50575 (CPR).

Tests:

Single core cables:

Flame resistance of a single cable (fire resistance):

Flame resistance of the cable bundle:

Emission of corrosive gases released during combustion:

Emission of smoke density during combustion:

Multicore cables:

Flame resistance of a single cable (fire resistance):

Flame resistance of the cable bundle:

Flame resistance of the cable bundle (only for multi-core cables with a conductor cross section $\geq 16\text{mm}^2$):

Emission of corrosive gases during combustion:

Emission of smoke density during combustion:

EN 60332-1-2, IEC 60332-1-2, DIN- VDE 0482-332-1

EN 60332-3-23, IEC 60332-3 cat. B

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

EN 60332-1-2, IEC 60332-1-2, DIN- VDE 0482-332-1

EN 60332-3-24, IEC 60332-3 cat. C

EN 60332-3-23, IEC 60332-3 cat. B

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

Core insulation colours:

No. of cores	Insulation colours
BiTinstal [®] H 0,6/1 kV (without protective conductor)	
1	black (other colours available at request)
2	blue, brown
3	brown, black, grey
4	blue, brown, black, grey
5	blue, brown, black, grey, black
BiTinstal [®] H 0,6/1 kV (with protective conductor)	
1	green-yellow
3	green-yellow, blue, brown
4	green-yellow, brown, black, grey
5	green-yellow, blue, brown, black, grey

BiTinstal[®] H 0,6/1 kV

Halogen-free power cable 0,6/1 kV

Conductor cross-section [mm ²]	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Max. conductor resistance at 20 °C	12,1	7,41	4,61	3,08	1,83	1,15	0,727	0,524	0,387	0,268	0,193	0,153	0,124	0,0991	0,0754	0,0601

Multi-core cables with protective conductor

Cat. no.	n x mm ²	Outer* diameter [mm]	Approximate cable weight [kg/km]
B64050	3G1,5 RE	9,8	150
B64051	3G2,5 RE	10,6	192
B64052	3G4 RE	11,6	251
B64053	3G6 RE	12,7	324
B64054	3G10 RE	14,4	467
B64055	3G16 RE	16,8	704
B64056	4G1,5 RE	10,6	178
B64057	4G2,5 RE	11,6	231
B64058	4G4 RE	12,7	306
B64059	4G6 RE	13,9	400
B64060	4G10 RE	16,1	591
B64061	4G16 RE	18,6	888
B64062	5G1,5 RE	11,3	205
B64063	5G2,5 RE	12,4	270
B64064	5G4 RE	13,6	360
B64065	5G6 RE	14,9	474
B64066	5G10 RE	17,3	704
B64067	5G16 RE	20,0	1069
B64068	5G25 RM	26,7	1700
B64069	5G35 RM	29,4	2225

Multi-core cables without protective conductor

Cat. no.	n x mm ²	Outer* diameter [mm]	Approximate cable weight [kg/km]
B64080	2x1,5 RE	9,4	132
B64081	2x2,5 RE	10,2	164
B64082	2x4,0 RE	11,1	210
B64083	2x6,0 RE	12,1	266
B64084	2x10 RE	13,7	374
B64085	2x16 RE	16,5	580
B64086	3x1,5 RE	9,8	150
B64087	3x2,5 RE	10,6	192
B64088	3x4,0 RE	11,6	251
B64089	3x6,0 RE	12,7	324
B64090	3x10 RE	14,4	467
B64091	3x16 RE	16,8	704
B64092	4x1,5 RE	10,6	178
B64093	4x2,5 RE	11,6	231
B64094	4x4,0 RE	12,7	306
B64095	4x6,0 RE	13,9	400
B64096	4x10 RE	16,1	591
B64097	4x16 RE	18,6	888
B64098	5x1,5 RE	11,3	205
B64099	5x2,5 RE	12,4	270
B64100	5x4,0 RE	13,6	360
B64101	5x6,0 RE	14,9	474
B64102	5x10 RE	17,3	704
B64103	5x16 RE	20,0	1069
B64104	5x25 RM	26,7	1700
B64105	5x35 RM	29,4	2225

Single-core cables with protective conductor

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
B64020	1G16 RE	8,8	214
B64021	1G25 RM	10,8	315
B64022	1G35 RM	11,9	415
B64023	1G50 RM	13,5	560
B64024	1G70 RM	15,0	750
B64025	1G95 RM	16,9	1020
B64026	1G120 RM	18,8	1245
B64027	1G150 RM	21,1	1590
B64028	1G185 RM	23,0	1945
B64029	1G240 RM	26,3	2480
B64030	1G300 RM	28,3	3070

Single-core cables without protective conductor

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
B64000	1x16 RE	8,8	214
B64001	1x25 RM	10,8	315
B64002	1x35 RM	11,9	415
B64003	1x50 RM	13,5	560
B64004	1x70 RM	15,0	750
B64005	1x95 RM	16,9	1020
B64006	1x120 RM	18,8	1245
B64007	1x150 RM	21,1	1590
B64008	1x185 RM	23,0	1945
B64009	1x240 RM	26,3	2480
B64010	1x300 RM	28,3	3070

RE - round, solid conductor

RM - round, multi-stranded conductor

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced.

300/500V HP-7 17.07.12 13 €€ BÖHLS www.böhls.com.at BITNER IB-VK-3LVK-600V-P-HP 1,4 x 2 x 0,75 mm² 300/500V HP-7 0,385m

17.07.12 13 €€ BÖHLS www.böhls.com.at BITNER IB-VK-3LVK-600V-P-HP 1,4 x 2 x 0,75 mm² 300/500V HP-7 0,385m

17.07.12 13 €€ BÖHLS www.böhls.com.at BITNER IB-VK-3LVK-600V-P-HP 1,4 x 2 x 0,75 mm² 300/500V HP-7 0,385m

300/500V HP-7 17.07.12 13 €€ BÖHLS www.böhls.com.at BITNER IB-VK-3LVK-600V-P-HP 1,4 x 2 x 0,75 mm² 300/500V HP-7 0,385m

17.07.12 13 €€ BÖHLS www.böhls.com.at BITNER IB-VK-3LVK-600V-P-HP 1,4 x 2 x 0,75 mm² 300/500V HP-7 0,385m

17.07.12 13 €€ BÖHLS www.böhls.com.at BITNER IB-VK-3LVK-600V-P-HP 1,4 x 2 x 0,75 mm² 300/500V HP-7 0,385m

Chapter IV

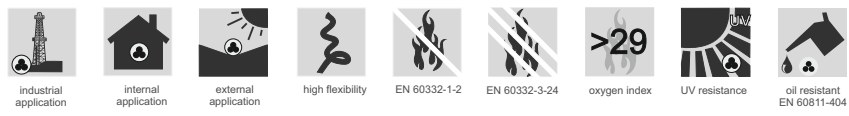
Intrinsically safe control cables 300/500 V

IB-BiT 500 [®]	164
IB-BiT 500 [®] C	166
IB-BiT 500 [®] CY	168
IB-BiT 500 [®] (St)	170
IB-BiT 500 [®] 2(St)	172

IB-BiT 500[®]



Flexible control cables with number coded conductors for intrinsically safe circuits, rated 300/500 V



Technical data:

Thermal parameters:
Operating temperature:
 fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C

Electrical parameters:
Operating voltage: U_i/U = 300/500 V
Test voltage (50 Hz): 3000 V
Insulation resistance: 20 MΩ x km
Inductance max: 0,6 mH/km

Mechanical parameters:

Min. bending radius:
 flexible connections: 7,5 x Ø
 fixed installation: 4 x Ø

Design:

Conductors: bare copper conductors, multi-stranded class 5 acc. to EN 60228
Insulation: PVC compound
Core identification: black, number coded conductors
Core arrangement: cores twisted together or pairs twisted together
Outer sheath: PVC compound, oil resistant (EN 60811-404), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant; colour: blue

Application:

Flexible power/control cables designed for operation intrinsically safe circuits. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. High flexibility of IB-BIT 500[®] cable enables easy and fast connections and ensures their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S55100	2x0,5	5,0	36
S55101	3x0,5	5,3	44
S55102	4x0,5	5,7	52
S55103	5x0,5	6,2	62
S55104	7x0,5	7,0	78
S55105	8x0,5	7,7	92
S55140	10x0,5	9,4	126
S55106	12x0,5	9,4	135
S55141	14x0,5	9,8	150
S55142	16x0,5	10,3	170
S55107	18x0,5	10,9	185
S55143	19x0,5	10,9	190
S55144	21x0,5	11,6	215
S55145	25x0,5	13,1	255
S55146	27x0,5	13,1	265
S55109	30x0,5	13,7	290
S55147	34x0,5	14,8	335
S55110	37x0,5	14,8	345
S55148	40x0,5	15,3	370
S55149	50x0,5	17,6	475
S55150	61x0,5	18,9	560
S55111	2x0,75	5,4	45
S55112	3x0,75	5,7	54
S55113	4x0,75	6,2	64
S55114	5x0,75	7,0	80
S55151	6x0,75	7,6	94
S55115	7x0,75	7,6	100
S55116	8x0,75	8,3	116
S55152	10x0,75	10,2	158
S55117	12x0,75	10,2	168
S55153	14x0,75	10,7	190
S55154	16x0,75	11,5	220
S55118	18x0,75	12,1	245
S55155	19x0,75	12,1	250

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S55156	21x0,75	12,6	275
S55157	25x0,75	14,5	335
S55158	27x0,75	14,5	345
S55159	30x0,75	15,0	375
S55160	34x0,75	16,6	450
S55161	37x0,75	16,6	465
S55162	40x0,75	17,1	500
S55163	50x0,75	19,5	625
S55120	2x1,0	5,7	52
S55121	3x1,0	6,1	64
S55122	4x1,0	6,8	80
S55123	5x1,0	7,4	96
S55164	6x1,0	8,0	112
S55124	7x1,0	8,0	118
S55125	8x1,0	9,2	148
S55165	10x1,0	10,8	188
S55126	12x1,0	10,8	204
S55166	14x1,0	11,5	235
S55167	16x1,0	12,2	264
S55127	18x1,0	12,8	294
S55168	19x1,0	12,8	300
S55169	21x1,0	13,6	336
S55170	25x1,0	15,4	405
S55171	30x1,0	16,4	470
S55129	2x1,5	6,7	71
S55130	3x1,5	7,1	87
S55131	4x1,5	7,8	110
S55132	5x1,5	8,5	130
S55172	6x1,5	9,6	162
S55133	7x1,5	9,6	172
S55173	8x1,5	10,6	202
S55174	10x1,5	12,7	265
S55134	12x1,5	12,7	285
S55175	14x1,5	13,5	325

IB-BiT 500[®]

Flexible control cables with number coded conductors for intrinsically safe circuits, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S55176	16x1,5	14,3	370
S55177	19x1,5	15,0	420
S55178	21x1,5	16,2	475
S55179	25x1,5	18,5	580
S55180	2x2,5	7,8	102
S55135	3x2,5	8,3	126
S55136	4x2,5	9,5	166

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S55137	5x2,5	10,3	200
S55138	6x2,5	11,5	240
S55139	7x2,5	11,5	260
S55181	10x2,5	15,2	390
S55182	12x2,5	15,2	425
S55183	14x2,5	16,3	495
S55184	16x2,5	17,2	560

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59520	2x2x0,5	7,3	63
S59521	3x2x0,5	8,2	72
S59522	4x2x0,5	9,3	97
S59523	5x2x0,5	10,0	122
S59524	6x2x0,5	10,3	130
S59525	7x2x0,5	11,8	156
S59526	8x2x0,5	12,3	172
S59527	10x2x0,5	13,2	205
S59528	12x2x0,5	14,2	245
S59529	14x2x0,5	15,1	275
S59530	16x2x0,5	16,6	335
S59531	18x2x0,5	17,3	360
S59532	20x2x0,5	17,8	390
S59533	24x2x0,5	18,5	455
S59534	2x2x0,75	7,9	80
S59535	3x2x0,75	9,3	98
S59536	4x2x0,75	10,1	122
S59537	5x2x0,75	10,9	152
S59538	6x2x0,75	11,5	170
S59539	7x2x0,75	12,8	196
S59540	8x2x0,75	13,6	225
S59541	10x2x0,75	14,6	270
S59542	12x2x0,75	16,0	325
S59543	14x2x0,75	16,9	370
S59544	16x2x0,75	18,3	435
S59545	18x2x0,75	19,1	470
S59546	20x2x0,75	19,7	510
S59547	24x2x0,75	20,3	590
S59548	2x2x1,0	8,4	92

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59549	3x2x1,0	9,9	116
S59550	4x2x1,0	10,7	142
S59551	5x2x1,0	11,8	184
S59552	6x2x1,0	12,2	202
S59553	7x2x1,0	13,8	240
S59554	8x2x1,0	14,5	270
S59555	10x2x1,0	15,5	320
S59556	12x2x1,0	17,0	390
S59557	14x2x1,0	18,2	450
S59558	16x2x1,0	19,5	515
S59559	2x2x1,5	10,1	132
S59560	3x2x1,5	11,6	160
S59561	4x2x1,5	12,6	198
S59562	5x2x1,5	13,8	258
S59563	6x2x1,5	14,3	280
S59564	7x2x1,5	16,4	340
S59565	8x2x1,5	17,2	380
S59566	10x2x1,5	18,6	465
S59567	12x2x1,5	19,9	540
S59568	14x2x1,5	21,1	620
S59569	2x2x2,5	12,1	192
S59570	3x2x2,5	13,8	235
S59571	4x2x2,5	15,0	295
S59572	5x2x2,5	16,6	385
S59573	6x2x2,5	17,2	425
S59574	7x2x2,5	19,6	500
S59575	8x2x2,5	20,5	560
S59576	10x2x2,5	22,2	690
S59577	12x2x2,5	23,7	805

*Outer diameter tolerance: +/- 5%
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

Electrical parameters IB-BiT 500[®]

Core cross-section [mm ²]	Max. resistance at 20 °C [Ω/km]	Core-core capacitance at 1kHz [nF/km]
0,5	39,0	130
0,75	26,0	140
1	19,5	140
1,5	13,3	140
2,5	7,98	170

Electrical parameters - paired cables IB-BiT 500[®]

Core cross-section [mm ²]	Max. loop resistance at 20 °C [Ω/km]	Core-core capacitance at 1kHz [nF/km]
0,5	78,0	130
0,75	52,0	140
1	39,0	140
1,5	26,6	140
2,5	16,0	170

IB-BiT 500[®]C



Flexible, screened control cables with number coded conductors for intrinsically safe circuits, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 5 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)*

Core arrangement:

cores twisted together or pairs twisted together

Screen:

tinned copper wire braid, coverage ≥85%

Outer sheath:

PVC compound, oil resistant (EN 60811-404), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant; colour: blue

Application:

Flexible power/control cables designed for operation intrinsically safe circuits. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field (screen attenuation ca. 50dB). Cables are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. High flexibility of IB-BiT 500[®]C cable simplifies installation and compounds used enable easy and fast connections and ensures their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59660	2x0,5	5,4	44
S59661	3x0,5	5,7	48
S59662	4x0,5	6,1	58
S59663	5x0,5	6,8	72
S59664	6x0,5	7,4	84
S59665	7x0,5	7,4	88
S59666	8x0,5	8,1	110
S59667	10x0,5	9,8	145
S59668	12x0,5	9,8	155
S59669	14x0,5	10,2	170
S59670	16x0,5	10,7	190
S59671	18x0,5	11,5	220
S59672	21x0,5	12,0	240
S59673	25x0,5	13,9	295
S59674	27x0,5	13,9	300
S59675	30x0,5	14,3	325
S59676	34x0,5	15,4	370
S59677	40x0,5	16,3	425
S59678	50x0,5	18,2	525
S59679	61x0,5	19,5	610
S59680	2x0,75	5,8	52
S59681	3x0,75	6,1	58
S59682	4x0,75	6,8	74
S59683	5x0,75	7,4	88
S59684	6x0,75	8,0	112
S59685	7x0,75	8,0	118
S59686	8x0,75	9,1	142
S59687	10x0,75	10,8	180
S59688	12x0,75	10,6	190
S59689	14x0,75	11,3	220

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59690	16x0,75	11,9	245
S59691	18x0,75	12,5	275
S59692	21x0,75	13,3	305
S59693	25x0,75	15,1	370
S59694	30x0,75	16,0	425
S59695	34x0,75	17,2	490
S59696	37x0,75	17,2	505
S59697	40x0,75	17,8	540
S59698	50x0,75	20,1	670
S59699	2x1,0	6,1	57
S59700	3x1,0	6,5	69
S59701	4x1,0	7,0	84
S59702	5x1,0	8,0	111
S59703	6x1,0	8,6	129
S59704	7x1,0	8,6	138
S59705	8x1,0	9,9	165
S59706	10x1,0	11,5	215
S59707	12x1,0	11,5	230
S59708	14x1,0	12,2	260
S59709	16x1,0	12,8	290
S59710	18x1,0	13,6	330
S59711	21x1,0	14,3	365
S59712	25x1,0	16,5	455
S59713	30x1,0	17,0	505
S59714	2x1,5	7,1	88
S59715	3x1,5	7,5	99
S59716	4x1,5	8,4	122
S59717	5x1,5	9,5	156
S59718	6x1,5	10,2	182
S59719	7x1,5	10,2	192

IB-BiT 500[®]C

Flexible, screened control cables with number coded conductors for intrinsically safe circuits, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59720	8x1,5	11,0	220
S59721	10x1,5	13,3	290
S59722	12x1,5	13,3	310
S59723	14x1,5	14,1	355
S59724	16x1,5	14,9	410
S59725	18x1,5	16,0	455
S59726	25x1,5	19,1	620
S59727	2x2,5	8,4	112

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59728	3x2,5	9,3	144
S59729	4x2,5	10,1	180
S59730	5x2,5	11,0	216
S59731	6x2,5	12,1	265
S59732	7x2,5	12,1	280
S59733	10x2,5	16,2	430
S59734	12x2,5	16,2	465
S59735	14x2,5	17,0	525
S59736	16x2,5	17,9	590

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59600	2x2x0,5	7,7	80
S59601	3x2x0,5	9,2	105
S59602	4x2x0,5	9,9	125
S59603	5x2x0,5	10,6	155
S59604	6x2x0,5	10,9	165
S59605	7x2x0,5	12,4	195
S59606	8x2x0,5	12,9	210
S59607	10x2x0,5	14,0	255
S59608	12x2x0,5	14,8	290
S59609	14x2x0,5	16,1	340
S59610	16x2x0,5	17,2	385
S59611	18x2x0,5	17,9	415
S59612	20x2x0,5	18,6	455
S59613	24x2x0,5	19,1	515
S59614	2x2x0,75	8,5	102
S59615	3x2x0,75	9,9	126
S59616	4x2x0,75	10,7	152
S59617	5x2x0,75	11,7	192
S59618	6x2x0,75	12,1	205
S59619	7x2x0,75	13,6	245
S59620	8x2x0,75	14,2	270
S59621	10x2x0,75	15,2	315
S59622	12x2x0,75	16,6	375
S59623	14x2x0,75	17,5	425
S59624	16x2x0,75	18,9	490
S59625	18x2x0,75	19,7	530
S59626	20x2x0,75	20,3	570
S59627	24x2x0,75	20,9	655
S59628	2x2x1,0	9,4	126

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S59629	3x2x1,0	10,5	146
S59630	4x2x1,0	11,5	182
S59631	5x2x1,0	12,4	225
S59632	6x2x1,0	12,8	240
S59633	7x2x1,0	14,4	285
S59634	8x2x1,0	15,1	315
S59635	10x2x1,0	16,5	385
S59636	12x2x1,0	17,6	445
S59637	14x2x1,0	18,8	510
S59638	16x2x1,0	20,1	580
S59639	2x2x1,5	10,7	162
S59640	3x2x1,5	12,2	196
S59641	4x2x1,5	13,2	240
S59642	5x2x1,5	14,4	300
S59643	6x2x1,5	14,9	325
S59644	7x2x1,5	17,0	395
S59645	8x2x1,5	17,8	435
S59646	10x2x1,5	19,2	525
S59647	12x2x1,5	20,5	605
S59648	14x2x1,5	21,9	695
S59649	2x2x2,5	12,7	230
S59650	3x2x2,5	14,4	280
S59651	4x2x2,5	16,0	355
S59652	5x2x2,5	17,3	440
S59653	6x2x2,5	17,8	480
S59654	7x2x2,5	20,2	565
S59655	8x2x2,5	21,1	625
S59656	10x2x2,5	22,8	760
S59657	12x2x2,5	24,3	880

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserve the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

Electrical parameters IB-BiT 500[®]C

Core cross-section [mm ²]	Max. resistance at 20 °C [Ω/km]	Core-core capacitance at 1kHz [nF/km]
0,5	36,0	160
0,75	24,5	170
1	18,1	180
1,5	12,1	180
2,5	7,41	200

Electrical parameters - paired cables IB-BiT 500[®]C

Core cross-section [mm ²]	Max. loop resistance at 20 °C [Ω/km]	Core-core capacitance at 1kHz [nF/km]
0,5	72,0	160
0,75	49,0	170
1	36,2	180
1,5	24,2	180
2,5	14,82	200

IB-BiT 500[®]CY



Flexible, screened control cables with number coded conductors for intrinsically safe circuits, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Inductance ca.: 0,6 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 5 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5

acc. to EN 60228

PVC compound

Insulation:

black, number coded conductors

cores twisted together or pairs twisted together

Core arrangement:

PVC compound

Inner sheath:

tinned copper wire braid, coverage ≥85%

Outer sheath:

PVC compound, oil resistant (EN 60811-404), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant; colour: blue

Application:

Flexible power/control cables designed for operation intrinsically safe circuits. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field especially in industrial environment. Reciprocal connection of screen to earth ensures full electromagnetic compatibility (EMC). Cables are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. High flexibility of IB-BiT 500[®]CY cable simplifies installation and compounds used enable easy and fast connections and ensure their high durability. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0150	2x0,5	6,9	77
SI0151	3x0,5	7,2	85
SI0152	4x0,5	7,6	98
SI0153	5x0,5	8,3	118
SI0154	6x0,5	9,3	143
SI0155	7x0,5	9,3	147
SI0156	8x0,5	10,0	165
SI0157	10x0,5	11,5	208
SI0158	12x0,5	11,5	215
SI0159	14x0,5	11,9	236
SI0160	16x0,5	12,4	258
SI0161	18x0,5	13,0	282
SI0162	19x0,5	13,0	286
SI0163	20x0,5	13,7	312
SI0164	21x0,5	13,7	316
SI0238	25x0,5	15,2	370
SI0166	27x0,5	15,2	380
SI0167	30x0,5	16,0	422
SI0168	37x0,5	17,1	487
SI0169	2x0,75	7,3	88
SI0170	3x0,75	7,6	99
SI0171	4x0,75	8,3	122
SI0172	5x0,75	9,3	149
SI0173	6x0,75	9,9	168
SI0174	7x0,75	9,9	173
SI0175	8x0,75	10,6	196

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0176	10x0,75	12,3	249
SI0177	12x0,75	12,3	260
SI0178	14x0,75	12,8	285
SI0179	16x0,75	13,6	321
SI0180	18x0,75	14,2	351
SI0181	19x0,75	14,2	356
SI0182	20x0,75	14,7	380
SI0183	21x0,75	14,7	387
SI1150	25x0,75	16,8	473
SI0185	2x1,0	7,6	98
SI0186	3x1,0	8,2	120
SI0187	4x1,0	9,1	146
SI0188	5x1,0	9,7	168
SI0189	6x1,0	10,3	190
SI0190	7x1,0	10,3	197
SI0191	8x1,0	11,3	229
SI0192	10x1,0	12,9	285
SI0193	12x1,0	12,9	300
SI0194	14x1,0	13,6	335
SI0195	16x1,0	14,3	371
SI0196	18x1,0	14,9	406
SI0197	19x1,0	14,9	414
SI0198	20x1,0	15,9	457
SI0199	21x1,0	15,9	463
SI0246	25x1,0	18,3	583
SI0201	2x1,5	8,6	130

IB-BiT 500[®]CY

Flexible, screened control cables with number coded conductors for intrinsically safe circuits, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0202	3x1,5	9,4	158
SI0203	4x1,5	10,1	187
SI0204	5x1,5	10,8	214
SI0205	6x1,5	11,7	248
SI0206	7x1,5	11,7	259
SI0207	8x1,5	12,7	296
SI0208	10x1,5	14,8	376
SI0209	12x1,5	14,8	397

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0210	2x2,5	10,1	180
SI0211	3x2,5	10,6	209
SI0212	4x2,5	11,6	252
SI0213	5x2,5	12,4	293
SI0214	6x2,5	13,6	345
SI0215	7x2,5	13,6	361
SI0216	8x2,5	14,8	414
SI0217	10x2,5	17,5	537
SI0218	12x2,5	17,5	570

*Outer diameter tolerance: +/-5%
 Cable Factory BITNER reserve the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

Electrical parameters IB-BiT 500[®]CY

Core cross-section [mm ²]	Max. resistance at 20 °C [Ω/km]	Core-core capacitance at 1kHz [nF/km]
0,5	39,0	130
0,75	26,0	140
1	19,5	140
1,5	13,3	140
2,5	7,98	170

IB-BiT 500® (St)



Flexible, screened control cables, with number coded conductors for intrinsically safe circuits, rated 300/500 V



industrial application



internal application



external application



high flexibility



EN 60332-1-2



EN 60332-3-24



oxygen index



UV resistance



oil resistant
EN 60811-404

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x m km

Inductance ca.: 0,6 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 5 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors

Core arrangement:

cores twisted together or pairs twisted together

Screen:

aluminium backed polyester tape with tinned copper drain wire

Outer sheath:

PVC compound, oil resistant (EN 60811-404), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant; colour: blue

Application:

Flexible power/control cables designed for operation intrinsically safe circuits. Common screen improves protection of transmitted signals against external electromagnetic field. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Insulation materials and conductor construction in IB-BiT 500® (St) cable enable easy and fast connections and ensure their high durability. Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0000	2x0,5	5,2	40
SI0001	3x0,5	5,5	44
SI0002	4x0,5	5,9	52
SI0003	5x0,5	6,4	64
SI0004	6x0,5	7,2	76
SI0005	7x0,5	7,2	80
SI0006	8x0,5	8,1	94
SI0007	10x0,5	9,8	126
SI0008	12x0,5	9,8	134
SI0009	14x0,5	10,2	150
SI0010	16x0,5	10,7	168
SI0011	18x0,5	11,5	192
SI0012	21x0,5	12,0	215
SI0013	25x0,5	13,7	260
SI0014	30x0,5	14,1	295
SI0015	34x0,5	15,2	347
SI0016	40x0,5	16,1	400
SI0017	50x0,5	18,2	502
SI0018	61x0,5	19,3	580
SI0019	2x0,75	5,6	48
SI0043	3x0,75	5,9	54
SI0044	4x0,75	6,4	66
SI0045	5x0,75	7,2	81
SI0046	6x0,75	7,8	96
SI0047	7x0,75	7,8	102
SI0048	8x0,75	9,1	126
SI0049	10x0,75	10,6	159
SI0050	12x0,75	10,6	168

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0051	14x0,75	11,3	195
SI0052	16x0,75	11,9	220
SI0053	18x0,75	12,5	245
SI0054	21x0,75	13,0	275
SI0055	25x0,75	14,9	335
SI0056	30x0,75	15,4	385
SI0057	34x0,75	17,0	460
SI0058	40G0,75	17,5	512
SI0059	50G0,75	19,9	640
SI0060	2x1,0	5,9	54
SI0061	3x1,0	6,2	64
SI0020	4x1,0	7,0	80
SI0021	5x1,0	7,6	98
SI0022	6x1,0	8,2	114
SI0023	7x1,0	8,2	120
SI0024	8x1,0	9,6	148
SI0025	10x1,0	11,4	194
SI0026	12x1,0	11,4	210
SI0027	14x1,0	11,9	235
SI0028	16x1,0	12,6	265
SI0029	18x1,0	13,2	295
SI0030	21x1,0	14,0	345
SI0031	25x1,0	16,2	425
SI0032	30x1,0	16,8	480
SI0033	2x1,5	6,9	74
SI0034	3x1,5	7,3	86
SI0035	4x1,5	8,0	108
SI0036	5x1,5	9,1	138

IB-BiT 500[®] (St)

Flexible, screened control cables with number coded conductors for intrinsically safe circuits, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0037	6x1,5	9,8	162
SI0038	7x1,5	9,8	172
SI0039	8x1,5	11,0	200
SI0040	10x1,5	13,1	260
SI0041	12x1,5	13,1	280
SI0042	14x1,5	13,9	325
SI0062	16x1,5	14,7	375
SI0063	18x1,5	15,4	418
SI0064	25x1,5	18,9	592

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0065	2x2,5	8,0	96
SI0066	3x2,5	8,5	118
SI0067	4x2,5	9,7	160
SI0068	5x2,5	10,5	192
SI0069	6x2,5	11,9	240
SI0070	7x2,5	11,9	255
SI0071	10x2,5	16,0	405
SI0072	12x2,5	16,0	437
SI0073	14x2,5	16,7	495
SI0074	16x2,5	17,6	562

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0080	2x2x0,5	7,7	70
SI0081	3x2x0,5	8,6	80
SI0082	4x2x0,5	9,7	106
SI0083	5x2x0,5	10,4	130
SI0084	6x2x0,5	10,7	138
SI0085	7x2x0,5	12,2	166
SI0086	8x2x0,5	12,7	182
SI0087	10x2x0,5	13,8	220
SI0088	12x2x0,5	14,6	255
SI0089	14x2x0,5	15,5	290
SI0090	16x2x0,5	17,0	355
SI0091	18x2x0,5	17,7	380
SI0092	20x2x0,5	18,4	422
SI0093	24x2x0,5	18,9	484
SI0094	2x2x0,75	8,3	86
SI0095	3x2x0,75	9,7	106
SI0096	4x2x0,75	10,5	130
SI0097	5x2x0,75	11,5	168
SI0098	6x2x0,75	11,9	180
SI0099	7x2x0,75	13,2	205
SI0100	8x2x0,75	14,0	235
SI0101	10x2x0,75	15,0	280
SI0102	12x2x0,75	16,4	340
SI0103	14x2x0,75	17,3	390
SI0104	16x2x0,75	18,7	457
SI0105	18x2x0,75	19,5	493
SI0106	20x2x0,75	20,1	537
SI0107	24x2x0,75	20,7	619
SI0108	2x2x1,0	9,2	110

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0109	3x2x1,0	10,3	126
SI0110	4x2x1,0	11,1	154
SI0111	5x2x1,0	12,2	196
SI0112	6x2x1,0	12,6	214
SI0113	7x2x1,0	14,2	255
SI0114	8x2x1,0	14,9	280
SI0115	10x2x1,0	16,3	355
SI0116	12x2x1,0	17,4	412
SI0117	14x2x1,0	18,6	478
SI0118	16x2x1,0	19,9	545
SI0119	2x2x1,5	10,5	142
SI0120	3x2x1,5	12,0	172
SI0121	4x2x1,5	13,0	210
SI0122	5x2x1,5	14,2	270
SI0123	6x2x1,5	14,7	295
SI0124	7x2x1,5	16,8	362
SI0125	8x2x1,5	17,6	405
SI0126	10x2x1,5	19,0	492
SI0127	12x2x1,5	20,3	572
SI0128	14x2x1,5	21,7	663
SI0129	2x2x2,5	12,5	205
SI0130	3x2x2,5	14,2	245
SI0131	4x2x2,5	15,4	305
SI0132	5x2x2,5	17,0	400
SI0133	6x2x2,5	17,6	450
SI0134	7x2x2,5	20,0	530
SI0135	8x2x2,5	20,9	592
SI0136	10x2x2,5	22,6	722
SI0137	12x2x2,5	24,1	843

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserve the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

Electrical parameters IB-BiT 500[®] (St)

Core cross-section [mm ²]	Max. resistance at 20 °C [Ω/km]	Core-core capacitance at 1kHz [nF/km]
0,5	39,0	130
0,75	26,0	140
1	19,5	140
1,5	13,3	140
2,5	7,98	170

Electrical parameters - paired cables IB-BiT 500[®] (St)

Core cross-section [mm ²]	Max. loop resistance at 20 °C [Ω/km]	Core-core capacitance at 1kHz [nF/km]
0,5	78,0	130
0,75	52,0	140
1	39,0	140
1,5	26,6	140
2,5	16,0	170

IB-BiT 500[®]2(St)

Flexible, individually and collectively screened paired control cables with number coded conductors, for intrinsically safe circuits, rated 300/500 V



industrial application



internal application



external application



high flexibility



EN 60332-1-2



EN 60332-3-24



oxygen index



UV resistance

oil resistant
EN 60811-404

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_n/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Inductance ca.: 0,6 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 5 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors

Core arrangement:

twisted screened pairs

Individual screen:

aluminium backed polyester tape with tinned copper drain wire underneath each pair

Collective screen:

aluminium backed polyester tape with tinned copper drain wire

Outer sheath:

PVC compound, oil resistant (EN 60811-404), self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-24, cat. C), UV resistant; colour: blue

Application:

Flexible power/control cables designed for operation intrinsically safe circuits. Double screening improves protection of transmitted signals against external electromagnetic field. Individual screening of pairs decreases signal interferences from adjacent pairs. They are suitable for fixed installations and for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Insulation materials and conductor construction in IB-BiT 500[®]2(St) cable enable easy and fast connections and ensure their high durability. Cables classified according to EN 50575 (CPR).

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0250	2x2x0,5	7,7	82
SI0251	3x2x0,5	8,6	96
SI0252	4x2x0,5	10,0	134
SI0253	5x2x0,5	10,4	158
SI0254	6x2x0,5	10,7	172
SI0255	7x2x0,5	12,2	205
SI0256	8x2x0,5	12,7	230
SI0257	10x2x0,5	13,8	280
SI0258	12x2x0,5	15,0	333
SI0259	14x2x0,5	15,9	380
SI0260	16x2x0,5	17,3	449
SI0261	18x2x0,5	18,0	488
SI0262	20x2x0,5	18,9	542
SI0263	24x2x0,5	20,3	633
SI0264	2x2x0,75	8,3	98
SI0265	3x2x0,75	9,7	124
SI0266	4x2x0,75	10,9	161
SI0267	5x2x0,75	11,5	196
SI0268	6x2x0,75	11,9	215
SI0269	7x2x0,75	13,2	250
SI0270	8x2x0,75	14,0	285
SI0271	10x2x0,75	15,0	340
SI0272	12x2x0,75	16,8	422
SI0273	14x2x0,75	17,7	480
SI0274	16x2x0,75	19,1	557
SI0275	18x2x0,75	19,9	605
SI0276	20x2x0,75	20,7	663
SI0277	24x2x0,75	22,2	776

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0278	2x2x1,0	9,2	126
SI0279	3x2x1,0	10,3	150
SI0280	4x2x1,0	11,5	193
SI0281	5x2x1,0	12,2	240
SI0282	6x2x1,0	12,6	265
SI0283	7x2x1,0	14,2	310
SI0284	8x2x1,0	14,9	345
SI0285	10x2x1,0	16,3	430
SI0286	12x2x1,0	17,8	514
SI0287	14x2x1,0	19,0	595
SI0288	16x2x1,0	20,3	678
SI0289	18x2x1,0	21,1	740
SI0290	20x2x1,0	22,2	821
SI0291	24x2x1,0	23,9	964
SI0292	2x2x1,5	10,5	158
SI0293	3x2x1,5	12,0	196
SI0294	4x2x1,5	13,5	253
SI0295	5x2x1,5	14,2	310
SI0296	6x2x1,5	14,7	345
SI0297	7x2x1,5	16,8	415
SI0298	8x2x1,5	17,6	460
SI0299	10x2x1,5	19,0	560
SI0300	12x2x1,5	20,8	676
SI0301	14x2x1,5	22,2	782
SI0302	16x2x1,5	23,7	894
SI0303	18x2x1,5	24,7	977
SI0304	20x2x1,5	26,1	1095
SI0305	24x2x1,5	28,1	1286

IB-BiT 500[®]2(St)

Flexible, individually and collectively screened paired control cables
with number coded conductors, for intrinsically safe circuits, rated 300/500 V

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0306	2x2x2,5	12,5	220
SI0307	3x2x2,5	14,2	275
SI0308	4x2x2,5	16,0	354
SI0309	5x2x2,5	17,0	445
SI0310	6x2x2,5	17,6	490

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SI0311	7x2x2,5	20,0	580
SI0312	8x2x2,5	20,9	645
SI0313	10x2x2,5	22,6	790
SI0314	12x2x2,5	24,7	952
SI0315	14x2x2,5	26,7	1116
SI0316	16x2x2,5	28,5	1276

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserve the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

Electrical parameters - paired cables IB-BiT 500[®]2(St)

Core cross-section [mm ²]	Max. resistance at 20 °C [Ω/km]	Core-core capacitance at 1 kHz [nF/km]
0,5	78,0	200
0,75	52,0	210
1	39,0	210
1,5	26,6	210
2,5	16,0	240



Chapter V

Servo motor cables

BiTservo®2XSLCY-J	176
BiTservo®3plus 2XSLCY-J	177
BiTservo®UV 2XSLCYK-J	178
BiTservo®UV 3plus 2XSLCYK-J	179
BiTservo®UV 2XSLCYK-J FR	180
BiTservo®UV 3plus 2XSLCYK-J FR	181
BiTservo®2XSLCH-J	182
BiTservo®3plus 2XSLCH-J	183
BiTservo®UV 2XSLCHK-J	184
BiTservo®UV 3plus 2XSLCHK-J	185
BiTservo®9YSLCYK-J	186
BiTservo®3GSEGCY 3,6/6 kV	188
BiTservo®3GSEGCH 3,6/6 kV	189
BiTservo®MV6	190
BiTservo®MV10	191

BiTservo® 2XSLCY-J



Flexible motor connection cables for frequency converters, with improved current carrying capacity, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Max. conductor operating temperature: 90 °C

Max. conductor temperature in shortcircuit (1 sec.): 250 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage: 4000 V

Insulation resistance: > 200 MΩ x km

Capacitance:

conductor/conductor = 70 to 250 nF/km
conductor/screen = 110 to 410 nF/km

Mechanical parameters:

Min. bending radius:

Ø < 12 mm - 5 x Ø
Ø = 12 + 20 mm - 7,5 x Ø
Ø > 20 mm - 10 x Ø

Application:

Cables with special construction, used to supply power to motors from frequency converters while maintaining full electromagnetic compatibility (EMC). The XLPE insulation improves current carrying capacity maintaining at the same time low capacitance in comparison to PVC insulated cables. The cables are suitable for both fixed installation and flexible connections in industrial equipment, process lines, and machines operating in dry and damp rooms. Cables classified according to **EN 50575 (CPR)**.

Design:

Conductors:

bare copper conductors, multi-stranded, class 5 acc. to EN 60228

Insulation:

cross-linked polyethylene (XLPE)

Core identification:

black, brown, grey, green-yellow

Core arrangement:

cores twisted together

Screens:

electrostatic screen made of aluminium backed polyester tape and a second screen made of tinned copper wire braid, total screen coverage 100%

Outer sheath:

PVC compound, self-extinguishing and flame retardant (as per EN 60332-1-2); colour: transparent

Special properties:

- low capacitance
- improved current carrying capacity
- fulfilment of electromagnetic compatibility (EMC) requirements*
- self-extinguishing sheath

**Note: in order to ensure optimal screen earthing and the fulfilment of electromagnetic compatibility (EMC) requirements of the connection, we recommend using metal glands or a different type of circuitual earthing system (360°).*

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity *) [A]	Approximate cable weight [kg/km]
IP0050	4G1,5	10,8	23	155
IP0051	4G2,5	12,2	32	205
IP0052	4G4	13,3	42	275
IP0053	4G6	14,8	54	365
IP0054	4G10	17,2	75	560
IP0055	4G16	20,1	100	810
IP0056	4G25	24,7	127	1295
IP0057	4G35	27,3	158	1665
IP0058	4G50	31,9	192	2295
IP0059	4G70	37,0	246	3165
IP0060	4G95	41,6	298	4210
IP0061	4G120	45,3	346	5235
IP0062	4G150	51,8	399	6545
IP0063	4G185	57,8	456	7815
IP0064	4G240	65,9	528	10455

*Outer diameter tolerance: +/- 5%

**) - current-carrying capacity of a single cable in air at a temperature of 30 °C

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BITservo® 3plus 2XSLCY-J

Flexible motor connection cables for frequency converters, symmetric construction, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C

flexible connections: -5 °C to 80 °C

Max. conductor operating temperature: 90 °C

Max. conductor temperature in shortcircuit (1 sec.): 250 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage: 4000 V

Insulation resistance: > 200 MΩ x km

Capacitance:

conductor/conductor = 70 to 250 nF/km

conductor/screen = 110 to 410 nF/km

Mechanical parameters:

Min. bending radius:

$\varnothing < 12$ mm - 5 x \varnothing

$\varnothing = 12 \pm 20$ mm - 7,5 x \varnothing

$\varnothing > 20$ mm - 10 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded, class 5

acc. to EN 60228

Insulation:

cross-linked polyethylene (XLPE)

Core identification:

black, brown, grey, 3 x green-yellow (3+3PE)

Core arrangement:

cores twisted together in symmetric construction, protective earth split into three arranged symmetrically every 120°)

Screens:

electrostatic screen made of aluminium backed polyester tape and a second screen made of tinned copper wire braid, total screen coverage 100%

Outer sheath:

PVC compound, self-extinguishing and flame retardant (as per EN 60332-1-2); colour: transparent orange

Special properties:

- low capacitance
- improved current carrying capacity
- fulfilment of electromagnetic compatibility (EMC) requirements*
- self-extinguishing sheath

***Note:** in order to ensure optimal screen earthing and the fulfilment of electromagnetic compatibility (EMC) requirements of the connection, we recommend using metal glands or a different type of circuitual earthing system (360°).

Application:

Cables with special construction, used to supply power to motors from frequency converters while maintaining full electromagnetic compatibility (EMC). The XLPE insulation improves current carrying capacity maintaining at the same time low capacitance in comparison to PVC insulated cables. The cables are suitable for both fixed installation and flexible connections in industrial equipment, process lines, and machines operating in dry and damp rooms. The symmetric construction of the cable (3+3PE) ensures symmetry of voltages on motor terminals. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity *) [A]	Approximate cable weight [kg/km]
IP0150	3x1,5+3x0,25	10,0	23	135
IP0151	3x2,5+3x0,5	11,2	32	180
IP0152	3x4+3x0,75	12,2	42	240
IP0153	3x6+3x1	13,5	54	315
IP0154	3x10+3x1,5	15,7	75	475
IP0155	3x16+3x2,5	18,3	100	700
IP0156	3x25+3x4	22,2	127	1075
IP0157	3x35+3x6	24,9	158	1445
IP0158	3x50+3x10	29,0	192	2035
IP0159	3x70+3x10	33,5	246	2705
IP0160	3x95+3x16	37,5	298	3600
IP0161	3x120+3x16	40,8	346	4390
IP0162	3x150+3x25	46,9	399	5655
IP0163	3x185+3x35	52,3	456	6845
IP0164	3x240+3x50	58,0	528	9000

*Outer diameter tolerance: +/- 5%

**) - current-carrying capacity of a single cable in air at a temperature of 30 °C

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BITservo® UV 2XSLCYK-J

Flexible motor connection cables for frequency converters, with improved current carrying capacity, UV-resistant, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Max. conductor operating temperature:

90 °C

Max. conductor temperature in shortcircuit

(1 sec.): 250 °C

Electrical parameters:

Operating voltage: $U_n/U = 0,6/1$ kV

Test voltage: 4000 V

Insulation resistance: > 200 MΩ x km

Capacitance:

conductor/conductor = 70 to 250 nF/km

conductor/screen = 110 to 410 nF/km

Mechanical parameters:

Min. bending radius:

$\varnothing = 12 + 20$ mm - 7,5 x \varnothing

$\varnothing > 20$ mm - 10 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded, class 5 acc. to EN 60228

Insulation:

cross-linked polyethylene (XLPE)

Core identification:

black, brown, grey, green-yellow

Core arrangement:

cores twisted together

Screens:

electrostatic screen made of aluminium backed polyester tape and a second screen made of tinned copper wire braid, total screen coverage 100%

Outer sheath:

PVC compound, self-extinguishing and flame retardant (as per EN 60332-1-2), UV resistant; colour: black

Special properties:

- low capacitance
- improved current carrying capacity
- fulfilment of electromagnetic compatibility (EMC) requirements*
- self-extinguishing sheath
- UV resistant sheath

**Note: in order to ensure optimal screen earthing and the fulfilment of electromagnetic compatibility (EMC) requirements of the connection, we recommend using metal glands or a different type of circualar earthing system (360°).*

Application:

Cables with special construction, used to supply power to motors from frequency converters while maintaining full electromagnetic compatibility (EMC). The XLPE insulation improves current carrying capacity maintaining at the same time low capacitance in comparison to PVC insulated cables. The cables are suitable for both fixed installation and flexible connections in industrial equipment, process lines, and machines operating in dry and damp rooms. Black UV-resistant sheath enables installation outside of buildings. The cable is also suitable for direct underground installations. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity *) [A]	Approximate cable weight [kg/km]
IP1600	4G1,5	11,6	23	180
IP1601	4G2,5	13,0	32	230
IP1602	4G4	14,1	42	305
IP1603	4G6	15,5	54	395
IP1604	4G10	18,2	75	605
IP1605	4G16	21,1	100	860
IP1606	4G25	25,7	127	1355
IP1607	4G35	28,5	158	1750
IP1608	4G50	33,1	192	2385
IP1609	4G70	38,2	246	3265
IP1610	4G95	42,8	298	4320
IP1611	4G120	46,5	346	5350
IP1612	4G150	53,2	399	6705
IP1613	4G185	59,6	456	8050
IP1614	4G240	66,7	528	10575

*Outer diameter tolerance: +/- 5%

**) - current-carrying capacity of a single cable in air at a temperature of 30 °C

Cable Factory BITNER reserves the right to modify the specifications without prior notice

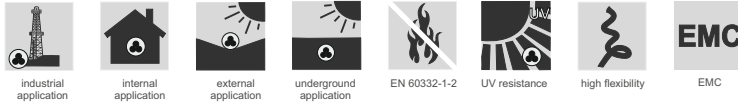
Note: on customer's request other cross sections or number of cores can be produced

BiTservo® UV 3plus 2XSLCYK-J



Servo motor cables

Flexible motor connection cables for frequency converters, symmetric construction, UV-resistant, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:
 fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C
Max. conductor operating temperature: 90 °C
Max. conductor temperature in shortcircuit (1 sec.): 250 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV
Test voltage: 4000 V
Insulation resistance: > 200 MΩ x km
Capacitance:
 conductor/conductor = 70 to 250 nF/km
 conductor/screen = 110 to 410 nF/km

Mechanical parameters:

Min. bending radius:
 $\varnothing < 12$ mm - 5 x \varnothing
 $\varnothing = 12 \pm 20$ mm - 7,5 x \varnothing
 $\varnothing > 20$ mm - 10 x \varnothing

Design:

- Conductors:** bare copper conductors, multi-stranded, class 5 acc. to EN 60228
- Insulation:** cross-linked polyethylene (XLPE)
- Core identification:** black, brown, grey, 3 x green-yellow (3+3PE)
- Core arrangement:** cores twisted together in symmetric construction, protective earth split into three arranged symmetrically every 120°
- Screens:** electrostatic screen made of aluminium backed polyester tape and a second screen made of tinned copper wire braid, total screen coverage 100%
- Outer sheath:** PVC compound, self-extinguishing and flame retardant (as per EN 60332-1-2), UV resistant; colour: black
- Special properties:**
- low capacitance
 - improved current carrying capacity
 - fulfilment of electromagnetic compatibility (EMC) requirements*
 - self-extinguishing sheath
 - UV resistant sheath

**Note: in order to ensure optimal screen earthing and the fulfilment of electromagnetic compatibility (EMC) requirements of the connection, we recommend using metal glands or a different type of circuitual earthing system (360°).*

Application:

Cables with special construction, used to supply power to motors from frequency converters while maintaining full electromagnetic compatibility (EMC). The XLPE insulation improves current carrying capacity maintaining at the same time low capacitance in comparison to PVC insulated cables. The cables are suitable for both fixed installation and flexible connections in industrial equipment, process lines, and machines operating in dry and damp rooms. Black UV-resistant sheath enables installation outside of buildings. The cable is also suitable for direct underground installations. The symmetric construction of the cable (3+3PE) ensures symmetry of voltages on motor terminals. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity *) [A]	Approximate cable weight [kg/km]
IP1700	3x1,5+3G0,25	10,8	23	155
IP1701	3x2,5+3G0,5	12,0	32	205
IP1702	3x4+3G0,75	13,0	42	270
IP1703	3x6+3G1	14,3	54	345
IP1704	3x10+3G1,5	16,7	75	520
IP1705	3x16+3G2,5	19,3	100	750
IP1706	3x25+3G4	23,2	127	1135
IP1707	3x35+3G6	26,1	158	1525
IP1708	3x50+3G10	30,2	192	2130
IP1709	3x70+3G10	34,7	246	2815
IP1710	3x95+3G16	38,7	298	3725
IP1711	3x120+3G16	42,0	346	4525
IP1712	3x150+3G25	48,3	399	5835
IP1713	3x185+3G35	54,1	456	7100
IP1714	3x240+3G50	60,0	528	9315

*Outer diameter tolerance: +/- 5%

**) - current-carrying capacity of a single cable in air at a temperature of 30 °C

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

Bit servo® UV 2XSLCYK-J FR



Highly flame retardant flexible motor connection cables for frequency converters, with improved current carrying capacity, UV resistant, rated 0,6/1 kV



Servo motor cables

Technical data:

Thermal parameters:
Operating temperature:
 fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C
Max. conductor operating temperature: 90 °C
Max. conductor temperature in shortcircuit (1 sec.): 250 °C

Electrical parameters:
Operating voltage: $U_0/U = 0,6/1$ kV
Test voltage: 4000 V
Insulation resistance: > 200 MΩ x km
Capacitance:
 conductor/conductor: 70 to 250 nF/km
 conductor/screen: 110 to 410 nF/km

Mechanical parameters:
Min. bending radius:
 $\varnothing < 20$ mm – 7,5 x \varnothing
 $\varnothing > 20$ mm – 10 x \varnothing

Design:

Conductors: bare copper conductors, multi-stranded, class 5 acc. to EN 60228

Insulation: cross-linked polyethylene (XLPE)

Core identification: black, brown, grey, green-yellow

Screens: electrostatic screen made of aluminium backed polyester tape and a second screen made of tinned copper wire braid, total screen coverage 100%

Outer sheath: PVC compound, self-extinguishing and highly flame retardant (as per EN 60332-1-2 and 60332-3-24 cat. C) with oxygen index > 29; colour: black

Special properties:

- low capacitance
- fulfillment of electromagnetic compatibility (EMC) requirements*
- self-extinguishing sheath
- UV resistant sheath

**Note: in order to ensure optimal screen earthing and the fulfillment of electromagnetic compatibility (EMC) requirements of the connection, we recommend using metal glands or a different type of circuitual earthing system (360°).*

Application:

Cables with special construction, used to supply power motors from frequency converters while maintaining full electromagnetic compatibility (EMC). The polyethylene insulation ensures low capacitance in comparison to PVC insulated cables. The cables are suitable for both fixed installation and flexible connections in industrial equipment, process lines and machines operating in dry and damp rooms. Black UV resistant sheath enables installation outside of buildings. The cable is also suitable for direct burial. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity ** [A]	Approximate cable weight [kg/km]
IP2120	4G1,5	11,6	23	180
IP2121	4G2,5	13,0	32	230
IP2122	4G4	14,1	42	305
IP2123	4G6	15,5	54	395
IP2124	4G10	18,2	75	605
IP2125	4G16	21,1	100	860
IP2126	4G25	25,7	127	1355
IP2127	4G35	28,5	158	1750
IP2128	4G50	33,1	192	2385
IP2129	4G70	38,2	246	3265
IP2130	4G95	42,8	298	4320
IP2131	4G120	46,5	346	5350
IP2132	4G150	53,2	399	6705
IP2133	4G185	59,6	456	8050
IP2134	4G240	66,7	528	10575

*Outer diameter tolerance: +/-5%
 **) - current-carrying capacity of a single cable in air at a temperature of 30 °C
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

BiTservo® UV 3plus 2XSLCYK-J FR

RoHS 2015/863/EU
 CE
 LVD 2014/35/EU
 CPR
 CPR 305/2011
 24 months warranty

Servo motor cables

Highly flame retardant flexible motor connection cables for frequency converters, with improved current carrying capacity, symmetric construction, UV resistant, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:
 fixed installation: -40 °C to 80 °C
 flexible connections: -5 °C to 80 °C
Max. conductor operating temperature: 90 °C
Max. conductor temperature in shortcircuit (1 sec.): 250 °C

Electrical parameters:

Operating voltage: $U_i/U = 0,6/1$ kV
Test voltage: 4000 V
Insulation resistance: > 200 MΩ x km
Capacitance:
 Conductor/conductor: 70 to 250 nF/km
 Conductor/screen: 110 to 410 nF/km

Mechanical parameters:

Min. bending radius:
 $\varnothing < 12$ mm – 5 x \varnothing
 $\varnothing = 12 + 20$ mm – 7,5 x \varnothing
 $\varnothing > 20$ mm – 10 x \varnothing

Design:

Conductors: bare copper conductors, multi-stranded, class 5 acc. to EN 60228
Insulation: cross-linked polyethylene (XLPE)
Core identification: black, brown, grey, 3 x green-yellow (3+3PE)
Screens: electrostatic screen made of aluminium backed polyester tape and a second screen made of tinned copper wire braid, total screen coverage 100%
Outer sheath: PVC compound, self-extinguishing and highly flame retardant (as per EN 60332-1-2 and 60332-3-24 cat. C) with oxygen index > 29; colour: black
Special properties:
 - low capacitance
 - fulfillment of electromagnetic compatibility (EMC) requirements*
 - self-extinguishing sheath
 - UV resistant sheath

***Note:** in order to ensure optimal screen earthing and the fulfillment of EMC (electromagnetic compatibility) requirements of the connection, we recommend using metal glands or a different type of circular earthing system (360°).

Application:

Cables with special construction, used to supply power motors from frequency converters while maintaining full electromagnetic compatibility (EMC). The polyethylene insulation ensures low capacitance in comparison to PVC insulated cables. The cables are suitable for both fixed installation and flexible connections in industrial equipment, process lines and machines operating in dry and damp rooms. Black UV resistant sheath enables installation outside of buildings. The cable is also suitable for direct burial. Symmetric construction of the cable (3+3PE) ensures symmetry of voltages on motor terminals. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity *) [A]	Approximate cable weight [kg/km]
IP2220	3x1,5+3G0,25	10,8	23	155
IP2221	3x2,5+3G0,5	12,0	32	205
IP2222	3x4+3G0,75	13,0	42	270
IP2223	3x6+3G1	14,3	54	345
IP2224	3x10+3G1,5	16,7	75	520
IP2225	3x16+3G2,5	19,3	100	750
IP2226	3x25+3G4	23,2	127	1135
IP2227	3x35+3G6	26,1	158	1525
IP2228	3x50+3G10	30,2	192	2130
IP2229	3x70+3G10	34,7	246	2815
IP2230	3x95+3G16	38,7	298	3725
IP2231	3x120+3G16	42,0	346	4525
IP2232	3x150+3G25	48,3	399	5835
IP2233	3x185+3G35	54,1	456	7100
IP2234	3x240+3G50	60,0	528	9315

*Outer diameter tolerance: +/- 5%
 **) - current-carrying capacity of a single cable in air at a temperature of 30 °C
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

BITservo[®] 2XSLCH-J



Servo motor cables

Flexible halogen-free motor connection cables for frequency converters, with improved current carrying capacity, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Max. conductor operating temperature: 90 °C

Max. conductor temperature in shortcircuit (1 sec.): 250 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage: 4000 V

Insulation resistance: > 200 MΩ x km

Capacitance:

conductor/conductor = 70 to 250 nF/km
conductor/screen = 110 to 410 nF/km

Mechanical parameters:

Min. bending radius:

$\varnothing < 12$ mm – 5 x \varnothing
 $\varnothing = 12$ to 20 mm – 7,5 x \varnothing
 $\varnothing > 20$ mm – 10 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded, class 5
acc. to EN 60228

Insulation:

cross-linked polyethylene (XLPE)

Core identification:

black, brown, grey, green-yellow

Core arrangement:

cores twisted together

Screens:

electrostatic screen made of aluminium backed polyester tape and a second screen made of tinned copper wire braid, total screen coverage 100%

Outer sheath:

special halogen-free compound, self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-22, cat. A); colour: orange

Special properties:

- halogen-free
- low capacitance
- improved current carrying capacity
- fulfilment of electromagnetic compatibility (EMC) requirements*
- self-extinguishing sheath

***Note:** in order to ensure optimal screen earthing and the fulfilment of electromagnetic compatibility (EMC) requirements of the connection, we recommend using metal glands or a different type of circuitual earthing system (360°)

Application:

Cables with special construction, used to supply power to motors from frequency converters while maintaining full electromagnetic compatibility (EMC). The XLPE insulation improves current carrying capacity maintaining at the same time low capacitance in comparison to PVC insulated cables. The cables are suitable for both fixed installation and flexible connections in industrial equipment, process lines, and machines operating in dry and damp rooms, also in public buildings. The entire cable is made of halogen-free materials and does not emit noxious substances under fire conditions. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity *) [A]	Approximate cable weight [kg/km]
IP1850	4G1,5	10,8	23	155
IP1851	4G2,5	12,2	32	210
IP1852	4G4	13,3	42	285
IP1853	4G6	14,8	54	370
IP1854	4G10	17,2	75	570
IP1855	4G16	20,1	100	820
IP1856	4G25	24,7	127	1305
IP1857	4G35	27,3	158	1685
IP1858	4G50	31,9	192	2315
IP1859	4G70	37,0	246	3185
IP1860	4G95	41,6	298	4235
IP1861	4G120	45,3	346	5265
IP1862	4G150	51,8	399	6585
IP1863	4G185	57,8	456	7865
IP1864	4G240	65,9	528	10540

*Outer diameter tolerance: +/- 5%

**) - current-carrying capacity of a single cable in air at a temperature of 30 °C

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiTservo® 3plus 2XSLCH-J



Servo motor cables

Flexible halogen-free motor connection cables for frequency converters, symmetric construction, with improved current carrying capacity, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C

flexible connections: -5 °C to 80 °C

Max. conductor operating temperature:

90 °C

Max. conductor temperature in shortcircuit

(1 sec.): 250 °C

Electrical parameters:

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage: 4000 V

Insulation resistance: > 200 MΩ x km

Capacitance:

conductor/conductor = 70 to 250 nF/km

conductor/screen = 110 to 410 nF/km

Mechanical parameters:

Min. bending radius:

$\varnothing < 12$ mm – 5 x \varnothing

$\varnothing = 12 + 20$ mm – 7,5 x \varnothing

$\varnothing > 20$ mm – 10 x \varnothing

Design:

Conductors:

bare copper conductors, multi-stranded, class 5

acc. to EN 60228

Insulation:

cross-linked polyethylene (XLPE)

Core identification:

black, brown, grey, 3 x green-yellow (3+3PE)

Core arrangement:

cores twisted together in symmetric construction, protective

earth split into three arranged symmetrically every 120°)

electrostatic screen made of aluminium backed polyester

tape and a second screen made of tinned copper wire braid,

total screen coverage 100%

Screens:

Outer sheath:

special halogen-free compound, self-extinguishing

and flame retardant (acc. to EN 60332-1-2, EN 60332-3-22,

cat. A); colour: orange

Special properties:

- halogen-free

- low capacitance

- improved current carrying capacity

- fulfillment of electromagnetic compatibility (EMC)

requirements*

- self-extinguishing sheath

***Note:** in order to ensure optimal screen earthing and the fulfilment of electromagnetic compatibility (EMC) requirements of the connection, we recommend using metal glands or a different type of circuitual earthing system (360°).

Application:

Cables with special construction, used to supply power to motors from frequency converters while maintaining full electromagnetic compatibility (EMC). The XLPE insulation improves current carrying capacity maintaining at the same time low capacitance in comparison to PVC insulated cables. The cables are suitable for both fixed installation and flexible connections in industrial equipment, process lines, and machines operating in dry and damp rooms, also in public buildings. The entire cable is made of halogen-free materials and does not emit noxious substances under fire conditions. The symmetric construction of the cable (3+3PE) ensures symmetry of voltages on motor terminals. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity *) [A]	Approximate cable weight [kg/km]
IP2400	3x1,5+3G0,25	10,0	23	138
IP2401	3x2,5+3G0,5	11,2	32	185
IP2402	3x4+3G0,75	12,2	42	245
IP2403	3x6+3G1	13,5	54	320
IP2404	3x10+3G1,5	15,7	75	485
IP2405	3x16+3G2,5	18,3	100	710
IP2406	3x25+3G4	22,2	127	1085
IP2407	3x35+3G6	24,9	158	1460
IP2408	3x50+3G10	29,0	192	2050
IP2409	3x70+3G10	33,5	246	2725
IP2410	3x95+3G16	37,5	298	3625
IP2411	3x120+3G16	40,8	346	4420
IP2412	3x150+3G25	46,9	399	5690
IP2413	3x185+3G35	52,3	456	6890
IP2414	3x240+3G50	58,0	528	9060

*Outer diameter tolerance: +/- 5%

**) - current-carrying capacity of a single cable in air at a temperature of 30 °C

Cable Factory BITNER reserves the right to modify the specifications without prior notice

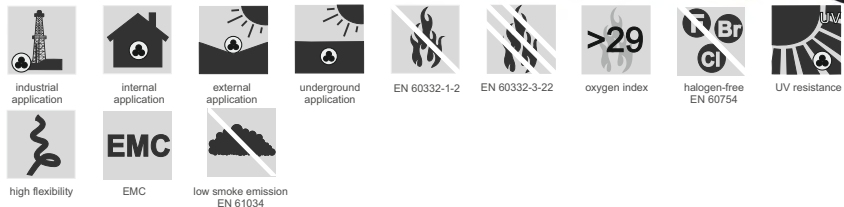
Note: on customer's request other cross sections or number of cores can be produced

BITservo® UV 2XSLCHK-J



Servo motor cables

Flexible halogen-free motor connection cables for frequency converters, rated 0,6/1 kV



Technical data:

Thermal parameters:
Operating temperature:
 fixed installation: -40 °C to 90 °C
 min. installation temp.: -5 °C
Max. conductor operating temperature: 90 °C
Max. conductor temperature in shortcircuit (1 sec.): 250 °C

Electrical parameters:
Operating voltage: U_i/U = 0,6/1 kV
Test voltage: 4000 V
Insulation resistance: > 200 MΩ x km
Capacitance:
 conductor/conductor = 70 to 250 nF/km
 conductor/screen = 110 to 410 nF/km

Mechanical parameters:
Min. bending radius:
 Ø < 20 mm – 7,5 x Ø
 Ø > 20 mm – 10 x Ø

Design:

Conductors: bare copper conductors, multi-stranded, class 5 acc. to EN 60228
Insulation: cross-linked polyethylene (XLPE)
Core identification: black, brown, grey, green-yellow
Core arrangement: cores twisted together
Screens: electrostatic screen made of aluminium backed polyester tape and a second screen made of tinned copper wire braid, total screen coverage 100%
Outer sheath: special halogen-free compound, self-extinguishing and flame retardant (acc. to EN 60332-1-2, EN 60332-3-22, IEC 60332-3-22 cat. A), UV resistant; colour: black
Special properties:
 - low capacitance
 - improved current carrying capacity
 - fulfillment of electromagnetic compatibility (EMC) requirements*
 - self-extinguishing sheath
 - UV resistant sheath

**Note: in order to ensure optimal screen earthing and the fulfillment of electromagnetic compatibility (EMC) requirements of the connection, we recommend using metal glands or a different type of circuital earthing system (360°).*

Application:

Cables with special construction, used to supply power to motors from frequency converters while maintaining full electromagnetic compatibility (EMC). The XLPE insulation improves current carrying capacity maintaining at the same time low capacitance in comparison to PVC insulated cables. The cables are suitable for both fixed installation and flexible connections in industrial equipment, process lines, and machines operating in dry and damp rooms. Black UV-resistant sheath enables installation outside of buildings. The cable is also suitable for direct underground installations. Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity *) [A]	Approximate cable weight [kg/km]
IP2620	4G1,5	11,6	23	180
IP2621	4G2,5	13,0	32	230
IP2622	4G4	14,1	42	310
IP2623	4G6	15,6	54	400
IP2624	4G10	18,2	75	610
IP2625	4G16	21,1	100	870
IP2626	4G25	25,7	127	1365
IP2627	4G35	28,5	158	1760
IP2628	4G50	33,1	192	2405
IP2629	4G70	38,2	246	3295
IP2630	4G95	42,8	298	4355
IP2631	4G120	46,5	346	5395
IP2632	4G150	53,2	399	6760
IP2633	4G185	59,6	456	8115
IP2634	4G240	66,7	528	10665
IP2635	4G300	76,5	612	13850

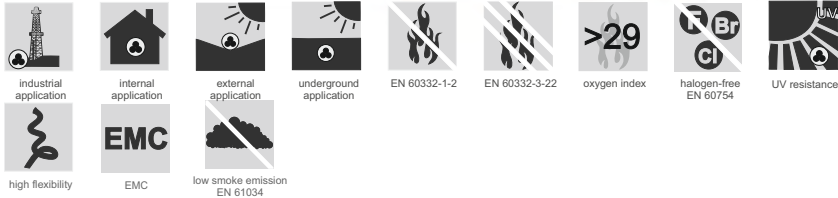
*)Outer diameter tolerance: +/- 5%; **) - current-carrying capacity of a single cable in air at a temperature of 30 °C
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] UV 3plus 2XSLCHK-J



Servo motor cables

Flexible halogen-free motor connection cables for frequency converters, symmetric construction, rated 0,6/1 kV



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 90 °C

min. installation temp.: -5 °C

Max. conductor operating temperature: 90 °C

Max. conductor temperature in shortcircuit (1 sec.): 250 °C

Electrical parameters:

Operating voltage: U_i/U = 0,6/1 kV

Test voltage: 4000 V

Insulation resistance: > 200 MΩ x km

Capacitance:

conductor/conductor = 70 to 250 nF/km

conductor/screen = 110 to 410 nF/km

Mechanical parameters:

Min. bending radius:

Ø < 20 mm – 7,5 x Ø

Ø > 20 mm – 10 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded, class 5

acc. to EN 60228

Insulation:

cross-linked polyethylene (XLPE)

Core identification:

black, brown, grey, 3 x green-yellow (3+3PE)

Core arrangement:

cores twisted together in symmetric construction, protective

earth split into three arranged symmetrically every 120°)

Screens:

electrostatic screen made of aluminium backed polyester

tape and a second screen made of tinned copper wire braid,

total screen coverage 100%

Outer sheath:

special halogen-free compound, self-extinguishing and flame

retardant (acc. to EN 60332-1-2, EN 60332-3-22,

IEC 60332-3-22 cat. A), UV resistant; colour: black

Special properties:

- low capacitance
- improved current carrying capacity
- fulfillment of electromagnetic compatibility (EMC) requirements*
- self-extinguishing sheath
- UV resistant sheath

***Note:** in order to ensure optimal screen earthing and the fulfillment of electromagnetic compatibility (EMC) requirements of the connection, we recommend using metal glands or a different type of circuitual earthing system (360°).

Application:

Cables with special construction, used to supply power to motors from frequency converters while maintaining full electromagnetic compatibility (EMC). The XLPE insulation improves current carrying capacity maintaining at the same time low capacitance in comparison to PVC insulated cables. The cables are suitable for both fixed installation and flexible connections in industrial equipment, process lines, and machines operating in dry and damp rooms. Black UV-resistant sheath enables installation outside of buildings. The cable is also suitable for direct underground installations. Cables classified according to **EN50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity ** [A]	Approximate cable weight [kg/km]
IP2600	3x1,5+3G0,25	10,8	23	155
IP2601	3x2,5+3G0,5	12,0	32	205
IP2602	3x4+3G0,75	13,0	42	270
IP2603	3x6+3G1,0	14,3	54	345
IP2604	3x10+3G1,5	16,7	75	520
IP2605	3x16+3G2,5	19,3	100	750
IP2606	3x25+3G4	23,2	127	1135
IP2607	3x35+3G6	26,1	158	1525
IP2608	3x50+3G10	30,2	192	2130
IP2609	3x70+3G10	34,7	246	2815
IP2610	3x95+3G16	38,7	298	3725
IP2611	3x120+3G16	42,0	346	4530
IP2612	3x150+3G25	48,3	399	5840
IP2613	3x185+3G35	54,1	456	7105
IP2614	3x240+3G50	60,0	528	9325
IP2615	3x300+3G50	69,5	621	11880

*Outer diameter tolerance: +/- 5%; ** - current-carrying capacity of a single cable in air at a temperature of 30 °C

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

Bit servo® UV 9YSLCYK-J



Flexible motor connection cables for frequency converters, PP insulation, UV resistant, rated 0,6/1 kV



Servo motor cables



industrial application



internal application



external application



underground application



EN 60332-1-2



UV resistance



high flexibility



EMC

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C

flexible application: -5 °C to 80 °C

Max. operating conductor temperature: 90 °C

Max. conductor temperature in shortcircuit (1 sec.): 250 °C

Electrical parameters:

Operating voltage:

IEC: U_i/U = 0,6/1 kV

UL & CSA: 1000 V

Test voltage: 4000 V

Mechanical parameters:

Min. bending radius:

Ø = 12 + 20 mm – 7,5 x Ø

Ø > 20 mm – 10 x Ø

Design:

Conductors:

bare copper conductors, multi-stranded, class 5

acc. to EN 60228

Insulation:

polypropylene PP

Core identification:

4 cores: black brown grey, yellow-green, 3+3 cores: black, brown, grey, 3x yellow-green

Screens:

electrostatic screen made of aluminium backed polyester tape and a second screen made of tinned copper wire braid, total screen coverage 100%

Outer sheath:

PVC compound, self-extinguishing and flame retardant, DIN EN/IEC 60332-1-2 and FT1 acc. to UL 2556, colour: black

Special properties:

- low capacitance
- fulfillment of electromagnetic compatibility (EMC) requirements*
- flame retardant sheath
- UV resistant sheath

**Note: in order to ensure optimal screen earthing and the fulfillment of electromagnetic compatibility (EMC) requirements by the connection, we recommend using metal glands or a different type of circual earthing system (360°).*

Application:

Cables with a special construction, used to supply power to motors from frequency converters while maintaining full electromagnetic compatibility of the system. The PP polypropylene insulation ensures low cable capacitance in comparison with cables with a PVC insulation. They are suitable for fixed installation in industrial equipment, process lines, machines operating in dry and damp rooms, as well as for mobile and portable devices and external applications. The cables are resistant to UV radiation. The cable is intended for direct underground installations. The symmetric construction of the cable (3+3PE) ensures the symmetry of supply voltages on the motor terminals.

Bit servo® UV 9YSLCYK-J

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity* [A]	Approximate cable weight [kg/km]
IP5000	4G1,5	11,6	23	180
IP5001	4G2,5	12,9	32	230
IP5002	4G4	14,0	42	305
IP5003	4G6	15,5	54	400
IP5004	4G10	18,1	75	605
IP5005	4G16	21,0	100	865
IP5006	4G25	25,6	127	1365
IP5007	4G35	28,5	158	1760
IP5008	4G50	33,1	192	2405
IP5009	4G70	38,1	246	3290
IP5010	4G95	42,8	298	4350
IP5011	4G120	46,4	346	5390
IP5012	4G150	53,2	399	6755
IP5013	4G185	59,6	456	8105
IP5014	4G240	66,7	528	10655

BITservo® UV 9YSLCYK-J

Flexible motor connection cables for frequency converters, PP insulation,
UV resistant, rated 0,6/1 kV

BITservo® UV 3plus 9YSLCYK-J

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity *) [A]	Approximate cable weight [kg/km]
IP5020	3x1,5+3G0,25	10,8	23	155
IP5021	3x2,5+3G0,5	12,0	32	205
IP5022	3x4+3G0,75	13,0	42	270
IP5023	3x6+3G1	14,3	54	345
IP5024	3x10+3G1,5	16,7	75	520
IP5025	3x16+3G2,5	19,3	100	750
IP5026	3x25+3G4	23,2	127	1135
IP5027	3x35+3G6	26,1	158	1525
IP5028	3x50+3G10	30,2	192	2130
IP5029	3x70+3G10	34,7	246	2815
IP5030	3x95+3G16	38,7	298	3720
IP5031	3x120+3G16	42,0	346	4525
IP5032	3x150+3G25	48,3	399	5835
IP5033	3x185+3G35	54,1	456	7100
IP5034	3x240+3G50	60,0	528	9315

*Outer diameter tolerance: +/- 5%

**) - current-carrying capacity of a single cable in air at a temperature of 30 °C

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

Conversion factors for deviating ambient temperature

ambient temperature °C	10	15	20	25	30	35	40	45	50	55	60	65	70	75
conversion factors	1,18	1,14	1,10	1,05	1,00	0,95	0,89	0,84	0,77	0,71	0,63	0,55	0,45	0,32

BITservo[®] 3GSEGCY 3,6/6 kV



Medium voltage cable for connections between motor and frequency converter



Technical data:

Thermal parameters:
Operating temperature: -30 °C to 80 °C
Min. installation temperature: -5 °C
Max conductor operating temperature: 90 °C
Max conductor temperature during short circuit (max 5s): 250 °C

Electrical parameters:
Operating voltage:** $U_0/U = 3,6/6$ kV
Test voltage: 11 kV

Mechanical parameters:
Max pulling force during installation [N]: 50 *S
 S - sum of cross sections of power conductors in mm²
Min bending radius: 12 x \varnothing

Design:

Conductors: bare copper conductors, multi-stranded, class 2 acc. to EN 60228

Semiconductive layer on conductor: special semi-conductive rubber compound acc. to IEC 60502-2
 EPR rubber acc. to IEC 60502-2

Insulation: Outer semiconductive layer: special semi-conductive rubber compound acc. to IEC 60502-2

Screen on insulated conductor: copper tape wrapping on each conductor numbers on outer semi-conductive layer

Core identification: special polymer compound acc. to IEC 60502-2

Filler: copper wires and helically applied copper tape, cross section of concentric conductor equals half of the cross section of phase conductor

Concentric conductor: special, oil resistant PVC, flame retardant acc. to EN 60332-1-2; colour: red

Outer sheath: special, oil resistant PVC, flame retardant acc. to EN 60332-1-2; colour: red

Cross section of Cu tapes on conductors
 sum of cross sections for 3 conductors)

Cross section of phase conductor	Cross section of Cu tapes
35...120 mm ²	16 mm ²
>120 mm ²	25 mm ²

** on customer's request cables rated 6/10 kV can be produced

Application:

BITservo 3GSEGCY 3,6/6 kV cables are designed for connection between frequency converters and medium voltage motors. They are suitable for installation inside buildings in dry and damp rooms but also outdoors (resistance to UV and atmospheric conditions) or buried directly in ground. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity *) [A]	Capacitance [nF/km]	Approximate cable weight [kg/km]
IP1100	3x35/18	46,6	169	280	3320
IP1101	3x50/25	50,4	203	300	4060
IP1102	3x70/35	54,5	253	350	5000
IP1103	3x95/50	59,3	306	390	6375
IP1104	3x120/60	63,3	352	420	7310
IP1105	3x150/75	67,9	400	460	8840
IP1106	3x185/95	71,0	451	500	10215
IP1107	3x240/120	77,8	523	560	12545

*Outer diameter tolerance: +/- 5%
 **) - current-carrying capacity of a single cable in air at a temperature of 30 °C
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

BITservo® 3GSEGCH 3,6/6 kV

Halogen-free medium voltage cable for connections between motor and frequency converter



Servo motor cables



Technical data:

Thermal parameters:
Operating temperature: -30 °C to 80 °C
Min. installation temperature: -5 °C
Max conductor operating temperature: 90 °C
Max conductor temperature during short circuit (max 5s): 250 °C

Electrical parameters:
Operating voltage:** U₀/U = 3,6/6 kV
Test voltage: 11 kV

Mechanical parameters:
Max pulling force during installation [N]: 50°S
 S - sum of cross sections of power conductors in mm²
Min bending radius: 12 x Ø

Cross section of Cu tapes on conductors
 (sum of cross sections for 3 conductors)

Cross section of phase conductor	Cross section of Cu tapes
35...120 mm ²	16 mm ²
>120 mm ²	25 mm ²

** on customer's request cables rated 6/10 kV can be produced

Design:

Conductors: bare copper conductors, multi-stranded, class 2 acc. to EN 60228

Semiconductive layer on conductor: special semi-conductive rubber compound acc. to IEC 60502-2

Insulation: EPR rubber acc. to IEC 60502-2

Outer semiconductive layer: special semi-conductive rubber compound acc. to IEC 60502-2

Screen on insulated conductor: copper tape wrapping on each conductor

Core identification: numbers on outer semi-conductive layer

Filler: special polymer compound acc. to IEC 60502-2

Concentric conductor: copper wires and helically applied copper tape, cross section of concentric conductor equals half of the cross section of phase conductor

Outer sheath: special, halogen-free, flame retardant acc. to EN 60332-1-2; colour: red

Application:

BITservo 3GSEGCH 3,6/6kV cables are designed for connection between frequency converters and medium voltage motors. They are suitable for installation inside buildings in dry and damp rooms. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Current-carrying capacity *) [A]	Capacitance [nF/km]	Approximate cable weight [kg/km]
IP4150	3x35/18	46,6	169	280	3340
IP4151	3x50/25	50,4	203	300	4080
IP4152	3x70/35	54,5	253	350	5025
IP4153	3x95/50	59,3	306	390	6300
IP4154	3x120/60	63,4	352	420	7345
IP4155	3x150/75	67,9	400	460	8745
IP4156	3x185/95	71,0	451	500	10255
IP4157	3x240/120	77,8	523	560	12590

*Outer diameter tolerance: +/-5%
 **) - current-carrying capacity of a single cable in air at a temperature of 30 °C
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] BiTservo[®] MV6



Servo motor cables

Flexible rubber MV motor connection cable for frequency converters rated 3,6/6 kV



Technical data:

Thermal parameters:

Operating temperature: -40 °C to 90 °C

Max conductor operating temperature: 90 °C

Max short circuit temperature (max 5 sec.): 250 °C

Electrical parameters:

Operating voltage: 3,6/6 kV

Test voltage: 11 kV

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors: plain copper conductors, multi-stranded, class 5 acc. to EN 60228

Screen of power conductors: special semi-conductive rubber compound

Insulation of power conductors: special EPR compound with increased electrical parameters, neutral color

Screen on insulation of power conductors split in 3 elements: special semi-conductive rubber, semi-conductive tape, tinned copper wire braid plus additional protective conductors (bare)

Separator: semi-conductive tape
Outer sheath: special flame retardant rubber compound with LOI>29, oil resistant; colour: red

Application:

For installation in power networks and power supply for high power engines through medium-voltage frequency converters. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Conductor resistance at 20 °C [Ω/km]	Capacitance [nF/km]	Inductance [mH/km]	Current-carrying capacity *) [A]
IP4500	3x16+3x16/3	42,5	2540	1,24	340	0,39	109
IP4501	3x25+3x16/3	46,0	3185	0,795	390	0,37	141
IP4502	3x35+3x16/3	48,2	3555	0,565	440	0,34	174
IP4503	3x35+3x25/3	48,2	3575	0,565	440	0,34	174
IP4504	3x50+3x25/3	52,6	4335	0,393	490	0,33	215
IP4505	3x70+3x35/3	56,5	5300	0,277	560	0,31	266
IP4506	3x95+3x50/3	60,2	6500	0,210	640	0,30	318
IP4507	3x120+3x70/3	63,8	7600	0,164	690	0,29	367
IP4508	3x150+3x70/3	68,7	8790	0,132	770	0,28	418
IP4509	3x185+3x95/3	74,5	10520	0,108	840	0,27	477

*Outer diameter tolerance: +/- 5%

**) - current-carrying capacity of a single cable in air at a temperature of 30 °C

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] BiTservo[®] MV10

RoHS 2015/863/EU
 CE
 LVD 2014/35/EU
 CPR
 CPR 305/2011
 24 months warranty

Servo motor cables

Flexible rubber MV motor connection cable for frequency converters rated 6/10 kV



Technical data:

Thermal parameters:

Operating temperature: -40 °C to 90 °C
 Max conductor operating temperature: 90 °C
 Max short circuit temperature (max 5 sec.): 250 °C

Electrical parameters:

Operating voltage: 6/10 kV
 Test voltage: 17 kV

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors: plain annealed copper, multi-stranded, class 5 acc. to EN 60228

Screen of power conductors: special semi-conductive rubber compound

Insulation of power conductors: special EPR compound with increased electrical parameters, neutral colour

Screen on insulation of power conductors split in 3 elements: special semi-conductive rubber, semi-conductive tape, tinned copper wire braid plus additional protective conductors (bare)

Separator: semi-conductive tape

Outer sheath: special flame retardant rubber compound with LOI>29, oil resistant; colour: red

Application:

For installations in power networks and supplying power to high power engines via MV frequency converters. Cables classified according to EN 50575 (CPR).

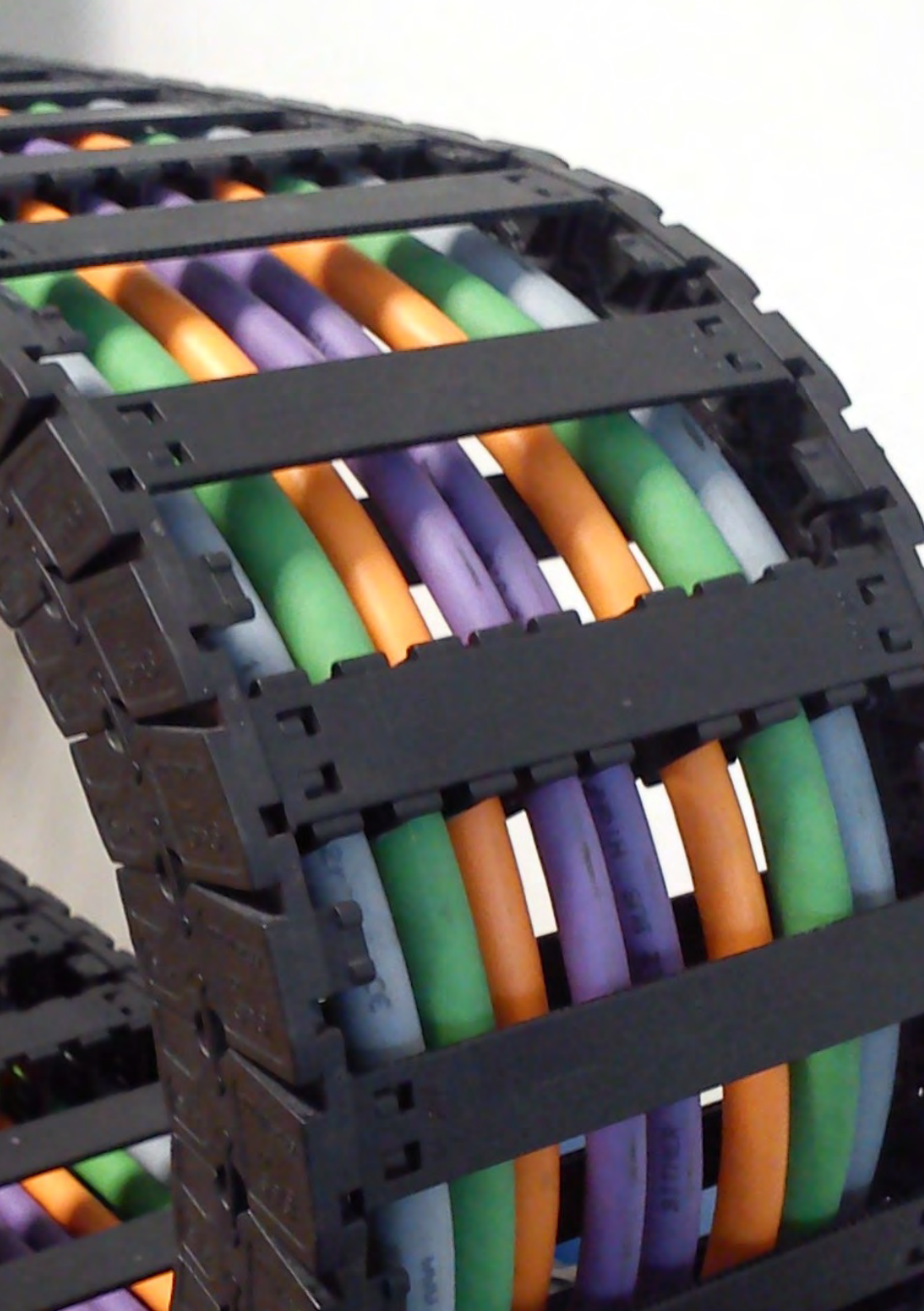
Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Conductor resistance at 20 °C [Ω/km]	Capacitance [nF/km]	Inductance [mH/km]	Current-carrying capacity **) [A]
IP4550	3x16+3x16/3	44,3	2800	1,24	310	0,40	109
IP4551	3x25+3x16/3	47,7	3360	0,795	350	0,38	141
IP4552	3x35+3x16/3	49,9	3740	0,565	400	0,35	174
IP4553	3x35+3x25/3	49,9	3760	0,565	400	0,35	174
IP4554	3x50+3x25/3	54,3	4535	0,393	440	0,34	215
IP4555	3x70+3x35/3	58,2	5515	0,277	500	0,32	266
IP4556	3x95+3x50/3	62,9	6875	0,210	580	0,30	318
IP4557	3x120+3x70/3	65,5	7845	0,164	620	0,29	367
IP4558	3x150+3x70/3	70,5	9050	0,132	690	0,28	418
IP4559	3x185+3x95/3	76,2	10800	0,108	760	0,27	477
IP4560	3x240+3x120/3	80,2	12800	0,0817	810	0,27	552

*Outer diameter tolerance: +/- 5%

***) - current-carrying capacity of a single cable in air at a temperature of 30 °C

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced



Chapter VI

Drag chain cables

BiTflex®500	194
BiTflex®500 CY	195
BiTflex®500 PUR	196
BiTflex®500 CPUR	198
BiTflex®530 PUR	200
BiTflex®530 CPUR	201
BiTflex®510 encoder	203
BiTflex®510 servo	204
BiT L2 BUS High Flex	205
BiT CAN-BUS Drag Chain	206

BiTflex[®] 500



Drag chain cables

Highly flexible, PVC sheathed cables for drag chains, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_i/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: 7,5 x Ø
fixed installation: 4 x Ø

Design:

Conductors:

highly flexible, bare copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together in layers with short lay length, special wrapping of separating tape between each layer PVC compound, oil resistant (cf. chemical resistance table), self-extinguishing and flame retardant acc. to EN 60332-1-2; colour: grey

Outer sheath:

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 5 million bending cycles in a drag chain. Suitable for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables classified according to **EN 50755 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S55000	2x0,5	5,0	38,0
S55001	3G0,5	5,3	45,0
S55002	4G0,5	5,7	55,0
S55003	5G0,5	6,2	65,0
S55004	7G0,5	7,0	85,0
S55005	7x0,5	7,0	85,0
S55006	10G0,5	9,4	133,0
S55007	12G0,5	9,4	143,0
S55008	14G0,5	9,8	160,0
S55009	16G0,5	10,3	180,0
S55010	18G0,5	10,9	200,0
S55011	20G0,5	11,6	225,0
S55012	24G0,5	12,8	260,0
S55013	30G0,5	13,7	315,0
S55014	37G0,5	14,8	375,0
S55015	2x0,75	5,3	45,0
S55016	3G0,75	5,6	54,0
S55017	4G0,75	6,1	65,0
S55018	5G0,75	6,8	82,0
S55019	7G0,75	7,4	102,0
S55020	7x0,75	7,4	102,0
S55021	10G0,75	10,0	160,0
S55022	12G0,75	10,0	172,0
S55023	14G0,75	10,5	194,0
S55024	16G0,75	11,0	218,0
S55025	18G0,75	11,8	249,0
S55026	20G0,75	12,4	274,0
S55027	24G0,75	13,9	324,0

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S55028	2x1,0	5,7	51,6
S55029	3G1,0	6,1	64,2
S55030	4G1,0	6,8	80,7
S55031	5G1,0	7,4	98,2
S55032	7G1,0	8,0	122,4
S55033	7x1,0	8,0	122,4
S55034	10G1,0	10,8	193,7
S55035	12G1,0	10,8	207,8
S55036	14G1,0	11,5	240,0
S55037	16G1,0	12,2	271,2
S55038	18G1,0	12,8	301,5
S55039	20G1,0	13,6	339,4
S55040	24G1,0	15,1	393,1
S55041	2x1,5	6,9	77,0
S55042	3G1,5	7,3	95,0
S55043	4G1,5	8,0	118,0
S55044	5G1,5	9,1	150,0
S55045	7G1,5	9,9	188,0
S55046	10G1,5	13,1	188,0
S55047	12G1,5	13,1	308,0
S55048	2x2,5	8,0	113,0
S55049	3G2,5	8,5	142,0
S55050	4G2,5	9,7	187,0
S55051	5G2,5	10,6	225,0
S55052	7G2,5	11,8	291,0
S55053	10G2,5	16,0	454,0
S55054	12G2,5	16,0	495,0

*Outer diameter tolerance: +/- 5%
Cable Factory BITNER reserves the right to modify specifications without prior notification
G - cables with green-yellow conductor
x - cables without green-yellow conductor
Note: on customer's request other cross sections or number of cores can be produced

BiTflex® 500 CY



Drag chain cables

Highly flexible, screened, PVC sheathed cables for drag chains, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 5 x Ø

Design:

Conductors:

highly flexible, bare copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together in layers with short lay length, special wrapping of separating tape between each layer PVC compound

Inner sheath:

tinned copper wire braid, coverage ≥85%, special wrapping with separating tape beneath the screen, around the screen special reinforcing fleece tape

Screen:

Outer sheath:

PVC compound, oil resistant (cf. chemical resistance table), self-extinguishing and flame retardant acc. to EN 60332-1-2; colour: grey

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 5 million bending cycles in a drag chain. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field especially in industrial environment. Suitable for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms. Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]
S55300	2x0,5	6,9	73,0
S55301	3G0,5	7,2	82,0
S55302	4G0,5	7,9	103,0
S55303	5G0,5	8,3	117,0
S55304	7G0,5	9,3	145,0
S55305	12G0,5	11,5	215,0
S55306	14G0,5	11,9	235,0
S55307	18G0,5	13,6	303,0
S55308	24G0,5	15,3	370,0
S55309	2x0,75	7,2	82,0
S55310	3G0,75	7,5	93,0
S55311	4G0,75	8,3	117,0
S55312	5G0,75	9,2	142,0
S55313	7G0,75	9,7	165,0
S55314	12G0,75	12,1	150,0
S55315	18G0,75	14,4	354,0
S55316	24G0,75	16,7	455,0

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]
S55317	2x1,0	7,6	92,0
S55318	3G1,0	8,2	115,0
S55319	4G1,0	9,1	142,0
S55320	5G1,0	9,7	163,0
S55321	7G1,0	10,3	192,0
S55322	12G1,0	12,9	293,0
S55323	18G1,0	15,3	415,0
S55324	24G1,0	17,8	535,0
S55325	2x1,5	9,2	137,0
S55326	3G1,5	9,6	158,0
S55327	4G1,5	10,4	188,0
S55328	5G1,5	11,0	215,0
S55329	7G1,5	12,0	263,0
S55330	12G1,5	16,0	438,0
S55331	3G2,5	10,8	213,0
S55332	4G2,5	11,9	263,0
S55333	5G2,5	12,7	305,0
S55334	7G2,5	14,3	395,0

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

G - cables with green-yellow conductor

x - cables without green-yellow conductor

Note: on customer's request other cross sections or number of cores can be produced

BITNER® 500 PUR



Drag chain cables

Highly flexible, PUR sheathed cables for drag chains, rated 300/500 V



industrial application



internal application



external application



EN 60332-1-2



high flexibility



drag chains



oil resistant
EN 60811-404



chemical resistance



UV resistance

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: U₀/U = 300/500 V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Electrical parameters:

Min. bending radius:

flexible connections: 7,5 x Ø
fixed installation: 4 x Ø

Design:

Conductors:

highly flexible, bare copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together in layers with short lay length, special wrapping of separating tape between each layer

Outer sheath:

special PUR compound, resistant to abrasion, oil, chemicals and industrial coolants, self-extinguishing and flame retardant (acc. to 60332-1-2), UV resistant; colour: grey, matt

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 5 million bending cycles in a drag chain. Suitable for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms as well as outdoors – outer sheath is UV resistant. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4600	2x0,5	5,0	35,0
SB4601	3G0,5	5,3	42,0
SB4602	3x0,5	5,3	42,0
SB4603	4G0,5	5,8	51,0
SB4604	4x0,5	5,8	51,0
SB4605	5G0,5	6,2	61,0
SB4606	5x0,5	6,2	61,0
SB4607	6G0,5	7,0	75,0
SB4608	7G0,5	7,0	80,0
SB4609	7x0,5	7,0	80,0
SB4610	8G0,5	7,7	92,0
SB4611	10G0,5	9,4	125,0
SB4612	12G0,5	9,4	135,0
SB4613	12x0,5	9,4	135,0
SB4614	14G0,5	9,8	150,0
SB4615	14x0,5	9,8	150,0
SB4616	16G0,5	10,3	170,0
SB4617	18G0,5	10,9	190,0
SB4618	19G0,5	10,9	195,0
SB4619	21G0,5	11,6	220,0
SB4620	2x0,75	5,3	40,0
SB4621	3G0,75	5,6	50,0
SB4622	3x0,75	5,6	50,0
SB4623	4G0,75	6,2	62,0
SB4624	4x0,75	6,2	62,0
SB4625	5G0,75	6,8	78,0
SB4626	5x0,75	6,8	78,0
SB4627	6G0,75	7,4	92,0

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4628	7G0,75	7,4	97,0
SB4629	7x0,75	7,4	97,0
SB4630	8G0,75	9,1	132,0
SB4631	10G0,75	10,0	155,0
SB4632	12G0,75	10,0	165,0
SB4633	12x0,75	10,0	165,0
SB4634	14G0,75	10,5	185,0
SB4635	14x0,75	10,5	185,0
SB4636	16G0,75	11,0	210,0
SB4637	18G0,75	11,8	240,0
SB4638	19G0,75	11,8	245,0
SB4639	21G0,75	12,4	268,0
SB4640	2x1,0	5,7	49,0
SB4641	3G1,0	6,1	62,0
SB4642	3x1,0	6,1	62,0
SB4643	4G1,0	6,8	78,0
SB4644	4x1,0	6,8	78,0
SB4645	5G1,0	7,4	95,0
SB4646	5x1,0	7,4	95,0
SB4647	6G1,0	8,0	112,0
SB4648	7G1,0	8,0	118,0
SB4649	7x1,0	8,0	118,0
SB4650	8G1,0	9,2	145,0
SB4651	10G1,0	10,8	186,0
SB4652	12G1,0	10,8	200,0
SB4653	12x1,0	10,8	200,0
SB4654	14G1,0	11,5	230,0
SB4655	14x1,0	11,5	230,0

BiTflex[®] 500 PUR

Highly flexible, PUR sheathed cables for drag chains, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4656	16G1,0	12,2	262,0
SB4657	18G1,0	12,8	292,0
SB4658	19G1,0	12,8	300,0
SB4659	21G1,0	13,6	335,0
SB4660	2x1,5	6,9	72,0
SB4661	3G1,5	7,3	90,0
SB4662	3x1,5	7,3	90,0
SB4663	4G1,5	8,1	113,0
SB4664	4x1,5	8,1	113,0
SB4665	5G1,5	9,1	143,0
SB4666	5x1,5	9,1	143,0
SB4667	6G1,5	9,9	170,0
SB4668	7G1,5	9,9	180,0
SB4669	7x1,5	9,9	180,0
SB4670	8G1,5	10,9	209,0

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4671	10G1,5	13,1	275,0
SB4672	12G1,5	13,1	295,0
SB4673	12x1,5	13,1	295,0
SB4674	2x2,5	8,0	105,0
SB4675	3G2,5	8,5	135,0
SB4676	3x2,5	8,5	135,0
SB4677	4G2,5	9,8	178,0
SB4678	4x2,5	9,8	178,0
SB4679	5G2,5	10,6	215,0
SB4680	5x2,5	10,6	215,0
SB4681	6G2,5	11,8	260,0
SB4682	7G2,5	11,8	280,0
SB4683	7x2,5	11,8	280,0
SB4684	8G2,5	13,0	325,0
SB4685	10G2,5	16,0	435,0
SB4686	12G2,5	16,0	475,0

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

G - cables with green-yellow conductor

x - cables without green-yellow conductor

Note: on customer's request other cross sections or number of cores can be produced

BiTflex[®] 500 CPUR



Drag chain cables

Highly flexible, screened, PUR sheathed cables for drag chains, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Operating voltage: $U_i/U_n = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: $10 \times \varnothing$
fixed installation: $5 \times \varnothing$

Design:

Conductors:

highly flexible, bare copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation:

PVC compound

Core identification:

black, number coded conductors, cables with protective

earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together in layers with short lay length, special wrapping of separating tape between each layer

Inner sheath:

PVC compound

Screen:

tinned copper wire braid, coverage $\geq 85\%$, special wrapping with separating tape beneath the screen, special reinforcing fleece tape around the screen

special PUR compound, resistant to abrasion, oil, chemicals and industrial coolants, self-extinguishing and flame retardant (acc. to 60332-1-2), UV resistant; colour: grey, matt

Outer sheath:

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 5 million bending cycles in a drag chain. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field especially in industrial environment. Suitable for flexible connections in industrial devices, technological lines and machines operating in dry and damp rooms as well as outdoors – outer sheath is UV resistant. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4700	2x0,5	6,9	70,0
SB4701	3G0,5	7,2	76,0
SB4702	4G0,5	7,9	98,0
SB4703	5G0,5	8,3	111,0
SB4704	6G0,5	9,3	132,0
SB4705	7G0,5	9,3	135,0
SB4706	8G0,5	10,0	145,0
SB4707	10G0,5	11,5	193,0
SB4708	12G0,5	11,5	207,0
SB4709	14G0,5	11,9	222,0
SB4710	16G0,5	12,4	248,0
SB4711	18G0,5	13,6	290,0
SB4712	19G0,5	13,6	293,0
SB4713	21G0,5	14,1	317,0
SB4714	24G0,5	15,3	355,0
SB4715	2x0,75	7,2	78,0
SB4716	3G0,75	7,5	90,0
SB4717	4G0,75	8,3	112,0
SB4718	5G0,75	9,1	135,0
SB4719	6G0,75	9,7	155,0
SB4720	7G0,75	9,7	160,0
SB4721	8G0,75	11,0	197,0
SB4722	10G0,75	12,1	230,0
SB4723	12G0,75	12,1	240,0
SB4724	14G0,75	12,6	265,0

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4725	16G0,75	13,7	313,0
SB4726	18G0,75	14,3	342,0
SB4727	19G0,75	14,3	348,0
SB4728	21G0,75	14,9	376,0
SB4729	24G0,75	16,6	437,0
SB4730	2x1,0	7,6	86,0
SB4731	3G1,0	8,2	108,0
SB4732	4G1,0	9,1	136,0
SB4733	5G1,0	9,7	157,0
SB4734	6G1,0	10,3	175,0
SB4735	7G1,0	10,3	182,0
SB4736	8G1,0	11,0	203,0
SB4737	10G1,0	12,9	265,0
SB4738	12G1,0	12,9	284,0
SB4739	14G1,0	14,0	328,0
SB4740	16G1,0	14,7	365,0
SB4741	18G1,0	15,3	405,0
SB4742	19G1,0	15,3	408,0
SB4743	21G1,0	16,3	452,1
SB4744	24G1,0	17,8	509,7
SB4745	2x1,5	9,2	128,0
SB4746	3G1,5	9,6	150,0
SB4747	4G1,5	10,4	180,0
SB4748	5G1,5	11,0	210,0
SB4749	6G1,5	12,0	245,0

BiTflex[®] 500 CPUR

Highly flexible, screened, PUR sheathed cables for drag chains, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4750	7G1,5	12,0	255,0
SB4751	8G1,5	13,0	290,0
SB4752	10G1,5	16,0	405,0
SB4753	12G1,5	16,0	425,0
SB4754	2G2,5	10,3	175,0
SB4755	3G2,5	10,8	208,0
SB4756	4G2,5	11,9	255,0

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB4757	5G2,5	12,7	298,0
SB4758	6G2,5	14,3	365,0
SB4759	7G2,5	14,3	385,0
SB4760	8G2,5	15,5	440,0
SB4761	10G2,5	18,5	575,0
SB4762	12G2,5	18,5	615,0

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

G - cables with green-yellow conductor

x - cables without green-yellow conductor

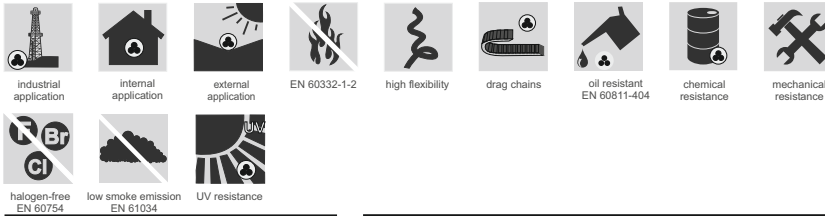
Note: on customer's request other cross sections or number of cores can be produced

BITflex® 530 PUR



Drag chain cables

Highly flexible, PUR sheathed cables for drag chains, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:
fixed installation: -40 °C to 80 °C
flexible connections: -30 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V
Test voltage (50 Hz): 3000 V
Insulation resistance (min): 100 MΩ x km

Mechanical parameters:

Min. bending radius:
flexible connections: 7,5 x Ø
fixed installation: 4 x Ø

Design:

Conductors: highly flexible, bare copper conductors, multi-stranded class 6 acc. to EN 60228
Insulation: special halogen-free TPE
Core identification: black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)
Core arrangement: cores twisted together in layers with short lay length, special wrapping of separating tape between each layer
Outer sheath: special PUR compound, resistant to abrasion, oil, chemicals, industrial coolants, flame retardant (as per EN 60332-1-2), halogen-free and UV resistant; colour: grey, matt

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 10 million bending cycles in a drag chain. Suitable for flexible installations in dry and damp rooms as well as outdoors – outer sheath is UV resistant. Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3960	2x0,5	5,6	36,0
SB3961	3G0,5	5,9	43,0
SB3962	4G0,5	6,4	52,0
SB3963	5G0,5	6,9	61,0
SB3964	6G0,5	7,4	71,0
SB3965	7G0,5	7,9	80,0
SB3966	12G0,5	9,6	120,0
SB3967	18G0,5	11,0	169,0
SB3968	20G0,5	11,5	185,0
SB3969	25G0,5	13,2	229,0
SB3970	30G0,5	13,6	265,0
SB3971	36G0,5	14,6	312,0
SB3972	2x0,75	6,0	43,0
SB3973	3G0,75	6,3	52,0
SB3974	4G0,75	6,7	64,0
SB3975	5G0,75	7,3	75,0
SB3976	7G0,75	8,4	99,0
SB3977	12G0,75	10,2	151,0
SB3978	18G0,75	12,2	217,0
SB3979	25G0,75	14,1	292,0
SB3980	36G0,75	15,7	400,0
SB3981	2 x 1,0	6,7	54,0
SB3982	3G1,0	7,0	66,0
SB3983	4G1,0	7,6	81,0

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3984	5G1,0	8,1	96,0
SB3985	7G1,0	9,4	126,0
SB3986	12G1,0	11,4	192,0
SB3987	18G1,0	13,2	271,0
SB3988	25G1,0	15,7	369,0
SB3989	30G1,0	16,3	429,0
SB3990	36G1,0	17,5	507,0
SB3991	2x1,5	7,3	69,0
SB3992	3G1,5	7,5	85,0
SB3993	4G1,5	8,2	105,0
SB3994	5G1,5	8,8	125,0
SB3995	7G1,5	10,5	168,0
SB3996	12G1,5	12,3	257,0
SB3997	18G1,5	15,3	376,0
SB3998	25G1,5	17,7	508,0
SB3999	36G1,5	19,8	702,0
SB4000	3G2,5	9,0	131,0
SB4001	4G2,5	9,7	164,0
SB4002	5G2,5	10,6	197,0
SB4003	7G2,5	12,4	265,0
SB4004	12G2,5	15,2	418,0
SB4005	18G2,5	18,4	611,0
SB4006	25G2,5	21,3	831,0

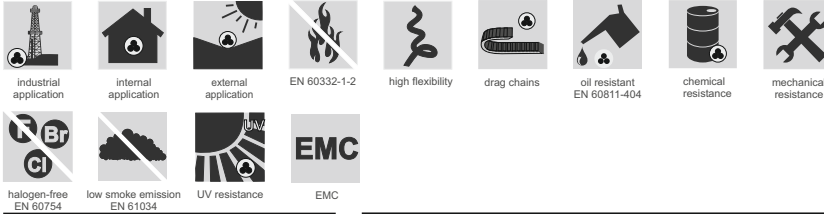
*Outer diameter tolerance: +/-5%
Cable Factory BITNER reserves the right to modify specifications without prior notification
G - cables with green-yellow conductor
x - cables without green-yellow conductor
Note: on customer's request other cross sections or number of cores can be produced

BITNER® 530 CPUR



Drag chain cables

Highly flexible, screened, PUR sheathed cables for drag chains, rated 300/500 V



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -30 °C to 80 °C

Electrical parameters:

Operating voltage: $U_0/U = 300/500$ V

Test voltage (50 Hz): 3000 V

Insulation resistance (min): 100 MΩ x km

Mechanical parameters:

Min. bending radius:

flexible connections: 10 x Ø
fixed installation: 5 x Ø

Design:

Conductors:

highly flexible, bare copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation:

special halogen-free TPE

Core identification:

black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Core arrangement:

cores twisted together in layers with short lay length, special wrapping of separating tape between each layer special halogen-free TPE

Inner sheath:

tinned copper wire braid, coverage ≥85%, special

Screen:

wrapping with separating tape beneath the screen, special reinforcing fleece tape around the screen special PUR compound, resistant to abrasion, oil, chemicals, industrial coolants, flame retardant (as per 60332-1-2), halogen-free and UV resistant; colour: grey, matt

Outer sheath:

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 10 million bending cycles in a drag chain. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field especially in industrial environment. Suitable for flexible installations in dry and damp rooms as well as outdoors – outer sheath is UV resistant. Cables classified according to EN 50575 (CPR).

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3900	2x0,5	6,7	70,0	SB3921	2 x1,0	7,7	100,0
SB3901	3G0,5	7,0	78,0	SB3922	3G1,0	8,0	110,0
SB3902	4G0,5	7,5	90,0	SB3923	4G1,0	8,6	130,0
SB3903	5G0,5	8,0	105,0	SB3924	5G1,0	9,2	155,0
SB3904	6G0,5	8,5	115,0	SB3925	7G1,0	10,0	185,0
SB3905	7G0,5	8,5	125,0	SB3926	12G1,0	12,6	270,0
SB3906	12G0,5	10,7	180,0	SB3927	18G1,0	14,4	370,0
SB3907	18G0,5	12,3	240,0	SB3928	25G1,0	17,0	495,0
SB3908	20G0,5	12,8	260,0	SB3929	30G1,0	17,5	560,0
SB3909	25G0,5	14,3	315,0	SB3930	36G1,0	18,9	655,0
SB3910	30G0,5	14,7	355,0	SB3931	2x1,5	8,3	105,0
SB3911	36G0,5	16,0	410,0	SB3932	3G1,5	8,7	125,0
SB3912	2x0,75	7,3	80,0	SB3933	4G1,5	9,5	150,0
SB3913	3G0,75	7,6	90,0	SB3934	5G1,5	10,2	176,0
SB3914	4G0,75	8,0	105,0	SB3935	7G1,5	11,7	240,0
SB3915	5G0,75	8,6	120,0	SB3936	12G1,5	13,9	345,0
SB3916	7G0,75	9,9	155,0	SB3937	18G1,5	16,2	475,0
SB3917	12G0,75	11,5	225,0	SB3938	25G1,5	19,1	640,0
SB3918	18G0,75	13,3	300,0	SB3939	36G1,5	21,2	850,0
SB3919	25G0,75	15,6	395,0	SB3940	3G2,5	10,2	180,0
SB3920	36G0,75	17,3	515,0	SB3941	4G2,5	11,0	216,0

BiTflex[®] 530 CPUR

Highly flexible, screened, PUR sheathed cables for drag chains, rated 300/500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3942	5G2,5	11,8	258,0
SB3943	7G2,5	13,8	340,0
SB3944	12G2,5	16,6	520,0

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
SB3945	18G2,5	19,3	740,0
SB3946	25G2,5	23,0	1000,0

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

G - cables with green-yellow conductor

x - cables without green-yellow conductor

Note: on customer's request other cross sections or number of cores can be produced

BiTflex[®] 510 encoder

Connecting cable between servo controller and encoder/resolver for application in drag chains



Drag chain cables



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C up to 80 °C
flexible connections: -30 °C up to 80 °C

Electrical parameters:

Operating voltage:

signal cables: 30 V AC/DC
Test voltage (50 Hz): 500 V

Mechanical parameters:

Min. bending radius:

flexible connections: 8 x Ø
fixed installation: 4 x Ø

Design:

Conductors:

flexible, tinned copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation:

special halogen-free TPE

Screen:

tinned copper wire braid

Outer sheath:

special PUR compound (11Y), resistant to oils and industrial coolants, low adhesive; colour: green

Application:

Highly flexible servomotor and feedback cables for connections between servo controller and encoder. Intended especially for use in power chains. Designed and tested to withstand at least 10 million bending cycles in a drag chain. Cables are oil, wear and tear resistant, halogen-free and cold flexible. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Core marking	Outer diameter* [mm]	Approx. cable weight [kg/km]
SB5781	4x2x0,34+4x0,5	orange, red, purple, blue, brown, black, yellow, green, white-red, white-yellow, black-white, white-blue	9,2	125

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

Note: on customer's request other cross sections or number of cores can be produced

BiTflex® 510 servo



Drag chain cables

Connecting cable between servo controller and motor for application in drag chains



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -30 °C to 80 °C

Electrical parameters:

Operating voltage:

power cores: $U_i/U = 600/1000$ V
control cores: 24 V AC/DC

Test voltage (50 Hz):

power cores (50 Hz): 4000 V
control cores (50 Hz): 1000 V

Mechanical parameters:

Min. bending radius:

flexible connections:
up to 16 mm²: 7,5 x Ø
from 25 mm² up: 10 x Ø
fixed installations: 4 x Ø

Design:

Conductors:

highly flexible, copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation:

special halogen-free TPE

Screen:

tinned copper wire braid

Outer sheath:

special PUR compound, resistant to oils and industrial coolants, low adhesive; colour: orange

Application:

Highly flexible servomotor and feedback cables for connections between servo controller and motor. Intended especially for use in power chains. Designed and tested to withstand at least 10 million bending cycles in a drag chain. Cables are oil, wear and tear resistant, halogen-free and cold flexible. Cables classified according to EN 50575 (CPR).

motor cables

Cat. no.	n x mm ²	Core marking	Outer diameter* [mm]	Approx. cable weight [kg/km]
SB5790	4G1,5		9,2	136
SB5791	4G2,5	U1	11,0	211
SB5792	4G4	V2	12,8	299
SB5793	4G6	W3	14,7	418
SB5794	4G10	green-yellow	17,3	611
SB5795	4G16		20,2	850

servo cables

Cat. no.	n x mm ²	Core marking	Outer diameter* [mm]	Approx. cable weight [kg/km]
SB5800	4G1,5+(2x1,5)	Power cores:	11,8	215
SB5801	4G2,5+(2x1,5)	U1	13,9	300
SB5802	4G4+(2x1,5)	V2	15,3	380
SB5803	4G6+(2x1,5)	W3	16,9	487
SB5804	4G10+(2x1,5)	green-yellow	18,9	665
SB5805	4G16+(2x1,5)	Control cores:	22,0	951
SB5806	4G25+(2x1,5)	BR1	26,4	1355
		BR2		

*Outer diameter tolerance: +/- 5%

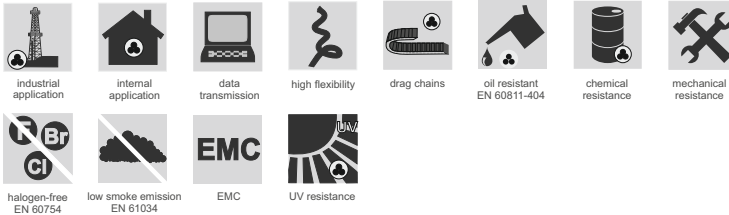
Cable Factory BITNER reserves the right to modify specifications without prior notification
Note: on customer's request other cross sections or number of cores can be produced

BiT L2 BUS High Flex

LiO2YS(St)C11Y, data transmission cables for the Profibus network



Drag chain cables



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -40 °C to 80 °C
flexible connections: -30 °C to 80 °C

Electrical parameters:

Wave impedance: 150 Ω +/-10%
Conductor loop resistance (max.): 69,1 Ω/km
Insulation resistance (min.): 1 GΩ x km
Capacitance: 35 nF/km
Test voltage: 1500 V
Wave attenuation at a frequency of:
4 MHz = 2,5 dB/100 m
16 MHz = 5,2 dB/100 m

Mechanical parameters:

Min. bending radius:

fixed installation: 5 x Ø
flexible connections: 10 x Ø

Design:

Conductors:

multi-stranded, bare copper conductors 1x2x0,64 mm (AWG24/19)

Insulation:

foamed polyethylene with a thin external layer of solid polyethylene

Core identification:

red and green

Core arrangement:

cores twisted together with two fillers

Screens:

aluminium backed polyester tape and tinned copper wire braid

Outer sheath:

special PUR with increased mechanical and chemical resistance; colour: purple

Application:

Cables designed for connecting very flexible applications and transmission of analogue and digital signals. Paired construction ensures good symmetry with respect to earth, while double screen protects against interference from external electromagnetic fields, which guarantees very good transmission quality. Cables may be used in dry and damp rooms and are suitable especially for continuous bending in drag chains designed and tested to withstand minimum 5 million bending cycles. Cables classified according to EN 50575 (CPR).

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approx. cable weight [kg/km]
EB0018	1x2x0,64	8,1	78

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

Note: on customer's request other cross sections or number of cores can be produced

BiT CAN-BUS Drag Chain

RoHS 2015/863/EU



LVD 2014/35/EU

CPR

CPR 305/2011

24 months warranty

Drag chain cables

Data transmission cables for CAN-BUS network, designed for drag chain operations



industrial application



internal application



external application



data transmission



drag chains



oil resistant
EN 60811-404



chemical resistance



mechanical resistance



halogen-free
EN 60754



low smoke emission
EN 61034



EMC



UV resistance

Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -50 °C to 80 °C
flexible connections: -40 °C to 80 °C

Electrical parameters:

Wave impedance: 120 Ω +/-15%

Conductor resistance (max.): 53 Ω/km

Insulation resistance (min.): 5 GΩ x km

Capacitance: 40 nF/km

Test voltage: 1000 V

Mechanical parameters:

Min. bending radius:

fixed installation: 5 x Ø
flexible connections: 10 x Ø

Design:

Conductors:

very finely stranded bare copper wires (42x0,1mm)

Insulation:

foamed polyethylene with a thin external layer of solid polyethylene

Conductor colours:

white and brown

Core arrangement:

cores twisted together

Wrapping:

special fleece tape

Screen:

tinned copper wire braid

Outer sheath:

special PUR with enhanced resistance to abrasion, chemicals, resistant to oil and industrial coolants, UV resistant; colour: purple

Application:

BiT CAN-BUS Drag Chain cable for data transmission in CAN (Control Area Network) is designed for continuous operation in drag chains withstanding at least 10mln bending cycles within a chain. Cable suitable both for indoor and outdoor applications. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approx. cable weight [kg/km]
EB0050	1x2x0,34	7,0	60

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

Chapter VII

Fire resistant cables

NHXH FE180/PH90/E90 MICA	208
NHXCH FE180/PH90/E90 MICA	211
(N)HXH FE180/E90 CERAMIC	213
(N)HXCH FE180/E90 CERAMIC	216
BiTflame®AS FE180/E90	218
BiTflame®AS(St) FE180/E90	220
BiTflame®A	222
BiTflame®A(St)	223
BiTflame®S FE180/E90	224
BiTflame®S(St) FE180/E90	226

NHXX FE180/PH90/E90 MICA



Fire resistant, halogen free power cable



industrial application



internal application



EN 60332-1-2



EN 60332-3-24



halogen-free
EN 60754



low smoke emission
EN 61034



FE180
insulation
resistance
to fire 180 min.



PH90 fire
integrity function



E90 fire
integrity function



sprinkler
zones*

Technical data:

Thermal parameters:

Temperature range:

fixed installation: -30 °C to 90 °C
min. installation temp: -5 °C

Electrical parameters:

Permissible conductor operating temperature: 90 °C

Permissible conductor temperature during short circuit: 250 °C

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage: 4 kV

Conductor resistance (at 20 °C): acc. to EN 60288 cl. 1 and 2, IEC 60288 cl. 1 and 2

Mechanical parameters:

Minimum bending radius:

single core cables: $15 \times \varnothing$

multi core cables: $12 \times \varnothing$

Design:

Conductors:

bare copper conductor, solid (cl. 1) or stranded (cl. 2) according to EN 60228 and IEC 60228

Insulation:

mica tape wrapping and cross-linked polymer HX11 acc. to DIN VDE 0266

Core colors:

acc. to information - chapter - Technical Data

Inner sheath:

special halogen-free compound

Outer sheath:

halogen-free polymer compound HM4

acc. to DIN VDE 207 p.24; colour: orange

Application:

Fire resistant power and control cables have E90 fire integrity function which means the assurance of power supply or control under fire conditions for 90 minutes. They are intended for use in buildings with increased fire safety requirements due to high concentration of people, material and cultural assets of high value (sky scrapers, hospitals, shopping centres, tunnels, museums, cinemas, theatres). Cables can be used for power supply or control (lighting, lifts, fire-fighting equipment, pumps). They can be used in fixed installations inside buildings. In case of outdoor application cables should be secured against UV radiation and the external factors. Cables with improved fire characteristic E90 must be installed on the supporting systems tested according to DIN 4102-12.

Tests:

Flame propagation test for a single insulated cable:

Flame propagation test for vertically-mounted bunched cables:

Test on corrosive gases emitted during burning:

Smoke density emission during burning:

Insulation resistance to long term fire exposure Fe180:

Fire integrity function of cable support system E90:

Fire integrity function of cable installation (Ph90):

*Water resistance under fire conditions:

EN 60332-1-2, IEC 60332-1-2, VDE 0482-332-1

EN 60332-3-24, IEC 60332-3-24, VDE 0482-332-3-24

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

PN-IEC 60331-21, IEC 60331-21, VDE 0472-814

DIN 4102-12

EN 50200

EN 50200 Annex E (applies to cables with a diameter not exceeding 20 mm)

Cable characteristics:

- fire resistant (fire retardant, self extinguishing, flame retardant, without self-ignition properties)
- halogen-free
- flame retardant
- no corrosive gases
- low smoke emission
- increased insulation resistance (FE180)
- fire integrity function (E90)
- low fire load (calorific value)

NHXH FE180/PH90/E90 MICA

Fire resistant, halogen free power cable

cables without green-yellow core NHXH-O FE180/PH90/E90 MICA

Cat. no.	n x mm ²	Outer diameter** [mm]	Approximate cable weight [kg/km]	Cu [kg/km]	Cat. no.	n x mm ²	Outer diameter** [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
B61004	1x10 RE	8,9	188	96,0	B61130	5x1,5 RE	15,8	354	72,0
B61005	1x16 RM	10,5	278	153,6	B61131	5x2,5 RE	16,8	430	120,0
B61006	1x25 RM	12,1	391	240,0	B61132	5x4 RE	18,0	536	192,0
B61007	1x35 RM	13,2	497	336,0	B61133	5x6 RE	19,4	667	288,0
B61008	1x50 RM	15,5	674	480,0	B61134	5x10 RE	21,6	920	480,0
B61009	1x70 RM	16,9	882	672,0	B61135	5x16 RM	25,8	1382	768,0
B61010	1x95 RM	19,0	1178	912,0	B61136	5x25 RM	30,4	2023	1200,0
B61011	1x120 RM	20,7	1410	1152,0	B61137	5x35 RM	34,0	2644	1680,0
B61012	1x150 RM	23,3	1789	1440,0	B61138	5x50 RM	40,1	3658	2400,0
B61013	1x185 RM	25,0	2164	1776,0	B61139	5x70 RM	44,2	4769	3360,0
B61014	1x240 RM	28,4	2739	2304,0	B61140	5x95 RM	49,7	6409	4560,0
B61085	1x300 RM	30,9	3311	2880,0	B61141	5x120 RM	54,8	7790	5760,0
B61177	1x400 RM	34,4	4169,0	3840,0	B61142	5x150 RM	61,8	9951	7200,0
B61187	1x500 RM	39,3	5347,2	4800,0	B61143	5x185 RM	66,5	11955	8880,0
B61084	3x1,5 RE	13,6	259	43,2	B61144	7x1,5 RE	16,9	417	100,8
B61107	3x2,5 RE	14,4	308	72,0	B61145	7x2,5 RE	18,1	513	168,0
B61108	3x4 RE	15,4	377	115,2	B61146	7x4 RE	19,5	649	268,8
B61109	3x6 RE	16,5	461	172,8	B60992	7x6 RE	20,7	818,0	403,2
B61110	3x10 RE	18,2	623	288,0	B60993	7x10 RE	23,1	1147,2	672,0
B61111	3x16 RM	21,6	921	460,8	B60994	7x16 RM	27,9	1731,7	1075,2
B61112	3x25 RM	25,1	1318	720,0	B60995	7x25 RM	33,6	2615,4	1680,0
B61113	3x35 RM	27,7	1693	1008,0	B61147	10x1,5 RE	20,8	557	144,0
B61114	3x50 RM	32,8	2355	1440,0	B61148	10x2,5 RE	22,3	690	240,0
B61115	3x70 RM	35,8	3032	2016,0	B61149	10x4 RE	24,2	881	384,0
B61116	3x95 RM	40,2	4054	2736,0	B61150	12x1,5 RE	21,4	625	172,8
B61117	3x120 RM	44,1	4905	3456,0	B61151	12x2,5 RE	23,0	781	288,0
B61118	3x150 RM	49,7	6258	4320,0	B61152	12x4 RE	24,9	1005	460,8
B61119	3x185 RM	53,9	7565	5328,0	B61153	14x1,5 RE	22,4	701	201,6
B61087	3x240 RM	61,1	9646	6912,0	B60996	16x1,5 RE	23,5	787,1	230,4
B61080	4x1,5 RE	14,6	304	57,6	B61154	14x2,5 RE	24,1	882	336,0
B61120	4x2,5 RE	15,5	365	96,0	B61191	16x2,5 RE	25,3	990,3	384,0
B61121	4x4 RE	16,7	452	153,6	B61155	14x4 RE	26,1	1140	537,6
B61122	4x6 RE	17,9	559	230,4	B61156	19x1,5 RE	24,7	874	273,6
B61083	4x10 RE	19,8	765	384,0	B61157	19x2,5 RE	26,6	1111	456,0
B61088	4x16 RM	23,6	1141	614,4	B61159	24x1,5 RE	28,7	1079	345,6
B61123	4x25 RM	27,6	1651	960,0	B61160	24x2,5 RE	31,4	1405	576,0
B61124	4x35 RM	30,6	2136	1344,0	B60997	26x2,5 RE	31,5	1525,9	624,0
B61082	4x50 RM	36,3	2974	1920,0	B61161	30x1,5 RE	30,4	1283	432,0
B61125	4x70 RM	39,6	3847	2688,0	B60998	48x1,5 RE	37,5	1964,3	691,2
B61126	4x95 RM	44,8	5192	3648,0	B61162	30x2,5 RE	33,2	1679	720,0
B61127	4x120 RM	49,0	6252	4608,0	B60999	48x2,5 RE	40,8	2551,7	1152,0
B61081	4x150 RM	55,7	8053	5760,0					
B61128	4x185 RM	59,8	9666	7104,0					
B61129	4x240 RM	67,9	12332	9216,0					

NHXX FE180/PH90/E90 MICA

Fire resistant, halogen free power cable

cables with green-yellow core NHXX-J FE180/PH90/E90 MICA

Cat. no.	n x mm ²	Outer diameter** [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
B60985	1x10 RE	8,9	188	96,0
B61178	1x16 RM	10,5	278	153,6
B60986	1x25 RM	12,1	391	240,0
B60987	1x35 RM	13,2	497	336,0
B60988	1x50 RM	15,5	674	480,0
B60989	1x70 RM	16,9	882	672,0
B60990	1x95 RM	19,0	1178	912,0
B61086	1x120 RM	20,7	1410	1152,0
B61189	1x150 RM	23,3	1789	1440,0
B60991	1x185 RM	25,0	2164	1776,0
B61179	1x240 RM	28,4	2739	2304,0
B61180	1x300 RM	30,9	3311	2880,0
B61186	1x400 RM	34,4	4169,0	3840,0
B61192	1x500 RM	39,3	5347,2	4800,0
B61022	3x1,5 RE	13,6	259	43,2
B61023	3x2,5 RE	14,4	308	72,0
B61024	3x4 RE	15,4	377	115,2
B61025	3x6 RE	16,5	461	172,8
B61026	3x10 RE	18,2	623	288,0
B61027	3x16 RM	21,6	921	460,8
B61028	3x25 RM	25,1	1318	720,0
B61029	3x35 RM	27,7	1693	1008,0
B61030	3x50 RM	32,8	2355	1440,0
B61031	3x70 RM	35,8	3032	2016,0
B61032	3x95 RM	40,2	4054	2736,0
B61033	3x120 RM	44,1	4905	3456,0
B61034	3x150 RM	49,7	6258	4320,0
B61035	3x185 RM	53,9	7565	5328,0
B61036	3x240 RM	61,1	9646	6912,0
B61037	4x1,5 RE	14,6	304	57,6
B61038	4x2,5 RE	15,5	365	96,0
B61039	4x4 RE	16,7	452	153,6
B61040	4x6 RE	17,9	559	230,4
B61041	4x10 RE	19,8	765	384,0
B61042	4x16 RM	23,6	1141	614,4
B61043	4x25 RM	27,6	1651	960,0
B61044	4x35 RM	30,6	2136	1344,0
B61045	4x50 RM	36,3	2974	1920,0
B61046	4x70 RM	39,6	3847	2688,0
B61047	4x95 RM	44,8	5192	3648,0
B61048	4x120 RM	49,0	6252	4608,0
B61049	4x150 RM	55,7	8053	5760,0
B61050	4x185 RM	59,8	9666	7104,0
B61051	4x240 RM	67,9	12332	9216,0
B61052	5x1,5 RE	15,8	354	72,0
B61053	5x2,5 RE	16,8	430	120,0
B61054	5x4 RE	18,0	536	192,0

Cat. no.	n x mm ²	Outer diameter** [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
B61055	5x6 RE	19,4	667	288,0
B61056	5x10 RE	21,6	920	480,0
B61057	5x16 RM	25,8	1382	788,0
B61058	5x25 RM	30,4	2023	1200,0
B61059	5x35 RM	34,0	2644	1680,0
B61060	5x50 RM	40,1	3658	2400,0
B61061	5x70 RM	44,2	4769	3360,0
B61062	5x95 RM	49,7	6409	4560,0
B61063	5x120 RM	54,8	7790	5760,0
B61064	5x150 RM	61,8	9951	7200,0
B61065	5x185 RM	66,5	11955	8880,0
B61066	7x1,5 RE	16,9	417	100,8
B61067	7x2,5 RE	18,1	513	168,0
B61092	7x4 RE	19,5	649	268,8
B61176	7x6 RE	20,7	818,0	403,2
B61193	7x10 RE	23,1	1147,2	672,0
B61194	7x16 RM	27,9	1731,7	1075,2
B61195	7x25 RM	33,6	2615,4	1680,0
B61068	10x1,5 RE	20,8	557	144,0
B61069	10x2,5 RE	22,3	690	240,0
B61093	10x4 RE	24,2	881	384,0
B61070	12x1,5 RE	21,4	625	172,8
B61071	12x2,5 RE	23,0	781	288,0
B61094	12x4 RE	24,9	1005	460,8
B61072	14x1,5 RE	22,4	701	201,6
B61196	16x1,5 RE	23,5	787,1	230,4
B61073	14x2,5 RE	24,1	882	336,0
B61190	16x2,5 RE	25,3	990,3	384,0
B61095	14x4 RE	26,1	1140	537,6
B61074	19x1,5 RE	24,7	874	273,6
B61075	19x2,5 RE	26,6	1111	456,0
B61096	24x1,5 RE	28,7	1079	345,6
B61076	24x2,5 RE	31,4	1405	576,0
B61197	26x2,5 RE	31,5	1525,9	624,0
B61078	30x1,5 RE	30,4	1283	432,0
B61198	48x1,5 RE	37,5	1964,3	691,2
B61079	30x2,5 RE	33,2	1679	720,0
B61199	48x2,5 RE	40,8	2551,7	1152,0
B61097	3x25+1x16RM	27,6	1583	873,6
B61098	3x35+1x16RM	30,6	1999	1161,6
B61099	3x50+1x25RM	36,3	2811	1680,0
B61100	3x70+1x35RM	39,6	3613	2352,0
B61101	3x95+1x50RM	44,8	4844	3216,0
B61102	3x120+1x70RM	49,0	5897	4128,0
B61103	3x150+1x70RM	55,7	7461	4992,0
B61104	3x185+1x95RM	59,8	9017	6240,0
B61105	3x240+1x120RM	67,9	11474	8064,0

RE - round conductor, single-wire

RM - round conductor, multi-wire

**Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

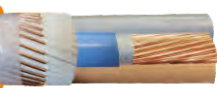
Note: on customer's request other cross sections or number of cores can be produced

NHXCH FE180/PH90/E90 MICA

Fire resistant, halogen-free power cable with concentric conductor



Fire resistant cables



industrial application

internal application

EN 60332-1-2

EN 60332-3-24

halogen-free EN 60754

low smoke emission EN 61034

FE180 insulation resistance to fire 180 min.

PH90 fire integrity function

E90 fire integrity function

sprinkler zones*

Technical data:

Thermal parameters:

Temperature range:

fixed installation: -30 °C to 90 °C
min. installation temp: -5 °C

Electrical parameters:

Permissible conductor operating temperature: 90 °C

Permissible conductor temperature during short circuit: 250 °C

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage: 4 kV

Conductor resistance (at 20 °C): acc. to EN 60288 cl. 1 and 2, IEC 60288 cl. 1 and 2

Mechanical parameters:

Minimum bending radius: $15 \times \varnothing$

Design:

Conductors:

bare copper conductor, solid (cl. 1) or stranded (cl. 2) according to EN 60228 and IEC 60228

Insulation:

mica tape wrapping and cross linked polymer HX11 acc. to DIN VDE 0266

Core colors:

acc. to information - chapter - Technical Data

Inner sheath:

special halogen-free compound

Concentric conductor:

copper wires over the inner sheath with helically applied copper tape

Outer sheath:

halogen-free polymer compound HM4 acc. to DIN VDE 207 p.24; colour: orange

Application:

Fire resistant power and control cables have E90 fire integrity function which means the assurance of power supply or control under fire conditions for 90 minutes. They are intended for use in buildings with increased fire safety requirements due to high concentration of people, material and cultural assets of high value (sky scrapers, hospitals, shopping centres, tunnels, museums, cinemas, theatres). Cables can be used for power supply or control (lighting, lifts, fire-fighting equipment, pumps). They can be used in fixed installations inside buildings. In case of outdoor application cables should be secured against UV radiation and the external factors. Cables with improved fire characteristic E90 must be installed on the supporting systems tested according to DIN 4102-12.

Tests:

Flame propagation test for a single insulated cable:

Flame propagation test for vertically-mounted bunched cables:

Test on corrosive gases emitted during burning:

Smoke density emission during burning:

Insulation resistance to long term fire exposure Fe180:

Fire integrity function of cable support system E90:

Fire integrity function of cable installation (Ph90):

*Water resistance under fire conditions:

EN 60332-1-2, IEC 60332-1-2, VDE 0482-332-1

EN 60332-3-24, IEC 60332-3-24, VDE 0482-332-3-24

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

PN-IEC 60331-21, IEC 60331-21, VDE 0472-814

DIN 4102-12

EN 50200

EN 50200 Annex E (applies to cables with a diameter not exceeding 20 mm)

Cable characteristics:

- fire resistant (fire retardant, self extinguishing, flame retardant, without self-ignition properties)
- halogen-free
- flame retardant
- no corrosive gases
- low smoke emission
- increased insulation resistance (FE180)
- fire integrity function (E90)
- low fire load (calorific value)

NHXCH FE180/PH90/E90 MICA

Fire resistant, halogen-free power cable with concentric conductor

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
B61438	2x1,5RE/1,5	14,4	265,0
B61439	2x2,5RE/2,5	15,4	313,6
B61440	2x4RE/4	16,5	385,8
B61441	2x6RE/6	17,9	471,3
B61442	2x10RE/10	19,9	638,4
B61443	2x16RM/16	23,0	932,6
B61444	2x25RM/16	26,4	1250,3
B61400	3x1,5RE/1,5	15,0	292,3
B61401	3x2,5RE/2,5	16,0	350,4
B61402	3x4RE/4	17,2	436,5
B61403	3x6RE/6	18,7	539,9
B61404	3x10RE/10	20,8	743,0
B61405	3x16RM/16	24,2	1097,8
B61406	3x25RM/16	27,9	1504,9
B61407	3x35RM/16	30,3	1891,2
B61408	3x50RM/25	35,9	2599,1
B61425	3x70RM/35	39,4	3382,3
B61426	3x95RM/50	44,4	4516,7
B61427	3x120RM/70	49,1	5598,1
B61428	3x150RM/70	54,4	6960,9
B61445	3x185RM/95	58,6	8463,6
B61446	3x240RM/120	66,5	10840,0
B61409	4x1,5RE/1,5	16,0	338,0
B61410	4x2,5RE/2,5	17,1	408,7
B61411	4x4RE/4	18,4	513,0
B61412	4x6RE/6	20,0	639,1
B61413	4x10RE/10	22,3	886,8
B61414	4x16RM16	26,1	1320,7

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
B61415	4x25RM/16	30,5	1848,6
B61416	4x35RM/16	33,2	2338,9
B61417	4x50RM/25	39,3	3216,4
B61429	4x70RM/35	43,2	4197,7
B61430	4x95RM/50	49,3	5680,8
B61431	4x120RM/70	54,0	6949,5
B61447	4x150RM/70	59,5	8760,9
B61424	4x185RM/95	64,5	10634,1
B61448	4x240RM/120	73,3	13533,1
B61418	7x1,5RE/2,5	18,5	463,9
B61419	7x2,5RE/2,5	19,6	561,5
B61449	7x4RE/4	21,2	714,2
B61420	10x1,5RE/2,5	22,1	609,3
B61421	10x2,5RE/4	23,8	757,2
B61450	10x4RE/6	25,9	967,4
B61422	12x1,5RE/2,5	22,7	678,3
B61423	12x2,5RE/4	24,5	851,0
B61451	12x4RE/6	26,6	1093,2
B61452	14x1,5RE/2,5	23,7	757,4
B61453	14x2,5RE/4	25,6	952,9
B61454	14x4RE/6	27,9	1237,9
B61432	19x1,5RE/4	26,2	946,1
B61455	19x2,5RE/6	28,4	1211,5
B61456	19x4RE/10	31,3	1609,8
B61435	24x1,5RE/6	30,5	1183,8
B61436	24x2,5RE/10	33,8	1576,9
B61457	30x1,5RE/6	32,2	1392,8
B61458	30x2,5RE/10	35,6	1859,4

RE - round conductor, single-wire
RM - round conductor, multi-wire

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

Note: on customer's request other cross sections or number of cores can be produced

(N)HXH FE180/E90 CERAMIC



Fire resistant cables

Fire resistant, halogen free power cable



Technical data:

Thermal parameters:

Temperature range:
fixed installation: -30 °C to 90 °C
min. installation temp: -5 °C

Electrical parameters:

Permissible conductor operating temperature: 90 °C
Permissible conductor temperature during short circuit: 250 °C
Operating voltage: $U_0/U = 0,6/1$ kV
Test voltage: 4 kV
Conductor resistance (at 20 °C): acc. to EN 60288 cl. 1 and 2, IEC 60288 cl. 1 and 2

Mechanical parameters:

Minimum bending radius:
single core cables: 15 x Ø
multi core cables: 12 x Ø

Design:

Cores: bare copper conductor, solid (cl. 1) or stranded (cl. 2) according to EN 60228 and IEC 60228
Insulation: special ceramic silicone rubber
Core colors: acc. to information - chapter - Technical Data
Inner sheath: special halogen-free compound
Outer sheath: halogen-free polymer compound HM4 acc. to DIN VDE 207 p.24; colour: orange

Application:

Fire resistant power and control cables have E90 fire integrity function which means the assurance of power supply or control under fire conditions for 90 minutes. They are intended for use in buildings with increased fire safety requirements due to high concentration of people, material and cultural assets of high value (sky scrapers, hospitals, shopping centres, tunnels, museums, cinemas, theatres). Cables can be used for power supply or control (lighting, lifts, fire-fighting equipment, pumps). They can be used in fixed installations inside buildings. In case of outdoor application cables should be secured against UV radiation and the external factors. Cables with improved fire characteristic E90 must be installed on the supporting systems tested according to DIN 4102-12.

Tests:

Flame propagation test for a single insulated cable:	EN 60332-1-2, IEC 60332-1-2, VDE 0482-332-1
Flame propagation test for vertically-mounted bunched cables:	EN 60332-3-24, IEC 60332-3-24, VDE 0482-332-3-24
Test on corrosive gases emitted during burning:	EN 60754-2, IEC 60754-2, VDE 0482-754-2
Smoke density emission during burning:	EN 61034-2, IEC 61034-2, VDE 0482-1034-2
Insulation resistance to long term fire exposure FE180:	PN-IEC 60331-21, IEC 60331-21, VDE 0472-814
Fire integrity function of cable support system E90:	DIN 4102-12
Fire integrity function of cable installation (PH90):	EN 50200

Cable characteristics:

- fire resistant (fire retardant, self extinguishing, flame retardant, without self-ignition properties)
- halogen-free
- flame retardant
- no corrosive gases
- low smoke emission
- increased insulation resistance (FE180)
- fire integrity function (E90)
- low fire load (calorific value)

(N)HXH FE180/E90 CERAMIC

Fire resistant, halogen free power cable

cables without green-yellow core (N)HXH-O FE180/E90 CERAMIC

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
B60200	1x1,5 RE	6,2	81
B60201	1x2,5 RE	6,5	94
B60202	1x4 RE	7,0	114
B60203	1x6 RE	7,5	138
B60204	1x10 RE	8,3	185
B60205	1x16 RM	9,6	274
B60206	1x25 RM	11,3	379
B60207	1x35 RM	12,4	484
B60208	1x50 RM	14,2	648
B60209	1x70 RM	15,6	853
B60210	1x95 RM	17,8	1144
B60211	1x120 RM	19,4	1373
B60212	1x150 RM	21,9	1755
B60213	1x185 RM	23,6	2125
B60214	1x240 RM	27,3	2671
B60285	1x300 RM	29,2	3234
B60215	2x1,5 RE	11,3	229
B60216	2x2,5 RE	12,1	268
B60217	2x4 RE	13,2	323
B60218	2x6 RE	14,2	388
B60219	2x10 RE	15,8	513
B60220	2x16 RM	18,6	753
B60221	2x25 RM	22,2	1040
B60286	2x35 RM	24,3	1319
B60287	2x50 RM	28,1	1781
B60288	2x70 RM	31,1	2300
B60289	2x95 RM	35,6	3066
B60290	2x120 RM	38,8	3700
B60300	3x1,5 RE	11,8	254
B60301	3x2,5 RE	12,6	302
B60302	3x4 RE	13,8	370
B60303	3x6 RE	14,9	453
B60304	3x10 RE	16,8	613
B60305	3x16 RM	19,6	910
B60306	3x25 RM	23,5	1277
B60307	3x35 RM	25,7	1641
B60308	3x50 RM	29,9	2254
B60309	3x70 RM	33,1	2920
B60310	3x95 RM	38,0	3922
B60311	3x120 RM	41,6	4759
B60312	3x150 RM	46,9	6092
B60313	3x185 RM	50,6	7320
B60314	3x240 RM	58,9	9441
B60315	4x1,5 RE	12,7	296
B60316	4x2,5 RE	13,6	357
B60317	4x4 RE	14,9	443
B60318	4x6 RE	16,1	548
B60319	4x10 RE	18,2	752

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
B60320	4x16 RM	21,6	1126
B60321	4x25 RM	25,7	1596
B60322	4x35 RM	28,3	2074
B60323	4x50 RM	33,3	2847
B60324	4x70 RM	36,7	3707
B60325	4x95 RM	42,3	5026
B60326	4x120 RM	46,2	6069
B60327	4x150 RM	52,1	7837
B60328	4x185 RM	56,7	9428
B60329	4x240 RM	65,4	12059
B60330	5x1,5 RE	13,7	345
B60331	5x2,5 RE	14,9	419
B60332	5x4 RE	16,1	524
B60333	5x6 RE	17,6	653
B60334	5x10 RE	19,8	904
B60335	5x16 RM	23,6	1363
B60336	5x25 RM	28,3	1956
B60337	5x35 RM	31,5	2567
B60338	5x50 RM	36,9	3502
B60339	5x70 RM	40,6	4595
B60340	5x95 RM	46,9	6204
B60341	5x120 RM	51,2	7562
B60342	5x150 RM	58,3	9681
B60343	7x1,5 RE	14,9	404
B60344	7x2,5 RE	16,0	499
B60345	7x4 RE	17,6	633
B60346	10x1,5 RE	18,4	539
B60347	10x2,5 RE	19,9	670
B60348	10x4 RE	22,0	857
B60349	12x1,5 RE	18,9	603
B60350	12x2,5 RE	20,7	757
B60351	12x4 RE	22,6	976
B60352	14x1,5 RE	19,8	676
B60353	14x2,5 RE	21,6	853
B60354	14x4 RE	23,7	1107
B60355	19x1,5 RE	22,2	840
B60356	19x2,5 RE	24,0	1071
B60357	19x4 RE	26,3	1415
B60358	24x1,5 RE	25,8	1036
B60359	24x2,5 RE	28,1	1356
B60360	30x1,5 RE	27,2	1230
B60361	30x2,5 RE	29,7	1619
B60362	3x25+1x16RM	25,4	1527
B60363	3x35+1x16RM	28,3	1946
B60364	3x50+1x25RM	33,3	2688
B60365	3x70+1x35RM	36,7	3479
B60366	3x95+1x50RM	42,3	4686
B60367	3x120+1x70RM	47,2	5724

(N)HXH FE180/E90 CERAMIC

Fire resistant, halogen free power cable

cables with green-yellow core (N)HXH-J FE180/E90 CERAMIC

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
B60222	3x1,5 RE	11,8	254	B60256	5x10 RE	19,8	904
B60223	3x2,5 RE	12,6	302	B60257	5x16 RM	23,6	1363
B60224	3x4 RE	13,8	370	B60258	5x25 RM	28,3	1956
B60225	3x6 RE	14,9	453	B60259	5x35 RM	31,5	2567
B60226	3x10 RE	16,8	613	B60260	5x50 RM	36,9	3502
B60227	3x16 RM	19,6	910	B60261	5x70 RM	40,6	4595
B60228	3x25 RM	23,5	1277	B60262	5x95 RM	46,9	6204
B60229	3x35 RM	25,7	1641	B60263	5x120 RM	51,2	7562
B60230	3x50 RM	29,9	2254	B60264	5x150 RM	58,3	9681
B60231	3x70 RM	33,1	2920	B60266	7x1,5 RE	14,9	404
B60232	3x95 RM	38,0	3922	B60267	7x2,5 RE	16,0	499
B60233	3x120 RM	41,6	4759	B60283	7x4 RE	17,6	633
B60234	3x150 RM	46,9	6092	B60288	10x1,5 RE	18,4	539
B60235	3x185 RM	50,6	7320	B60269	10x2,5 RE	19,9	670
B60236	3x240 RM	58,9	9441	B60289	10x4 RE	22,0	857
B60237	4x1,5 RE	12,7	296	B60270	12x1,5 RE	18,9	603
B60238	4x2,5 RE	13,6	357	B60271	12x2,5 RE	20,7	757
B60239	4x4 RE	14,9	443	B60290	12x4 RE	22,6	976
B60240	4x6 RE	16,1	548	B60272	14x1,5 RE	19,8	676
B60241	4x10 RE	18,2	752	B60273	14x2,5 RE	21,6	853
B60242	4x16 RM	21,6	1126	B60291	14x4 RE	23,7	1107
B60243	4x25 RM	25,7	1596	B60274	19x1,5 RE	22,2	840
B60244	4x35 RM	28,3	2074	B60275	19x2,5 RE	24,0	1071
B60245	4x50 RM	33,3	2847	B60292	19x4 RE	26,3	1415
B60246	4x70 RM	36,7	3707	B60276	24x1,5 RE	25,8	1036
B60247	4x95 RM	42,3	5026	B60277	24x2,5 RE	28,1	1356
B60248	4x120 RM	46,2	6069	B60278	30x1,5 RE	27,2	1230
B60249	4x150 RM	52,1	7837	B60279	30x2,5 RE	29,7	1619
B60250	4x185 RM	56,7	9428	B60291	3x25+1x16RM	25,4	1527
B60251	4x240 RM	65,4	12059	B60292	3x35+1x16RM	28,3	1946
B60252	5x1,5 RE	13,7	345	B60293	3x50+1x25RM	33,3	2688
B60253	5x2,5 RE	14,9	419	B60294	3x70+1x35RM	36,7	3479
B60254	5x4 RE	16,1	524	B60295	3x95+1x50RM	42,3	4686
B60255	5x6 RE	17,6	653	B60296	3x120+1x70RM	47,2	5724

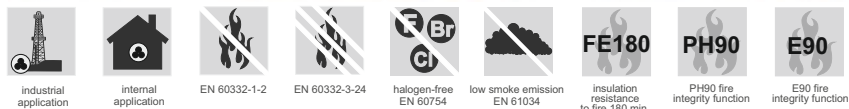
RE - round conductor, single-wire
RM - round conductor, multi-wire

*Outer diameter tolerance: +/- 5%
Cable Factory BITNER reserves the right to modify specifications without prior notification
Note: on customer's request other cross sections or number of cores can be produced

(N)HXCH FE180/E90 CERAMIC



Fire resistant, halogen-free power cable with concentric conductor



Technical data:

Thermal parameters:

Temperature range:

fixed installation: -30 °C to 90 °C
min. installation temp: -5 °C

Electrical parameters:

Permissible conductor operating temperature: 90 °C

Permissible conductor temperature during short circuit: 250 °C

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage: 4 kV

Conductor resistance (at 20 °C): acc. to EN 60288 cl. 1 and 2, IEC 60288 cl. 1 and 2

Mechanical parameters:

Minimum bending radius: $15 \times \varnothing$

Design:

Conductors:

bare copper conductor, solid (cl. 1) or stranded (cl. 2) according to EN 60228 and IEC 60228

Insulation:

special ceramic silicone rubber

Core colors: acc. to information - chapter - Technical Data

Inner sheath: special halogen-free compound

Concentric conductor: copper wires over the inner sheath with helically applied copper tape

Outer sheath:

halogen-free polymer compound HM4

acc. to DIN VDE 207 p.24; colour: orange

Application:

Fire resistant power and control cables have E90 fire integrity function which means the assurance of power supply or control under fire conditions for 90 minutes. They are intended for use in buildings with increased fire safety requirements due to high concentration of people, material and cultural assets of high value (sky scrapers, hospitals, shopping centres, tunnels, museums, cinemas, theatres). Cables can be used for power supply or control (lighting, lifts, fire-fighting equipment, pumps). They can be used in fixed installations inside buildings. In case of outdoor application cables should be secured against UV radiation and the external factors. Cables with improved fire characteristic E90 must be installed on the supporting systems tested according to DIN 4102-12.

Tests:

Flame propagation test for a single insulated cable:

Flame propagation test for vertically-mounted bunched cables:

Test on corrosive gases emitted during burning:

Smoke density emission during burning:

Insulation resistance to long term fire exposure FE180:

Fire integrity function of cable support system E90:

Fire integrity function of cable installation (PH90):

EN 60332-1-2, IEC 60332-1-2, VDE 0482-332-1

EN 60332-3-24, IEC 60332-3-24, VDE 0482-332-3-24

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

PN-IEC 60331-21, IEC 60331-21, VDE 0472-814

DIN 4102-12

EN 50200

Cable characteristics:

- fire resistant (fire retardant, self extinguishing, flame retardant, without self-ignition properties)
- halogen-free
- flame retardant
- no corrosive gases
- low smoke emission
- increased insulation resistance (FE180)
- fire integrity function (E90)
- low fire load (calorific value)

(N)HXCH FE180/E90 CERAMIC

Fire resistant, halogen-free power cable with concentric conductor

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
B60636	2x1,5RE/1,5	13,5	271
B60637	2x2,5RE/2,5	14,4	321
B60638	2x4RE/4	15,5	394
B60639	2x6RE/6	16,9	483
B60640	2x10RE/10	18,9	652
B60641	2x16RM/16	21,5	947
B60642	2x25RM/16	24,9	1238
B60600	3x1,5RE/1,5	14,0	297
B60601	3x2,5RE/2,5	15,0	356
B60602	3x4RE/4	16,2	443
B60603	3x6RE/6	17,6	548
B60604	3x10RE/10	19,7	753
B60605	3x16RM/16	22,6	1107
B60606	3x25RM/16	26,2	1482
B60607	3x35RM/16	28,6	1864
B60608	3x50RM/25	33,2	2582
B60324	3x70RM/35	37,1	3366
B60325	3x95RM/50	42,1	4492
B60326	3x120RM/70	46,8	5576
B60327	3x150RM/70	51,9	6760
B60643	3x185RM/95	55,7	8240
B60644	3x240RM/120	63,9	10571
B60609	4x1,5RE/1,5	14,8	341
B60610	4x2,5RE/2,5	15,9	412
B60611	4x4RE/4	17,2	517
B60612	4x6RE/6	18,8	645
B60613	4x10RE/10	21,1	894
B60614	4x16RM/16	24,3	1326

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
B60615	4x25RM/16	28,6	1815
B60616	4x35RM/16	31,3	2299
B60617	4x50RM/25	36,8	3184
B60328	4x70RM/35	40,6	4164
B60329	4x95RM/50	46,7	5636
B60330	4x120RM/70	51,4	6904
B60645	4x150RM/70	57,1	8431
B60646	4x185RM/95	61,7	10339
B60647	4x240RM/120	70,5	13179
B60618	7x1,5RE/2,5	17,0	463
B60619	7x2,5RE/2,5	18,1	559
B60648	7x4RE/4	19,7	711
B60620	10x1,5RE/2,5	20,2	601
B60621	10x2,5RE/4	21,9	748
B60649	10x4RE/6	23,9	957
B60622	12x1,5RE/2,5	20,7	667
B60623	12x2,5RE/4	22,4	838
B60650	12x4RE/6	24,5	1078
B60651	14x1,5RE/2,5	21,6	742
B60652	14x2,5RE/4	23,4	936
B60653	14x4RE/6	25,6	1218
B60331	19x1,5RE/4	23,7	923
B60654	19x2,5RE/6	25,5	1185
B60655	19x4RE/10	28,6	1582
B60334	24x1,5RE/6	27,4	1155
B60335	24x2,5RE/10	30,2	1547
B60656	30x1,5RE/6	28,8	1354
B60657	30x2,5RE/10	31,8	1817

RE - round conductor, single-wire

RM - round conductor, multi-wire

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

Note: on customer's request other cross sections or number of cores can be produced

BiTflame® AS FE180/E90

RoHS 2015/863/EU



LVD 2014/35/EU



CPR 305/2011



Fire resistant, halogen-free telecommunication cable



internal application



EN 60332-1-2



EN 60332-3-24



halogen-free
EN 60754



low smoke emission
EN 61034



insulation
resistance
to fire 180 min.



PH90 fire
integrity function



E90 fire
integrity function

Technical data:

Thermal parameters:

Temperature range:

fixed installation: -40 °C to 80 °C
min. installation temp: -5 °C

Electrical parameters:

Operating voltage: 225 V

Test voltage:

AC 1500 V

DC 2250 V

Insulation resistance (minimum):

500 MΩ x km

Pair loop resistance at 20 °C (maximum):

0,8 mm - 75 Ω/km

1,0 mm - 48 Ω/km

1,4 mm - 26,6 Ω/km

1,8 mm - 14,96 Ω/km

2,3 mm - 9,6 Ω/km

2,8 mm - 6,4 Ω/km

Mutual capacitance of pair at 1 kHz

(maximum):

Unscreened cable: 120 nF/km

Screened cable: 150 nF/km

Inductance: 0,7 mH/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Tests:

Flame propagation test for a single insulated cable:

Flame propagation test for vertically-mounted bunched cables:

Test on corrosive gases emitted during burning:

Smoke density emission during burning:

Insulation resistance to long term fire exposure FE180:

Fire integrity function of cable support system E90:

Fire integrity function of cable installation (PH90):

EN 60332-1-2, IEC 60332-1-2, VDE 0482-332-1

EN 60332-3-24, IEC 60332-3-24, VDE 0482-332-3-24

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

PN-IEC 60331-21, IEC 60331-21, VDE 0472-814

DIN 4102-12

EN 50200

Cable characteristics:

- fire resistant
- halogen-free
- flame retardant
- no corrosive gases (acidity pH ≥ 4,3; conductivity < 10 µS/mm)
- low smoke emission (light transmittance over 60%)
- increased insulation resistance (FE180)
- fire integrity function (PH90)
- installation on clamps located every 60cm in E90 systems
- low fire load (calorific value)

BiTflame[®] AS FE180/E90

Fire resistant, halogen-free telecommunication cable

Cat. no.	n x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
BF0240	1x2x0,8	5,2	37
BF0241	1x4x0,8	6,0	55
BF0242	2x2x0,8	7,5	62
BF0243	3x2x0,8	8,2	81
BF0244	4x2x0,8	9,5	101
BF0245	5x2x0,8	10,4	121
BF0246	7x2x0,8	11,5	167
BF0247	8x2x0,8	12,4	185
BF0248	10x2x0,8	13,9	223
BF0249	20x2x0,8	17,7	408
BF0250	1x2x1,0	5,8	47
BF0251	1x4x1,0	6,7	73
BF0252	2x2x1,0	8,4	81
BF0253	3x2x1,0	9,2	106
BF0254	4x2x1,0	10,7	135
BF0255	5x2x1,0	12,1	174
BF0256	7x2x1,0	13,4	225
BF0257	8x2x1,0	14,0	250
BF0258	10x2x1,0	15,7	303
BF0259	1x2x1,4	6,9	69
BF0260	1x4x1,4	8,0	113
BF0261	2x2x1,4	10,1	123
BF0262	3x2x1,4	11,2	167
BF0263	4x2x1,4	13,4	227
BF0264	5x2x1,4	14,8	274
BF0265	7x2x1,4	16,3	360

Cat. no.	n x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
BF0266	8x2x1,4	17,5	420
BF0267	10x2x1,4	9,6	512
BF0268	1x2x1,8	8,4	94
BF0269	1x4x1,8	9,7	160
BF0270	2x2x1,8	12,7	183
BF0271	3x2x1,8	14,0	250
BF0272	4x2x1,8	16,2	321
BF0273	5x2x1,8	18,2	407
BF0274	7x2x1,8	20,1	538
BF0275	8x2x1,8	21,1	603
BF0276	10x2x1,8	23,9	750
BF0277	1x2x2,3	9,6	132
BF0278	1x4x2,3	11,2	232
BF0279	2x2x2,3	14,6	259
BF0280	3x2x2,3	16,1	359
BF0281	4x2x2,3	19,2	484
BF0282	5x2x2,3	21,1	588
BF0283	7x2x2,3	23,6	798
BF0284	8x2x2,3	24,7	898
BF0285	10x2x2,3	27,7	1103
BF0286	1x2x2,8	10,8	179
BF0287	1x4x2,8	13,0	332
BF0288	2x2x2,8	16,5	351
BF0289	3x2x2,8	18,7	511
BF0290	4x2x2,8	21,8	664

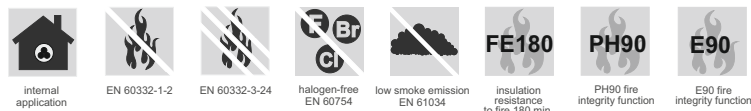
*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

Note: on customer's request other cross sections or number of cores can be produced

BiTflame® AS(St) FE180/E90

Fire resistant, halogen-free telecommunication cable



Technical data:

Thermal parameters:

Temperature range:

fixed installation: -40 °C to 80 °C
min. installation temp: -5 °C

Electrical parameters:

Operating voltage: 225 V

Test voltage:

AC 1500 V

DC 2250 V

Insulation resistance (minimum):

500 MΩ x km

Pair loop resistance at 20 °C (maximum):

0,8 mm - 75 Ω/km

1,0 mm - 48 Ω/km

1,4 mm - 26,6 Ω/km

1,8 mm - 14,96 Ω/km

2,3 mm - 9,6 Ω/km

2,8 mm - 6,4 Ω/km

Mutual capacitance of pair at 1 kHz (maximum):

Unscreened cable: 120 nF/km

Screened cable: 150 nF/km

Inductance: 0,7 mH/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Tests:

Flame propagation test for a single insulated cable:

Flame propagation test for vertically-mounted bunched cables:

Test on corrosive gases emitted during burning:

Smoke density emission during burning:

Insulation resistance to long term fire exposure FE180:

Fire integrity function of cable support system E90:

Fire integrity function of cable installation (PH90):

EN 60332-1-2, IEC 60332-1-2, VDE 0482-332-1

EN 60332-3-24, IEC 60332-3-24, VDE 0482-332-3-24

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

PN-IEC 60331-21, IEC 60331-21, VDE 0472-814

DIN 4102-12

EN 50200

Cable characteristics:

- fire resistant
- halogen-free
- flame retardant
- no corrosive gases (acidity pH ≥ 4,3; conductivity < 10 µS/mm)
- low smoke emission (light transmittance over 60%)
- increased insulation resistance (FE180)
- fire integrity function (PH90)
- installation on clamps located every 60cm in E90 systems
- low fire load (calorific value)

Design:

Conductors:

solid copper conductor class 1, acc. to EN 60228

Insulation:

mica tape wrapping and halogen-free compound

Core colors:

acc. to PN -92/T-90321

Wrapping:

polyester tape

Screen:

aluminium backed polyester type with tinned copper drain

wire 0,4 mm dia

Outer sheath:

halogen-free polymer compound; colour: red

Application:

Fire resistant, halogen-free telecommunication cables designed for emergency lighting installations, alarm-, signalling-, and teletransmission systems, in sound alarm systems as well as in fire warning systems, fire automation and other safety ensuring installations. Static screen (St) protects the cable against interferences of external magnetic fields. Under fire conditions those cables ensure proper operation of installations for at least 90 minutes (PH90) and durability of conductors insulation for 180 minutes (FE180). During burning cables do not emit corrosive gases or dense smoke. Cables are suitable for fixed installations inside buildings. BiTflame® AS(St) FE180/E90 cables have been tested in accordance with the requirements of DIN 4102 p.12 and can be installed in E90 cable support systems as their elements (installation on clamps located every 30 cm and 60 cm).

BiTflame® AS(St) FE180/E90

Fire resistant, halogen-free telecommunication cable

Cat. no.	n x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
BF0300	1x2x0,8	6,5	54
BF0301	1x4x0,8	7,3	75
BF0302	2x2x0,8	8,7	85
BF0303	3x2x0,8	9,4	105
BF0304	4x2x0,8	10,7	129
BF0305	5x2x0,8	11,6	151
BF0306	7x2x0,8	12,7	188
BF0307	8x2x0,8	13,3	207
BF0308	10x2x0,8	14,7	247
BF0309	20x2x0,8	18,6	438
BF0310	1x2x1,0	7,1	66
BF0311	1x4x1,0	8,0	94
BF0312	2x2x1,0	9,6	105
BF0313	3x2x1,0	10,4	134
BF0314	4x2x1,0	11,9	166
BF0315	5x2x1,0	13,0	195
BF0316	7x2x1,0	14,3	248
BF0317	8x2x1,0	14,9	274
BF0318	10x2x1,0	16,6	330
BF0319	1x2x1,4	8,2	90
BF0320	1x4x1,4	9,3	137
BF0321	2x2x1,4	11,4	152
BF0322	3x2x1,4	12,4	199
BF0323	4x2x1,4	14,3	251
BF0324	5x2x1,4	15,6	299
BF0325	7x2x1,4	17,2	405

Cat. no.	n x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
BF0326	8x2x1,4	18,4	450
BF0327	10x2x1,4	20,5	545
BF0328	1x2x1,8	9,7	118
BF0329	1x4x1,8	11,1	186
BF0330	2x2x1,8	13,6	205
BF0331	3x2x1,8	14,9	273
BF0332	4x2x1,8	17,1	348
BF0333	5x2x1,8	19,1	436
BF0334	7x2x1,8	21,0	570
BF0335	8x2x1,8	22,0	637
BF0336	10x2x1,8	25,0	799
BF0337	1x2x2,3	11,0	159
BF0338	1x4x2,3	12,5	262
BF0339	2x2x2,3	15,5	283
BF0340	3x2x2,3	17,0	386
BF0341	4x2x2,3	20,1	515
BF0342	5x2x2,3	22,0	622
BF0343	7x2x2,3	24,7	847
BF0344	8x2x2,3	25,8	949
BF0345	10x2x2,3	29,2	1187
BF0346	1x2x2,8	12,2	209
BF0347	1x4x2,8	14,0	354
BF0348	2x2x2,8	17,4	378
BF0349	3x2x2,8	19,6	541
BF0350	4x2x2,8	22,7	698

*Outer diameter tolerance: +/- 5%
 Cable Factory BITNER reserves the right to modify specifications without prior notification
 Note: on customer's request other cross sections or number of cores can be produced

BiTflame® A



Fire resistant, halogen-free control, power supply and telecommunication cable



internal application



EN 60332-1-2



IEC 60332-3
EN 60332-3



halogen-free
EN 60754



low smoke emission
EN 61034



CPR class

Technical data:

Thermal parameters:

Temperature range:

fixed installation: -40 °C to 80 °C
min. installation temp.: -5 °C

Electrical parameters:

Operating voltage: 150 V

Test voltage:

AC: 1500 V

DC: 2250 V

Insulation resistance (min.): 200 MΩ x km

Pair loop resistance at 20 °C (max.):

0,8 mm - 75 Ω/km

1,0 mm - 48 Ω/km

Mutual capacitance of pair at 1 kHz

(maximum): 120 nF/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Cores:

solid copper conductor class 1, acc. to EN 60228

Insulation:

halogen-free compound

Core colours:

acc. to PN -92/T-90321

Core arrangement:

cores twisted in pairs

Wrapping:

polyester tape

Outer sheath:

halogen-free polymer compound; colour: red

Application:

Fire resistant, halogen-free telecommunication cables designed for emergency lighting installations, alarm-, signalling-, and teletransmission systems, in sound alarm systems as well as in fire warning systems, fire automation and other safety ensuring installations. Cables designed for signal transmission that turns on the auxiliary devices during the fire emergency. Cables are suitable for fixed installations inside buildings.

Tests:

Flame propagation test for a single insulated cable:

EN 60332-1, IEC 60332-1

Flame propagation test for vertically-mounted bunched cables:

EN 60332-3, IEC 60332-3

Test on corrosive gases emitted during burning:

EN 60754-2, IEC 60754-2

Smoke density emission during burning:

EN 61034-2, IEC 61034-2

Reaction to fire:

EN 50399

Cat. no.	[n x mm]	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
BF0001	1x2x0,8	4,0	23	9,6
BF0003	2x2x0,8	5,8	40	19,3
BF0004	3x2x0,8	6,6	57	28,9
BF0010	1x2x1,0	4,8	34	15,1
BF0011	1x4x1,0	5,8	57	30,1
BF0012	2x2x1,0	7,3	62	30,1
BF0013	3x2x1,0	8,1	88	45,2
BF0014	4x2x1,0	9,4	113	60,3
BF0015	5x2x1,0	10,5	136	75,4

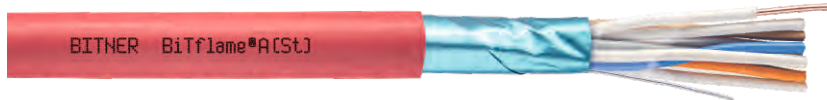
*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

Note: on customer's request other cross sections or number of cores can be produced

BiTflame® A(St)

Fire resistant, halogen-free control, power supply and telecommunication cable



Technical data:

Thermal parameters:

Temperature range:
fixed installation: -40 °C to 80 °C
min. installation temp.: -5 °C

Electrical parameters:

Operating voltage: 150 V
Test voltage:
AC: 1500 V
DC: 2250 V
Insulation resistance (min.): 200 MΩ x km
Pair loop resistance at 20 °C (max.):
0,6 mm: 135,8 Ω/km
0,8 mm: 75 Ω/km
1,0 mm: 48 Ω/km
Mutual capacitance of pair at 1 kHz (maximum): 150 nF/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Cores: solid copper conductor class 1, acc. to EN 60228
Insulation: halogen-free compound
Core colors: acc. to PN -92/T-90321
Core arrangement: cores twisted in pairs
Wrapping: polyester tape
Screen: aluminium backed polyester type with tinned copper drain wire 0,4 mm diameter
Outer sheath: halogen-free polymer compound; colour: red

Application:

Fire resistant, halogen-free telecommunication cables designed for emergency lighting installations, alarm-, signalling-, and teletransmission systems, in sound alarm systems as well as in fire warning systems, fire automation and other safety ensuring installations. Cables designed for signal transmission that turns on the auxiliary devices during the fire emergency. Static screen (St) protects the cable against interferences of external magnetic fields. Cables are suitable for fixed installations inside buildings.

Tests:

Flame propagation test for a single insulated cable:	EN 60332-1-2, IEC 60332-1-2
Flame propagation test for vertically-mounted bunched cables:	EN 60332-3, IEC 60332-3
Test on corrosive gases emitted during burning:	EN 60754-2, IEC 60754-2
Smoke density emission during burning:	EN 61034-2, IEC 61034-2
Reaction to fire:	EN 50399

Cat. no.	n x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
BF0068	2x2x0,6	5,3	30	10,3
BF0069	3x2x0,6	5,7	39	15,4
BF0070	1x2x0,8	4,5	26	10,9
BF0071	1x4x0,8	5,1	40	20,5
BF0072	2x2x0,8	6,2	44	20,5
BF0073	3x2x0,8	7,0	61	30,1
BF0074	4x2x0,8	7,9	79	39,8
BF0075	5x2x0,8	8,6	92	49,4
BF0082	1x2x1,0	5,3	38	16,3
BF0083	1x4x1,0	6,3	60	31,3
BF0084	2x2x1,0	7,7	65	31,3
BF0085	3x2x1,0	8,6	91	46,4
BF0086	4x2x1,0	9,9	116	61,5
BF0087	5x2x1,0	11,0	139	76,6

*Outer diameter tolerance: +/- 5%
Cable Factory BITNER reserves the right to modify specifications without prior notification
Note: on customer's request other cross sections or number of cores can be produced

BiTflame® S FE180/E90



Fire resistant, halogen-free power cable 300/500 V



internal application



EN 60332-1-2



EN 60332-3-24



halogen-free
EN 60754



low smoke emission
EN 61034



insulation
resistance
to fire 180 min.



PH90 fire
integrity function



E90 fire
integrity function

Technical data:

Thermal parameters:

Temperature range:
fixed installation: -40 °C up to 80 °C
min. installation temp: -10 °C

Electrical parameters:

Operating voltage: 300/500 V

Test voltage:

AC 3000 V

DC 7200 V

Insulation resistance (min.): 100 MΩ x km

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

bare solid copper conductor, class 1 acc. to EN 60228, IEC 60228

Insulation:

special ceramic silicone rubber

Core colors:

without green/yellow earth conductor
2- core – blue, brown
3- core – brown, black, grey
4-core – blue, brown, black, grey
5-core – blue, brown, black, grey, black

Above 5 cores – In each layer:

brown (starting conductor), blue (reference conductor), remaining conductors – any freely selected colours with exception of green, yellow, brown, blue with green/yellow earth conductor
3-core – green/yellow, blue, brown
4-core – green/yellow, brown, black, grey
5-core – green/yellow, blue, brown, black, grey

Above 5 cores – In external layer:

green/yellow (starting conductor), blue (reference conductor) remaining conductors – any freely selected colours with exception of green, yellow, brown, blue

Other layers:

brown (starting conductor), blue (reference conductor) remaining conductors – any freely selected colours with exception of green, yellow, brown, blue

Wrapping:

polyester tape

Outer sheath:

halogen-free compound; colour: red

Application:

Halogen-free fire resistant cables designed for installations in places where it is necessary to ensure operation of devices under fire conditions. They are recommended for emergency lighting installations, smoke extraction systems, alarm systems, signalling systems, sound warning and control systems, fire alarm signalling and automation and other safety ensuring circuits. Under fire conditions those cables ensure correct functioning of installation for at least 90 minutes (PH90) and insulation resistance to fire exposure for 180 minutes (FE180). During burning they do not emit corrosive gases or dense smoke. Cables are suitable for fixed installations inside buildings.

Tests:

Flame test for a single insulated cable:

EN 60332-1-2, IEC 60332-1-2

Flame test for vertically-mounted bunched cables:

EN 60332-3-22, IEC 60332-3 cat.A

Test on corrosive gases emitted during burning:

EN 60754-2, IEC 60754-2, VDE 0482-754-2

Smoke density emission during burning:

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

Insulation resistance to long term fire exposure FE180:

IEC 60331-11, IEC 60331-21, IEC 60331-23

Fire integrity function of cable support system E90:

DIN 4102-12

Fire integrity function of cable installations (PH90):

EN 50200

Cable characteristics:

- fire resistant
- halogen-free
- flame retardant
- no corrosive gases (acidity pH ≥ 4,3; conductivity < 10 µS/mm)
- low smoke emission (light transmittance over 60%)
- increased insulation resistance (FE180)
- fire integrity function (PH90)
- low fire load (calorific value)

BiTflame® S FE180/E90

Fire resistant, halogen-free power cable 300/500 V

Cables without green-yellow core BiTflame® S FE180/E90

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BF0360	2x1,0	6,7	54	BF0383	12x1,5	14,1	306
BF0361	2x1,5	7,5	67	BF0384	12x2,5	17,2	475
BF0362	2x2,5	9,1	103	BF0385	14x1,0	13,1	265
BF0363	2x4,0	10,0	136	BF0386	14x1,5	14,7	348
BF0364	3x1,0	7,1	69	BF0387	14x2,5	18,1	541
BF0365	3x1,5	7,9	88	BF0388	16x1,0	13,8	302
BF0366	3x2,5	9,6	136	BF0389	16x1,5	16,3	427
BF0367	3x4,0	10,8	189	BF0390	16x2,5	19,6	655
BF0368	4x1,0	8,0	90	BF0391	19x1,0	14,5	344
BF0369	4x1,5	9,2	120	BF0392	19x1,5	17,1	477
BF0370	4x2,5	10,8	176	BF0393	19x2,5	20,7	735
BF0371	4x4,0	11,9	240	BF0394	20x1,0	15,8	384
BF0372	5x1,0	8,8	116	BF0395	20x1,5	18,5	546
BF0373	5x1,5	9,9	150	BF0396	20x2,5	21,7	801
BF0374	5x2,5	11,7	223	BF0397	24x1,0	17,5	452
BF0375	5x4,0	12,9	301	BF0398	24x1,5	20,5	622
BF0376	7x1,0	9,5	143	BF0399	24x2,5	24,7	949
BF0377	7x1,5	10,9	191	BF0400	30x1,0	19,1	569
BF0378	7x2,5	12,7	278	BF0401	30x1,5	21,6	747
BF0379	10x1,0	12,1	204	BF0402	30x2,5	26,1	1144
BF0380	10x1,5	13,7	265	BF0403	37x1,0	20,5	680
BF0381	10x2,5	16,7	411	BF0404	37x1,5	23,9	929
BF0382	12x1,0	12,5	234	BF0405	37x2,5	28,1	1375

Cables with green-yellow core BiTflame® S FE180/E90

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BF0408	3x1,0	7,1	69	BF0429	14x1,0	13,1	265
BF0409	3x1,5	7,9	88	BF0430	14x1,5	14,7	348
BF0410	3x2,5	9,6	136	BF0431	14x2,5	18,1	541
BF0411	3x4,0	10,8	189	BF0432	16x1,0	13,8	302
BF0412	4x1,0	8,0	90	BF0433	16x1,5	16,3	427
BF0413	4x1,5	9,2	120	BF0434	16x2,5	19,6	655
BF0414	4x2,5	10,8	176	BF0435	19x1,0	14,5	344
BF0415	4x4,0	11,9	240	BF0436	19x1,5	17,1	477
BF0416	5x1,0	8,8	116	BF0437	19x2,5	20,7	735
BF0417	5x1,5	9,9	150	BF0438	20x1,0	15,8	384
BF0418	5x2,5	11,7	223	BF0439	20x1,5	18,5	546
BF0419	5x4,0	12,9	301	BF0440	20x2,5	21,7	801
BF0420	7x1,0	9,5	143	BF0441	24x1,0	17,5	452
BF0421	7x1,5	10,9	191	BF0442	24x1,5	20,5	622
BF0422	7x2,5	12,7	278	BF0443	24x2,5	24,7	949
BF0423	10x1,0	12,1	204	BF0444	30x1,0	19,1	569
BF0424	10x1,5	13,7	265	BF0445	30x1,5	21,6	747
BF0425	10x2,5	16,7	411	BF0446	30x2,5	26,1	1144
BF0426	12x1,0	12,5	234	BF0447	37x1,0	20,5	680
BF0427	12x1,5	14,1	306	BF0448	37x1,5	23,9	929
BF0428	12x2,5	17,2	475	BF0449	37x2,5	28,1	1375

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

Note: on customer's request other cross sections or number of cores can be produced

BiTflame® S(St) FE180/E90

RoHS 2015/863/EU



LVD 2014/35/EU

CPR

CPR 305/2011



Fire resistant, halogen-free power cable 300/500 V



internal application



EN 60332-1-2



EN 60332-3-24



halogen-free
EN 60754



low smoke emission
EN 61034



insulation resistance to fire 180 min.



PH90 fire integrity function



E90 fire integrity function

Technical data:

Thermal parameters:

Temperature range:

fixed installation: -40 °C to 80 °C
min. installation temp: -10 °C

Electrical parameters:

Operating voltage: 300/500 V

Test voltage:

AC 3000 V

DC 7200 V

Insulation resistance (min.): 100 MΩ x km

Mechanical parameters:

Min. bending radius: 10 x Ø

Cable characteristics:

- fire resistant
- halogen-free
- flame retardant
- no corrosive gases (acidity pH ≥ 4,3; conductivity <10µS/mm)
- low smoke emission (light transmittance over 60%)
- increased insulation resistance (FE180)
- fire integrity function (PH90)
- low fire load (calorific value)

Design:

Conductors:

bare solid copper conductor, class 1 acc. to EN 60228, IEC 60228

Insulation:

special ceramic silicone rubber

Core colors:

without green/yellow earth conductor
2-core – blue, brown
3-core – brown, black, grey
4-core – blue, brown, black, grey
5-core – blue, brown, black, grey, black

Above 5 cores – In each layer:

brown (starting conductor), blue (reference conductor), remaining conductors – any freely selected colours with exception of green, yellow, brown, blue with green/yellow earth conductor

3-core – green/yellow, blue, brown
4-core – green/yellow, brown, black, grey
5-core – green/yellow, blue, brown, black, grey

Above 5 cores – In external layer:

green/yellow (starting conductor), blue (reference conductor) remaining conductors – any freely selected colours with exception of green, yellow, brown, blue brown (starting conductor), blue (reference conductor) remaining conductors – any freely selected colours with exception of green, yellow, brown, blue

Other layers:

Wrapping:

Screen:

polyester tape

aluminium backed polyester tape with tinned copper drain wire

Outer sheath:

halogen-free compound; colour: red

Application:

Halogen-free fire resistant cables designed for installations in places where it is necessary to ensure operation of devices under fire conditions. They are recommended for emergency lighting installations, smoke extraction systems, alarm systems, signalling systems, sound warning and control systems, fire alarm signalling and automation and other safety ensuring circuits. Static screen in BiTflame® S(St) cables protects them against interferences of external magnetic fields. Under fire conditions those cables ensure correct functioning of installation for at least 90 minutes (PH90) and insulation resistance to fire exposure for 180 minutes (FE180). During burning they do not emit corrosive gases or dense smoke. Cables are suitable for fixed installations inside buildings.

Tests:

Flame test for a single insulated cable:

Flame test for vertically-mounted bunched cables:

Test on corrosive gases emitted during burning:

Smoke density emission during burning:

Insulation resistance to long term fire exposure FE180:

Fire integrity function of cable support system E90:

Fire integrity function of cable installations (PH90):

EN 60332-1-2, IEC 60332-1-2

EN 60332-3-22, IEC 60332-3 cat.A

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

IEC 60331-11, IEC 60331-21, IEC 60331-23

DIN 4102-12

EN 50200

BiTflame® S(St) FE180/E90

Fire resistant, halogen-free power cable 300/500 V

Cables without green-yellow core BiTflame®S(St) FE180/E90

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BF0460	2x1,0	7,1	63
BF0461	2x1,5	7,9	78
BF0462	2x2,5	9,5	115
BF0463	2x4,0	10,4	150
BF0464	3x1,0	7,5	79
BF0465	3x1,5	8,3	99
BF0466	3x2,5	10,0	148
BF0467	3x4,0	11,2	203
BF0468	4x1,0	8,4	100
BF0469	4x1,5	9,6	132
BF0470	4x2,5	11,2	190
BF0471	4x4,0	12,3	256
BF0472	5x1,0	9,2	125
BF0473	5x1,5	10,3	161
BF0474	5x2,5	12,1	235
BF0475	5x4,0	13,3	318
BF0476	7x1,0	9,9	154
BF0477	7x1,5	11,3	203
BF0478	7x2,5	13,1	293
BF0479	10x1,0	12,5	214
BF0480	10x1,5	14,1	279
BF0481	10x2,5	17,1	430
BF0482	12x1,0	12,9	244

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BF0483	12x1,5	14,5	320
BF0484	12x2,5	17,6	494
BF0485	14x1,0	13,5	276
BF0486	14x1,5	15,4	371
BF0487	14x2,5	19,1	589
BF0488	16x1,0	14,3	313
BF0489	16x1,5	16,8	438
BF0490	16x2,5	20,3	668
BF0491	19x1,0	15,5	375
BF0492	19x1,5	18,1	520
BF0493	19x2,5	21,0	758
BF0494	20x1,0	16,2	408
BF0495	20x1,5	18,9	565
BF0496	20x2,5	22,1	825
BF0497	24x1,0	17,9	462
BF0498	24x1,5	20,9	642
BF0499	24x2,5	25,1	976
BF0500	30x1,0	19,5	580
BF0501	30x1,5	22,0	768
BF0502	30x2,5	26,5	1173
BF0503	37x1,0	20,9	689
BF0504	37x1,5	23,7	918
BF0505	37x2,5	28,5	1406

Cables with green-yellow core BiTflame®S(St) FE180/E90

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BF0508	3x1,0	7,5	79
BF0509	3x1,5	8,3	99
BF0510	3x2,5	10,0	148
BF0511	3x4,0	11,2	203
BF0512	4x1,0	8,4	100
BF0513	4x1,5	9,6	132
BF0514	4x2,5	11,2	190
BF0515	4x4,0	12,3	256
BF0516	5x1,0	9,2	125
BF0517	5x1,5	10,3	161
BF0518	5x2,5	12,1	235
BF0519	5x4,0	13,3	318
BF0520	7x1,0	9,9	154
BF0521	7x1,5	11,3	203
BF0522	7x2,5	13,1	293
BF0523	10x1,0	12,5	214
BF0524	10x1,5	14,1	279
BF0525	10x2,5	17,1	430
BF0526	12x1,0	12,9	244
BF0527	12x1,5	14,5	320
BF0528	12x2,5	17,6	494

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
BF0529	14x1,0	13,5	276
BF0530	14x1,5	15,4	371
BF0531	14x2,5	19,1	589
BF0532	16x1,0	14,3	313
BF0533	16x1,5	16,8	438
BF0534	16x2,5	20,3	668
BF0535	19x1,0	15,5	375
BF0536	19x1,5	18,1	520
BF0537	19x2,5	21,0	758
BF0538	20x1,0	16,2	408
BF0539	20x1,5	18,9	565
BF0540	20x2,5	22,1	825
BF0541	24x1,0	17,9	462
BF0542	24x1,5	20,9	642
BF0543	24x2,5	25,1	976
BF0544	30x1,0	19,5	580
BF0545	30x1,5	22,0	768
BF0546	30x2,5	26,5	1173
BF0547	37x1,0	20,9	689
BF0548	37x1,5	23,7	918
BF0549	37x2,5	28,5	1406

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

Note: on customer's request other cross sections or number of cores can be produced



Chapter VIII

LAN cables

BiTLAN [®] U/UTP cat.5e 200 MHz	230
BiTLAN [®] F/UTP cat.5e 200 MHz	232
BiTLAN [®] U/UTP cat.5e 200 MHz LSOH	234
BiTLAN [®] F/UTP cat.5e 200 MHz LSOH	236
BiTLAN [®] U/UTP cat.5e outdoor 200 MHz	238
BiTLAN [®] U/UTPs cat.5e outdoor 200 MHz	240
BiTLAN [®] U/UTPf cat.5e outdoor 200 MHz	242
BiTLAN [®] U/UTPfs cat.5e outdoor 200 MHz	244
BiTLAN [®] F/UTP cat.5e outdoor 200 MHz	246
BiTLAN [®] F/UTPs cat.5e outdoor 200 MHz	248
BiTLAN [®] F/UTPf cat.5e outdoor 200 MHz	250
BiTLAN [®] U/UTP PATCHCORD cat.5e	252
BiTLAN [®] F/UTP PATCHCORD cat.5e	253
BiTLAN [®] U/UTP cat.6 350 MHz	254
BiTLAN [®] F/UTP cat.6 350 MHz	256
BiTLAN [®] U/FTP cat.6 350 MHz	258
BiTLAN [®] U/UTP cat.6 350 MHz LSOH	260
BiTLAN [®] F/UTP cat.6 350 MHz LSOH	262
BiTLAN [®] U/FTP cat.6 350 MHz LSOH	264
BiTLAN [®] F/FTP cat.6 350 MHz LSOH	266
BiTLAN [®] U/UTP cat.6 outdoor 350 MHz	268
BiTLAN [®] U/UTPf cat.6 outdoor 350 MHz	270
BiTLAN [®] F/UTP cat.6 outdoor 350 MHz	272
BiTLAN [®] U/UTP cat.6 Duplex 350 MHz LSOH	274
BiTLAN [®] U/FTP cat.6A 500 MHz	276
BiTLAN [®] F/FTP cat.6A 500 MHz	278
BiTLAN [®] S/FTP cat.6A 500 MHz	280
BiTLAN [®] U/UTP cat.6A 500 MHz LSOH	282
BiTLAN [®] U/FTP cat.6A 500 MHz LSOH	284
BiTLAN [®] F/UTP cat.6A 500 MHz LSOH	286
BiTLAN [®] F/FTP cat.6A 500 MHz LSOH	288
BiTLAN [®] S/FTP cat.6A 500 MHz LSOH	290
BiTLAN [®] S/FTP cat.6A outdoor 500 MHz	292
BiTLAN [®] U/FTP cat.6A DUPLEX 500 MHz LSOH	294
BiTLAN [®] S/FTP cat.7 1000 MHz LSOH	296
BiTLAN [®] S/FTP cat.7A 1200 MHz LSOH	298
BiTLAN [®] U/UTP cat.6 350 MHz LSOH B2ca	300
BiTLAN [®] U/FTP cat.6A 500 MHz LSOH B2ca	302
BiTLAN [®] F/FTP cat.6A 500 MHz LSOH B2ca	304
BiTLAN [®] S/FTP cat.7A 1200 MHz LSOH B2ca	306

BiTLAN® U/UTP cat.5e 200 MHz



Data transmission cable

BITNER BiTLAN U/UTP 4x2x24AWG(0,5) cat. 5e 200MHz



LAN cables



internal application



data transmission



EN 60332-1-2

Technical data:

Thermal parameters

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

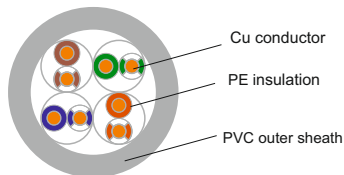
Electrical parameters

Conductor diameter: $0,5 \pm 0,015$ mm
Insulated core diameter: $0,86 \pm 0,03$ mm
DC loop resistance at 20 °C (max): 190 Ω /km
Insulation resistance (min): 5 G Ω x km
Resistance unbalance within a pair: ≤ 2 %
Mutual capacitance at 1 kHz: 50 ± 5 nF/km
Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km
Nominal voltage: 150 V
Test voltage at 1 min.:
AC 50 Hz: 700 V
DC: 1000 V
Characteristic impedance at 100 MHz: 100 ± 5 Ω
NVP value: 69 %
Return loss dB (min.):
 $f = 4 + 10$ MHz: $20 + 5 \times \log_{10}(f)$
 $f = 10 + 20$ MHz: 25
 $f = 20 + 200$ MHz: $25 - 7 \times \log_{10}(f/20)$

Mechanical parameters:

Bending radius:

during operation: $\geq 4 \times \varnothing$
during installation: $\geq 6 \times \varnothing$



Cu conductor

PE insulation

PVC outer sheath

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together

Outer sheath:

PVC compound

Outer sheath colour:

grey RAL 7035, other colours available on customer's request

Marking: BITNER BiTLAN U/UTP 4x2x24AWG(0,5) cat.5e 200MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN U/UTP cat.5e 200MHz cables are applicable to computer networks with operating frequency band up to 200MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1 Gb/s. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks not exposed to external electromagnetic interferences. Cables classified according to **EN 50575 (CPR)**.

Packaging:



box
(305m)



pallet 10 980m
(36x305m)



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10006	U/UTP cat.5e	24AWG(0,5)	4,8	Eca	28	200

*Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

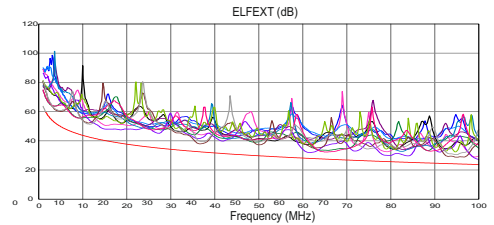
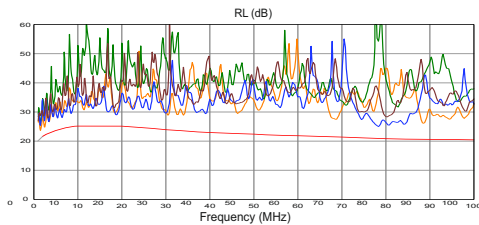
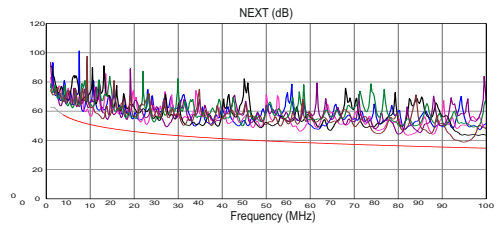
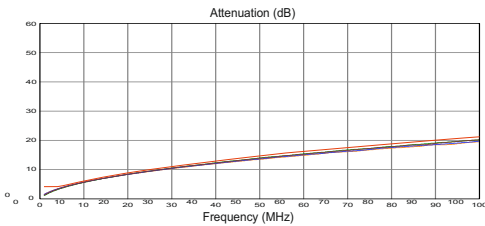
BiTLAN[®] U/UTP cat.5e 200 MHz

Data transmission cable

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	130	155	175	200
Attenuation \leq dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT \geq dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT \geq dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT \geq dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT \geq dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

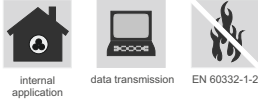
Transmission parameters graphs - examples of measurement results



BiTLAN[®] F/UTP cat.5e 200 MHz



Data transmission cable, screened



Technical data:

Thermal parameters:

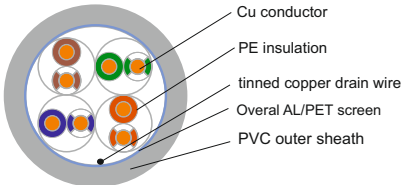
Temperature range:
operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,5 ± 0,015 mm
Insulated core diameter: 0,92 ± 0,03 mm
DC loop resistance at 20 °C (max): 190 Ω/km
Insulation resistance (min): 5 GΩ x km
Resistance unbalance within a pair: ≤ 2 %
Mutual capacitance at 1 kHz: 50 ± 5 nF/km
Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km
Nominal voltage: 150 V
Test voltage at 1 min:
AC 50 Hz: 700 V
DC: 1000 V
Characteristic impedance at 100 MHz:
100 ± 5 Ω
NVP value: 69 %
Return loss dB (min):
f = 4 + 10 MHz: 20 + 5 x log₁₀(f)
f = 10 + 20 MHz: 25
f = 20 + 200 MHz: 25 - 7 x log₁₀(f/20)
Coupling attenuation within the range of 30 + 100 Mhz (min.): 55 dB
Transfer impedance at 10 Mhz (max):
100 mΩ/m.

Mechanical parameters:

Bending radius:
during operation: ≥ 6 x Ø
during installation: ≥ 8 x Ø



Design:

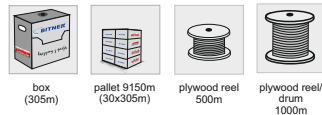
Conductors: solid round copper conductors
Insulation: special polyolefin compound
Core identification: wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn
Core arrangement: cores twisted in pairs, pairs twisted together
Screen: Al/Pet screen with tinned copper drain wire
Outer sheath: PVC compound
Outer sheath colour: grey RAL 7035, other colours available on customer's request

Marking: BITNER BiTLAN F/UTP 4x2x24AWG(0,5) cat.5e 200MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN F/UTP cat.5e 200MHz cables are applicable to computer networks with operating frequency band up to 200MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1Gb/s. Additional collective Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables classified according to **EN 50575 (CPR)**.

Packaging:



Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0007	F/UTP cat.5e	24AWG	6,1	Eca	38	200

*Outer diameter tolerance: +/-5%
Cable Factory BITNER reserves the right to modify the specifications without prior notice

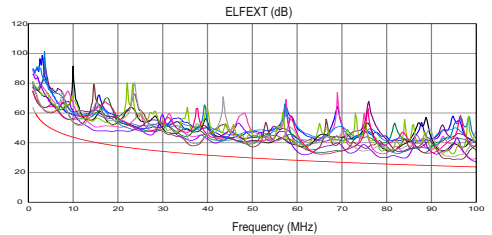
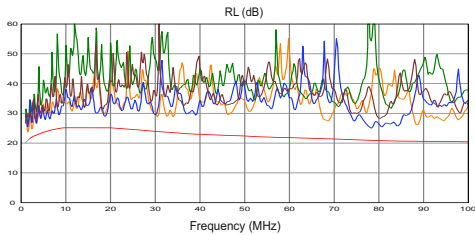
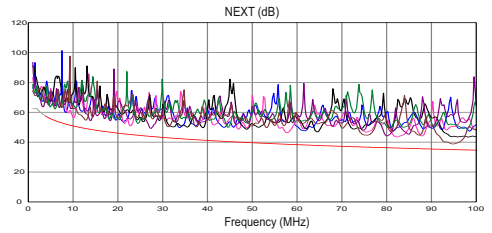
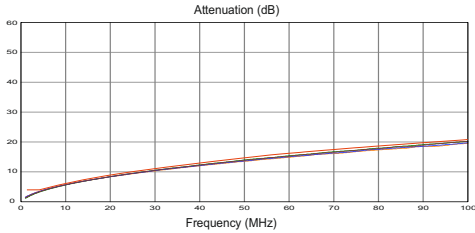
BiTLAN[®]F/UTP cat.5e 200 MHz

Data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	130	155	175	200
Attenuation ≤ dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT ≥ dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT ≥ dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT ≥ dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT ≥ dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

Transmission parameters graphs - examples of measurement results



BiTLAN® U/UTP cat.5e 200 MHz

LSOH Data transmission cable, halogen-free



BITNER BiTLAN U/UTP 4x2x24AWG(0,5) cat. 5e 200MHz LSOH



internal application



data transmission



EN 60332-1-2



halogen-free
EN 60754



low smoke emission
EN 61034

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

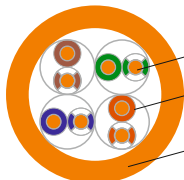
Electrical parameters:

Conductor diameter: 0,5 ± 0,015 mm
Insulated core diameter: 0,86 ± 0,03 mm
DC loop resistance at 20 °C (max): 190 Ω/km
Insulation resistance (min): 5 GΩ x km
Resistance unbalance within a pair: ≤ 2 %
Mutual capacitance at 1 kHz: 50 ± 5 nF/km
Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km
Nominal voltage: 150 V
Test voltage at 1 min:
AC 50 Hz: 700 V
DC: 1000 V
Characteristic impedance at 100 MHz:
100 ± 5 Ω
NVP value: 69 %
Return loss dB (min):
f = 4 + 10 MHz: 20 + 5 x log₁₀(f)
f = 10 + 20 MHz: 25
f = 20 + 200 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø
during installation: ≥ 8 x Ø



Cu conductors

PE insulation

LSOH outer sheath

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

Marking: BITNER BiTLAN U/UTP 4x2x24AWG(0,5) cat.5e 200MHz LSOH
EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS
www.bitner.com.pl/meters

Application:

BiTLAN U/UTP cat.5e 200MHz LSOH cables are applicable to computer networks with operating frequency band up to 200MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1Gb/s. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks not exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:



box
(305m)



pallet 10 980m
(36x305m)



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0008	U/UTP cat.5e LSOH	24AWG(0,5)	4,8	Dca	28	200

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

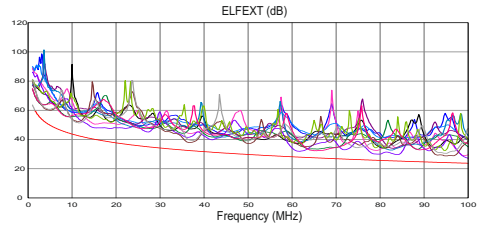
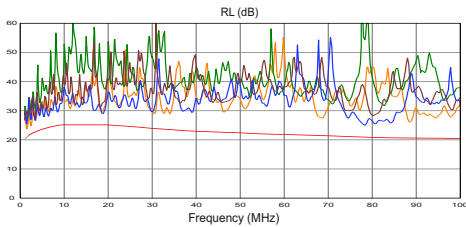
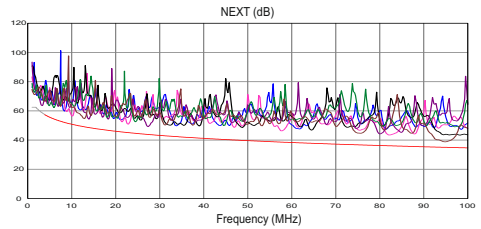
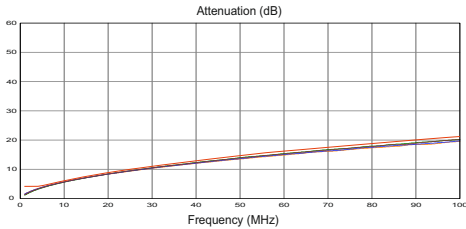
BiTLAN[®] U/UTP cat.5e 200 MHz

LSOH Data transmission cable, halogen-free

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	130	155	175	200
Attenuation \leq dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT \geq dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT \geq dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT \geq dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT \geq dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

Transmission parameters graphs - examples of measurement results



BiTLAN® F/UTP cat.5e 200 MHz LSOH

Data transmission cable, halogen-free, screened



BITNER BiTLAN F/UTP 4x2x24AWG(0,5) cat.5e 200MHz LSOH



internal application



data transmission



EN 60332-1-2

halogen-free
EN 60754low smoke emission
EN 61034

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,5 ± 0,015 mm

Insulated core diameter: 0,92 ± 0,03 mm

DC loop resistance at 20 °C (max):

190 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 69 %

Return loss dB (min):

$f = 4 + 10 \text{ MHz: } 20 + 5 \times \log_{10}(f)$

$f = 10 + 20 \text{ MHz: } 25$

$f = 20 + 200 \text{ MHz: } 25 - 7 \times \log_{10}(f/20)$

Coupling attenuation within the range of 30 ÷ 100 MHz (min.): 55 dB

Transfer impedance at 10 MHz (max):

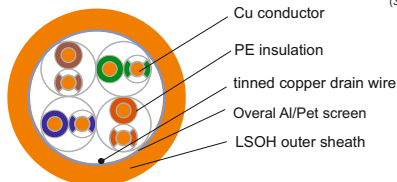
100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together

Screen:

Al/Pet screen with tinned copper drain wire

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

Marking: BITNER BiTLAN F/UTP 4x2x24AWG(0,5) cat.5e 200MHz LSOH

EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS

www.bitner.com.pl meters

Application:

BiTLAN F/UTP cat.5e 200MHz LSOH cables are applicable to computer networks with operating frequency band up to 200MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1Gb/s. Additional collective Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:



box
(305m)



pallet 9150m
(30x305m)



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0009	F/UTP cat.5e LSOH	24AWG(0,5)	6,1	Dca	38	200

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

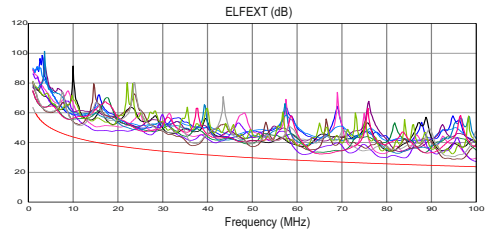
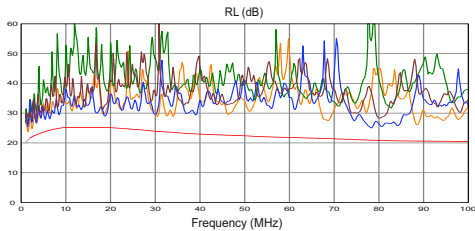
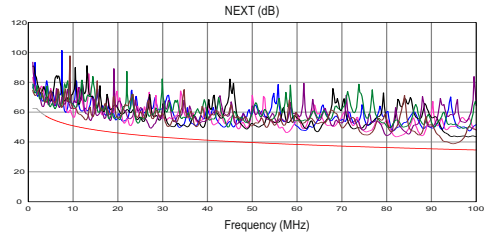
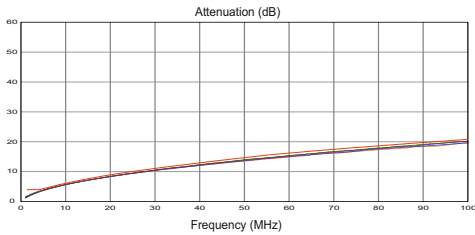
BiTLAN[®] F/UTP cat.5e 200 MHz

LSOH Data transmission cable, halogen-free, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	130	155	175	200
Attenuation ≤ dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT ≥ dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT ≥ dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT ≥ dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT ≥ dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

Transmission parameters graphs - examples of measurement results



BiTLAN® U/UTP cat.5e outdoor

200 MHz

Data transmission cable suitable
for external applications



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temp: -10 °C

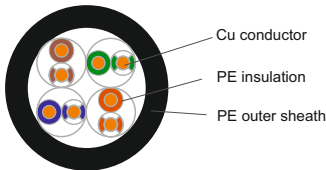
Electrical parameters:

Conductor diameter: 0,5 ± 0,015 mm
Insulated core diameter: 0,83 ± 0,03 mm
DC loop resistance at 20 °C (max):
190 Ω/km
Insulation resistance (min): 5 GΩ x km
Resistance unbalance within a pair: ≤ 2%
Mutual capacitance at 1 kHz: 50 ± 5 nF/km
Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km
Nominal voltage: 150 V
Test voltage at 1 min:
AC 50 Hz: 700 V
DC: 1000 V
Characteristic impedance at 100 MHz:
100 ± 5 Ω
NVP value: 69 %
Return loss dB (min):
f = 4 + 10 MHz: 20 + 5 x log₁₀(f)
f = 10 + 20 MHz: 25
f = 20 + 200 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø
during installation: ≥ 8 x Ø



Design:

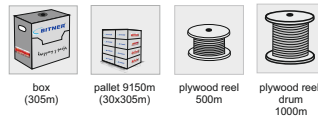
Conductors: solid round copper conductors
Insulation: special polyolefin compound
Core identification: wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn
Core arrangement: cores twisted in pairs, pairs twisted together
Outer sheath: polyethylene PE
Outer sheath colour: black

Marking: BITNER BiTLAN U/UTP 4x2x24AWG(0,5) cat.5e outdoor 200MHz
EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS
www.bitner.com.pl meters

Application:

BiTLAN U/UTP cat.5e outdoor 200MHz cables are applicable to computer networks with operating frequency band up to 200MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1Gb/s. Dedicated for fixed installations within outdoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks not exposed to external electromagnetic interferences. UV resistant outer sheath enables external application. Cables classified according to **EN 50757 (CPR)**.

Packaging:



Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50757	Cable weight [kg]	Bandwidth [MHz]
TI0060	U/UTP cat.5e outdoor	24AWG(0,5)	5,7	Fca	32	200

*Outer diameter tolerance: +/-5%
Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] U/UTP cat.5e outdoor

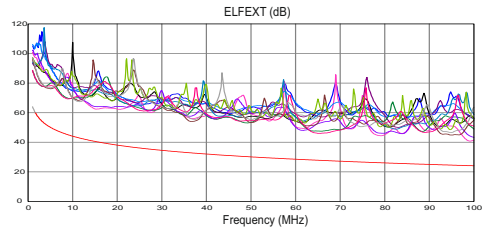
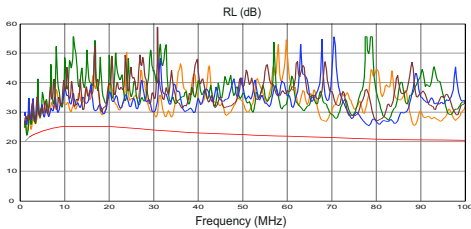
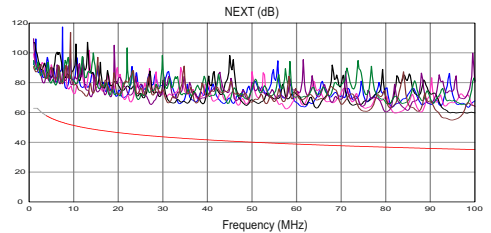
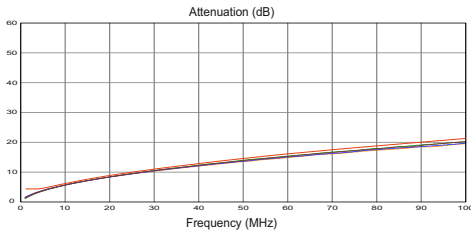
200 MHz

Data transmission cable suitable
for external applications

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	130	155	175	200
Attenuation \leq dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT \geq dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT \geq dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT \geq dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT \geq dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

Transmission parameters graphs - examples of measurement results



BiTLAN® U/UTPs cat.5e outdoor



200 MHz

Data transmission cable suitable
for external applications with self-supporting element



external application



data transmission



UV resistance

oil resistant
EN 60811-2-1

self-supporting

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,5 ± 0,015 mm
Insulated core diameter: 0,83 ± 0,03 mm
DC loop resistance at 20 °C (max):
190 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2%

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC 50Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 69 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 200 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together

Self-supporting element:

galvanized steel wire

Outer sheath:

polyethylene PE

Outer sheath colour:

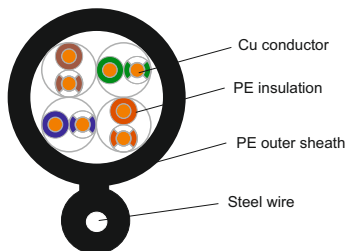
black

Marking: BITNER BiTLAN U/UTPs 4x2x24AWG(0,5) cat.5e outdoor 200MHz
EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID co. CE RoHS
www.bitner.com.pl meters

Application:

BiTLAN U/UTPs cat.5e outdoor 200MHz cables are applicable to computer networks with operating frequency band up to 200MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1Gb/s. Dedicated for fixed installations within outdoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards. UV resistant outer sheath enables external application in self-supporting installations. Cables classified according to **EN 50575 (CPR)**.

Packaging:

plywood reel
500mplywood reel/
drum
1000m

Cu conductor

PE insulation

PE outer sheath

Steel wire

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10061	U/UTPs cat.5e outdoor	24AWG(0,5)	10,3x5,3	Fca	53	200

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

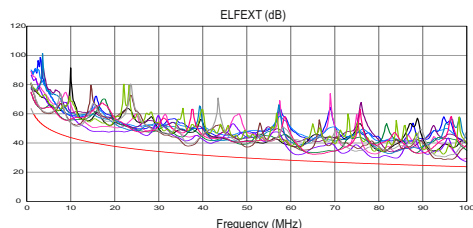
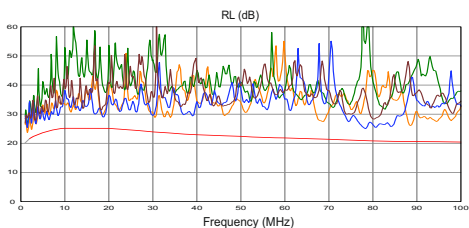
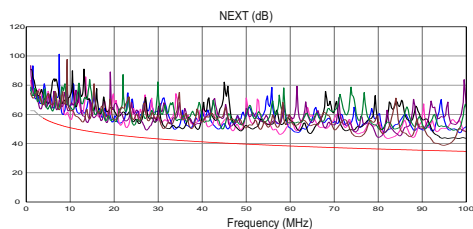
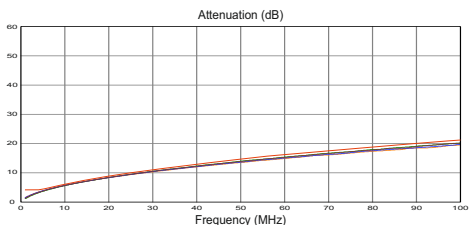
BiTLAN[®] U/UTPs cat.5e outdoor

200 MHz Data transmission cable suitable for external applications with self-supporting element

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	130	155	175	200
Attenuation \leq dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT \geq dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT \geq dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT \geq dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT \geq dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

Transmission parameters graphs - examples of measurement results



BiTLAN[®] U/UTP cat.5e outdoor

200 MHz

Data transmission cable suitable
for external applications, jelly filled



BITNER BiTLAN U/UTP 4x2x24AWG(0,5) cat. 5e outdoor 200MHz



internal application



external application



data transmission



UV resistance



oil resistant
EN 60811-2-1

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,5 ± 0,015 mm

Insulated core diameter: 0,98 ± 0,01 mm

DC loop resistance at 20 °C (max):

190 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 67 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 200 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together

Filling:

hydrophobic jelly filling

Outer sheath:

polyethylene PE

Outer sheath colour:

black

Marking: BITNER BiTLAN U/UTP 4x2x24AWG(0,5) cat.5e outdoor 200MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN U/UTP cat.5e outdoor 200MHz cables are applicable to computer networks with operating frequency band up to 200MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1Gb/s. Dedicated for fixed installations within outdoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards. Cables are filled with hydrophobic gel preventing water ingress and have UV resistant outer sheath allowing external application as well as direct burial. Cables classified according to **EN 50575 (CPR)**.

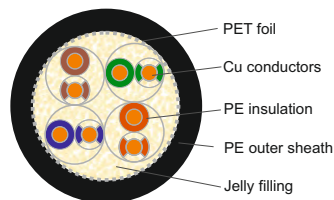
Packaging:



plywood reel
500m



plywood reel/
drum
1000m



Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0012	U/UTP cat.5e outdoor	24AWG(0,5)	6,2	Fca	42	200

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] U/UTPf cat.5e outdoor

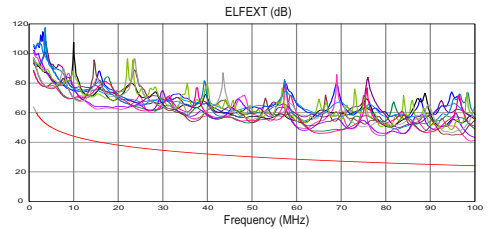
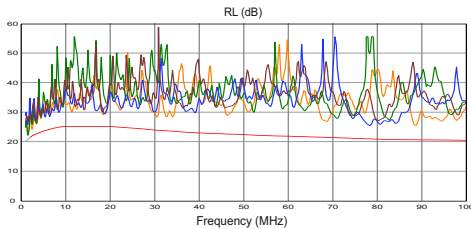
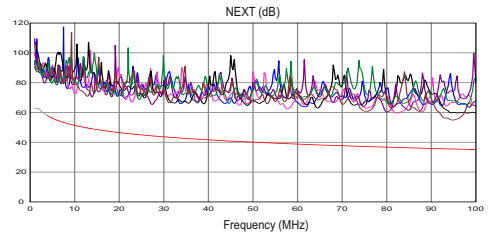
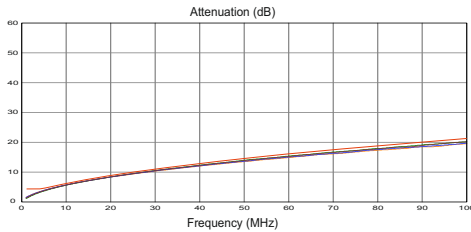
200 MHz

Data transmission cable suitable
for external applications, jelly filled

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	130	155	175	200
Attenuation \leq dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT \geq dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT \geq dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT \geq dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT \geq dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

Transmission parameters graphs - examples of measurement results



BiTLAN[®] U/UTPfs cat.5e outdoor

RoHS 2015/863/EU



LVD 2014/35/EU

CPR

CPR 305/2011

24 months warranty

200 MHz

Data transmission cable suitable for external applications,
jelly filled with self-supporting element

BITNER BiTLAN U/UTPfs 4x2x24AWG(0,5) cat. 5e outdoor 200MHz



internal application



external application



data transmission



UV resistance



oil resistant
EN 60811-2-1



jelly filling

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,5 ± 0,015 mm

Insulated core diameter: 0,98 ± 0,03 mm

DC loop resistance at 20 °C (max):
190 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 67 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 200 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together

Filling:

hydrophobic jelly filling

Outer sheath:

polyethylene PE

Outer sheath colour:

black

Marking: BITNER BiTLAN U/UTPfs 4x2x24AWG(0,5) cat.5e outdoor 200MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN U/UTPfs cat.5e outdoor 200MHz cables are applicable to computer networks with operating frequency band up to 200 MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1 Gb/s. Dedicated for fixed installations within outdoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards. Cables are filled with hydrophobic gel preventing water ingress and have UV resistant outer sheath and galvanized steel wire element allowing external application in self-supporting constructions as well as direct burial. Cables classified according to EN 50575 (CPR).

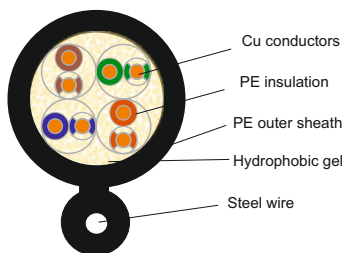
Packaging:



plywood reel
500m



plywood reel/
drum
1000m



Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10012	U/UTPfs cat.5e outdoor	24AWG(0,5)	12,6 x 6,5	Fca	66	200

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] U/UTPs cat.5e outdoor

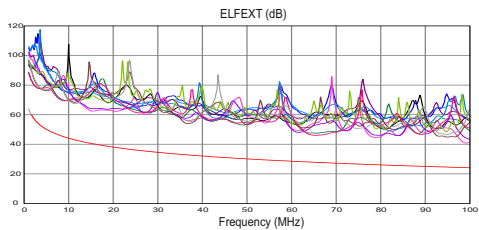
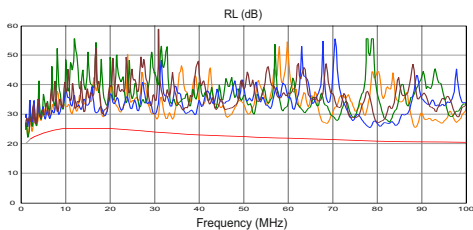
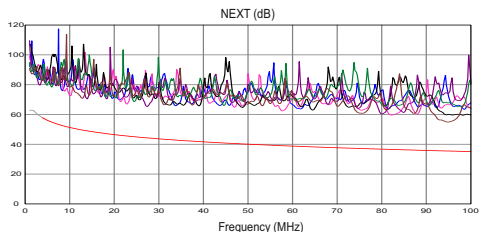
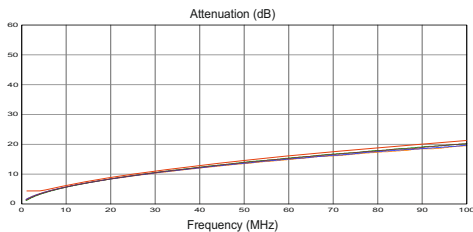
200 MHz

Data transmission cable suitable for external applications,
jelly filled with self-supporting element

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	130	155	175	200
Attenuation \leq dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT \geq dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT \geq dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT \geq dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT \geq dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

Transmission parameters graphs - examples of measurement results



BiTLAN[®]F/UTP cat.5e outdoor

200 MHz

Data transmission cable, screened, suitable for external applications



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temp: -10 °C

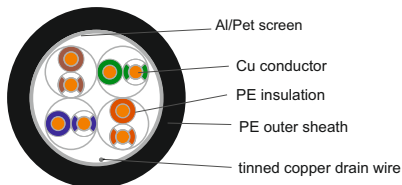
Electrical parameters:

Conductor diameter: 0,5 ± 0,015 mm
Insulated core diameter: 0,92 ± 0,03 mm
DC loop resistance at 20 °C (max):
190 Ω/km
Insulation resistance (min): 5 GΩ x km
Resistance unbalance within a pair: ≤ 2 %
Mutual capacitance at 1 kHz: 50 ± 5nF/km
Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km
Nominal voltage: 150 V
Test voltage at 1 min.:
AC 50 Hz: 700 V
DC: 1000 V
Characteristic impedance at 100 MHz:
100 ± 5 Ω
NVP value: 67 %
Return loss dB (min):
f = 4 + 10 MHz: 20 + 5 x log₁₀(f)
f = 10 + 20 MHz: 25
f = 20 + 200 MHz: 25 - 7 x log₁₀(f/20)
Coupling attenuation within the range of 30 + 100 MHz (min.): 50 dB
Transfer impedance at 10 MHz (max):
100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø
during installation: ≥ 8 x Ø



Design:

Conductors: solid round copper conductors
Insulation: special polyolefin compound
Core identification: wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn
Core arrangement: cores twisted in pairs, pairs twisted together
Screen: Al/Pet screen with tinned copper drain wire
Outer sheath: polyethylene PE
Outer sheath colour: black

Marking: BITNER BiTLAN F/UTP 4x2x24AWG(0,5) cat.5e outdoor 200MHz
EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS
www.bitner.com.pl meters

Application:

BiTLAN F/UTP cat.5e outdoor 200MHz outdoor cables are applicable to computer networks with operating frequency band up to 200MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1Gb/s. Dedicated for fixed installations within outdoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. UV resistant outer sheath enables external application. Cables classified according to **EN 50575 (CPR)**.

Packaging:

plywood reel
500mplywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10051	F/UTP cat.5e outdoor	24AWG(0,5)	6,8	Fca	40	200

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] F/UTP cat.5e outdoor

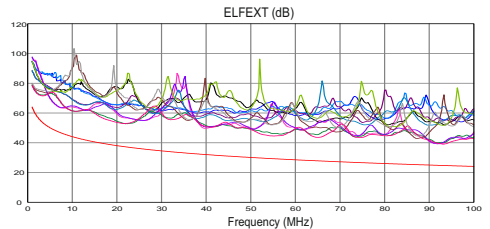
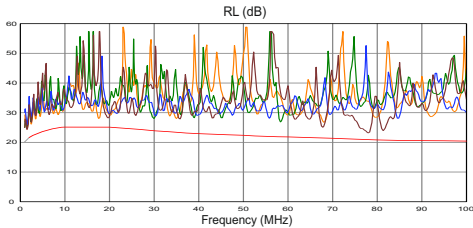
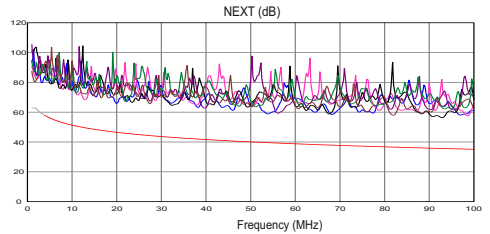
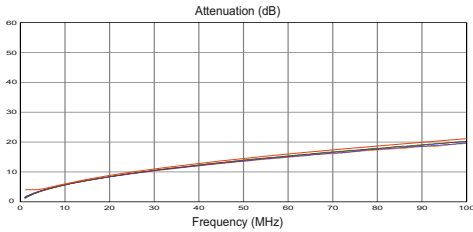
200 MHz

Data transmission cable, screened, suitable for external applications

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	130	155	175	200
Attenuation \leq dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT \geq dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT \geq dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT \geq dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT \geq dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

Transmission parameters graphs - examples of measurement results



BiTLAN[®] F/UTPs cat.5e outdoor



200 MHz

Data transmission cable, screened and suitable for external applications with self-supporting element



external application



data transmission



UV resistance



oil resistant
EN 60811-2-1



self-supporting

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temp: -10 °C

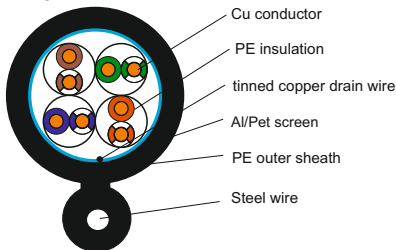
Electrical parameters:

Conductor diameter: 0,5 ± 0,015 mm
Insulated core diameter: 0,92 ± 0,03 mm
DC loop resistance at 20 °C (max): 190 Ω/km
Insulation resistance (min): 5 GΩ x km
Resistance unbalance within a pair: ≤ 2 %
Mutual capacitance at 1 kHz (max): 50 ± 5 nF/km
Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km
Nominal voltage: 150 V
Test voltage at 1 min.:
AC 50 Hz: 700 V
DC: 1000 V
Characteristic impedance at 100 MHz: 100 ± 5 Ω
NVP value: 69 %
Return loss dB (min):
f = 4 + 10 MHz: 20 + 5 x log₁₀(f)
f = 10 + 20 MHz: 25
f = 20 + 200 MHz: 25 - 7 x log₁₀(f/20)
Coupling attenuation within the range of 30 + 100 MHz (min.): 55 dB
Transfer impedance at 10 MHz (max): 100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø
during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together

Screen:

Al/Pet screen with tinned copper drain wire

Self-supporting element:

galvanized steel wire

Outer sheath:

polyethylene PE

Outer sheath colour:

black

Marking: BITNER BiTLAN F/UTPs 4x2x24AWG(0,5) cat.5e outdoor 200MHz
EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl
meters

Application:

BiTLAN F/UTPs cat.5e outdoor 200MHz cables are applicable to computer networks with operating frequency band up to 200 MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1 Gb/s. Additional collective Al/Pet screen with CuSn drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within outdoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards. UV resistant outer sheath enables external application in self-supporting installations. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10062	F/UTPs cat.5e outdoor	24AWG(0,5)	6,5x10,7	Fca	61	200

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] F/UTPs cat.5e outdoor

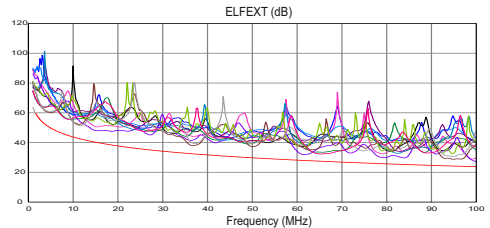
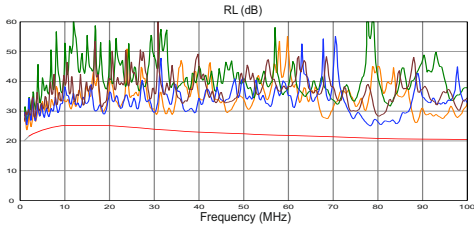
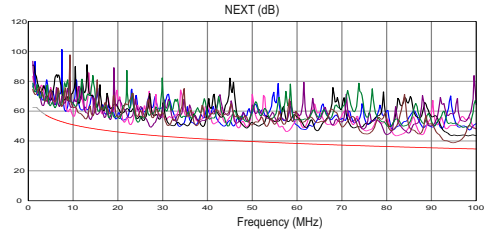
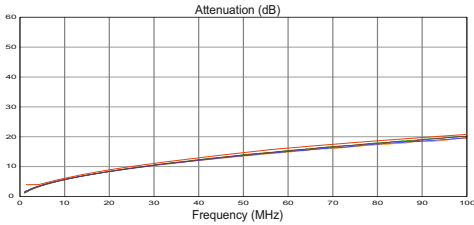
200 MHz

Data transmission cable, screened and suitable for external applications with self-supporting element

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	130	155	175	200
Attenuation ≤ dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT ≥ dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT ≥ dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT ≥ dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT ≥ dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

Transmission parameters graphs - examples of measurement results



BiTLAN[®] F/UTPf cat.5e outdoor

200 MHz

Data transmission cable, screened and suitable for external applications



external application



data transmission



UV resistance



oil resistant
EN 60811-2-1



self-supporting

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temp: -10 °C

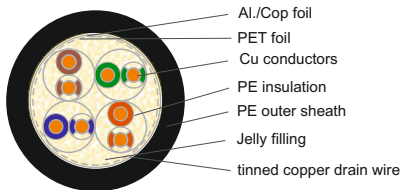
Electrical parameters:

Conductor diameter: 0,5 ± 0,015 mm
Insulated core diameter: 1,05 ± 0,03 mm
DC loop resistance at 20 °C (max): 190 Ω/km
Insulation resistance (min): 5 GΩ x km
Resistance unbalance within a pair: ≤ 2 %
Mutual capacitance at 1 kHz (max): 50 ± 5 nF/km
Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km
Nominal voltage: 150 V
Test voltage at 1 min.:
AC 50 Hz: 700 V
DC: 1000 V
Characteristic impedance at 100 MHz: 100 ± 5 Ω
NVP value: 67 %
Return loss dB (min):
f = 4 + 10 MHz: 20 + 5 x log₁₀(f)
f = 10 + 20 MHz: 25
f = 20 + 200 MHz: 25 - 7 x log₁₀(f/20)
Coupling attenuation within the range of 30 + 100 MHz (min.): 55 dB
Transfer impedance at 10 MHz (max): 100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø
during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together

Filling:

hydrophobic jelly filling

Screen:

Al./Cop foil with tinned copper drain wire

Outer sheath:

polyethylene PE

Outer sheath colour:

black

Marking: BITNER BiTLAN F/UTPf 4x2x24AWG(0,5) cat.5e outdoor 200MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN F/UTPs cat.5e outdoor 200MHz cables are applicable to computer networks with operating frequency band up to 200 MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1 Gb/s. Dedicated for fixed installations within outdoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards. Additional collective Al/Cop screen with tinned copper drain wire acts as a protection against external electromagnetic interferences and as a moisture barrier. Cables are filled with hydrophobic gel preventing water ingress and have UV resistant outer sheath allowing external application as well as direct burial. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10013	F/UTPf cat.5e outdoor	24AWG(0,5)	7,4	Fca	53	200

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] F/UTPf cat.5e outdoor

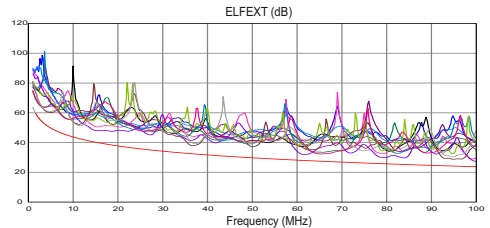
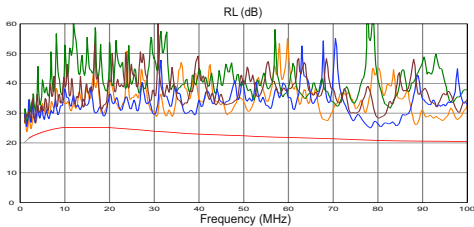
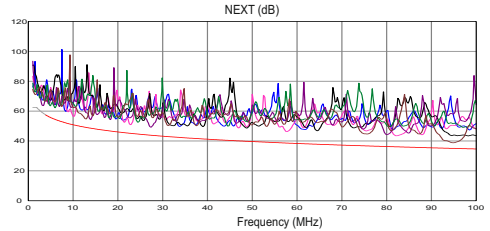
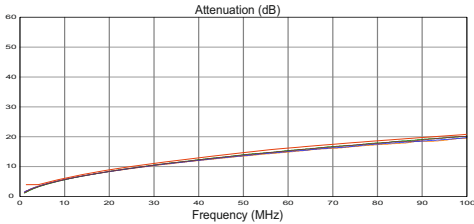
200 MHz

Data transmission cable, screened and suitable for external applications

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	130	155	175	200
Attenuation \leq dB/100m	2,1	4,0	6,3	8,0	9,0	11,2	13,9	16,2	18,9	21,3	23,6	24,7	27,2	29,2	31,5
NEXT \geq dB	65,3	56,3	50,3	47,2	45,8	43,1	40,5	38,6	36,7	35,3	34,1	33,6	32,4	31,6	30,8
PS NEXT \geq dB	62,3	53,3	47,3	44,2	42,8	40,1	37,5	35,6	33,8	32,3	31,1	30,6	29,5	28,6	27,8
ELFEXT \geq dB/100m	63,8	51,8	43,8	39,7	37,8	34,3	30,7	28,2	25,7	23,8	22,2	21,5	20,0	19,0	17,8
PS ELFEXT \geq dB/100m	60,8	48,8	40,8	36,7	34,8	31,3	27,7	25,2	22,7	20,8	19,2	18,5	17,0	16,0	14,8
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	19,3	18,8	18,4	18,0

Transmission parameters graphs - examples of measurement results



BiTLAN[®] U/UTP PATCHCORD

cat.5e

Data transmission patchcord cable

BITNER BiTLAN U/UTP PATCHCORD CABLE 4x2x26/7AWG cat. 5e



internal application



EN 60332-1-2



data transmission



RoHS 2015/863/EU



LVD 2014/35/EU



CPR 305/2011



24 months warranty

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

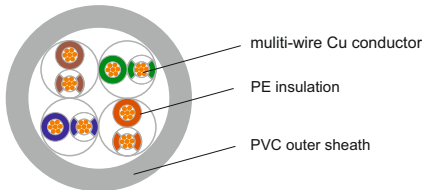
Electrical parameters:

Conductor cross-section: 26/7 AWG
Insulated core diameter: 0,88 ± 0,03 mm
DC loop resistance at 20 °C (max): 260 Ω/km
Insulation resistance (min): 5 GΩ x km
Resistance unbalance within a pair: ≤ 2 %
Mutual capacitance at 1 kHz: 50 ± 5 nF/km
Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km
Test voltage at 1 min.:
AC 50 Hz: 700 V
DC: 1000 V
Characteristic impedance at 100 MHz:
100 ± 5 Ω
NVP value: 67 %
Return loss dB (min):
f = 4 + 10 MHz: 20 + 5 x log₁₀(f)
f = 10 + 20 MHz: 25
f = 20 + 100 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø
during installation: ≥ 8 x Ø



Design:

Conductors:

multi-wire round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together

Outer sheath:

PVC compound

Outer sheath colour:

grey RAL 7035 other colours available on customer's request

Marking: BITNER BiTLAN U/UTP PATCHCORD CABLE 4x2x26/7AWG cat.5e
EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID co. CE RoHS
www.bitner.com.pl meters

Application:

BiTLAN U/UTP PATCHCORD cat.5e are designed for use in computer networks in frequency range up to 100MHz, with binary bandwidth up to 1Gb/s. The cables are used to connect computers with telecommunication sockets and other devices, both active (switches, routers) as well as passive (patch panel concentrators) of the LAN computer network. Cables meet the requirements of EN 50173-1, ISO / IEC 11801, ANSI/ TIA568-C.2. Cables classified in accordance with **EN 50575 (CPR)**.

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10016	U/UTP PATCHCORD cat.5e	26/7AWG	4,8	Fca	26	100

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BITLAN[®] F/UTP PATCHCORD

cat.5e

Data transmission patchcord cable, screened



LAN cables

BITNER BITLAN F/UTP PATCHCORD CABLE 4x2x26/7AWG cat. 5e



internal application



EN 60332-1-2



data transmission

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor cross-section: 26/7 AWG
Insulated core diameter: 0,92 ± 0,03 mm
DC loop resistance at 20 °C (max): 260 Ω/km
Insulation resistance (min): 5 GΩ x km
Resistance unbalance within a pair: ≤ 2 %
Mutual capacitance at 1 kHz: 50 ± 5 nF/km
Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km
Test voltage at 1 min.:
AC 50 Hz: 700 V
DC: 1000 V

Characteristic impedance at 100 MHz:
100 ± 5 Ω

NVP value: 67 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 100 MHz: 25-7 x log₁₀(f/20)

Coupling attenuation within the range of 30 + 100 Mhz (min.): 55 dB

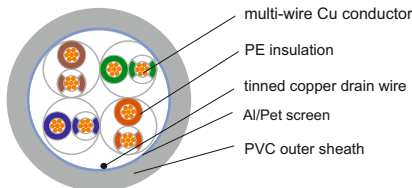
Transfer impedance at 100 MHz (max):
100 mΩ/m.

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Design:

Conductors:

multi-wire round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together

Screen:

aluminium backed polyester tape and tinned copper drain wire

Outer sheath:

PVC compound

Outer sheath colour:

grey RAL 7035 other colours available on customer's request

Marking: BITNER BITLAN F/UTP PATCHCORD CABLE 4x2x26/7AWG cat.5e
EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS
www.bitner.com.pl meters

Application:

BITLAN U/UTP PATCHCORD cat.5e are designed for use in computer networks in frequency range up to 100MHz, with binary bandwidth up to 1Gb/s. Additional collective Al/Pet screen with drain wire acts as a protection against external electromagnetic interferences. The cables are used to connect computers with telecommunication sockets and other devices, both active (switches, routers) as well as passive (patch panel concentrators) of the LAN computer network. Cables meet the requirements of EN 50173-1, ISO / IEC 11801, ANSI / TIA 568-C.2. Cables classified in accordance with EN 50575 (CPR).

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10017	F/UTP PATCHCORD cat.5e	26/7AWG	5,9	Fca	35	100

*Outer diameter tolerance: +/-5%

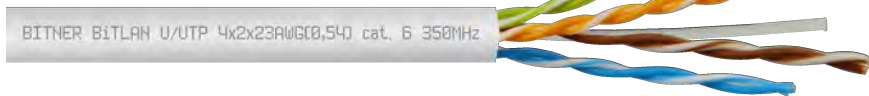
Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] U/UTP cat.6 350 MHz



LAN cables

Data transmission cable



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,54 ± 0,015 mm

Insulated core diameter: 0,99 ± 0,03 mm

DC loop resistance at 20 °C (max):

165 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC: 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 67 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

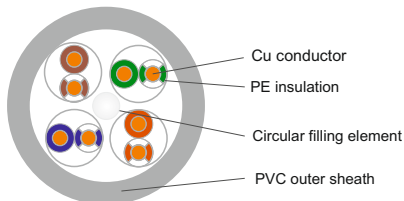
f = 20 + 350 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters:

Bending radius:

during operation: ≥ 4 x Ø

during installation: ≥ 6 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or,wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together with a circular filling element

Outer sheath:

PVC compound

Outer sheath colour:

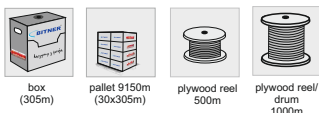
grey RAL 7035, other colours available on customer's request

Marking: BITNER BiTLAN U/UTP 4x2x23AWG(0,54) cat.6 350MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN U/UTP cat.6 350MHz cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1 Gb/s. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks not exposed to external electromagnetic interferences. Cables classified according to **EN 50575 (CPR)**.

Packaging:



Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10044	U/UTP cat.6	23AWG(0,54)	5,8	Eca	38	350

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

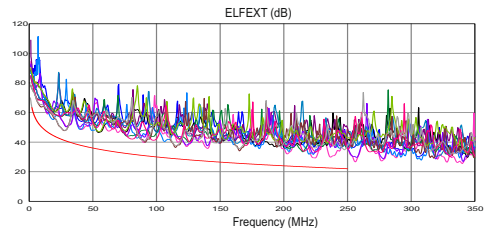
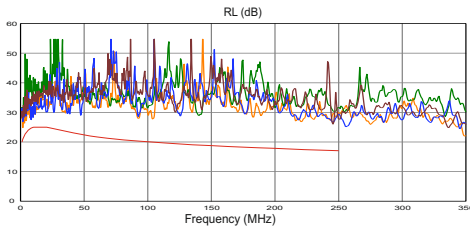
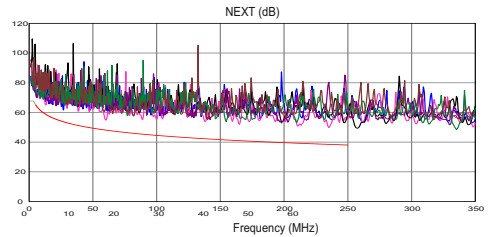
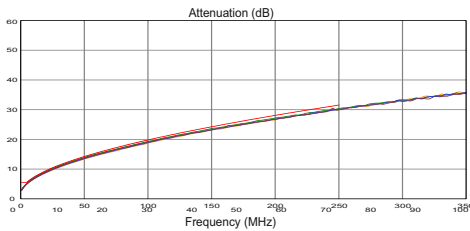
BiTLAN[®] U/UTP cat.6 350 MHz

Data transmission cable

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation \leq dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT \geq dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT \geq dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT \geq dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT \geq dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

Transmission parameters graphs - examples of measurement results



BiTLAN® F/UTP cat.6 350 MHz



LAN cables

Data transmission cable, screened

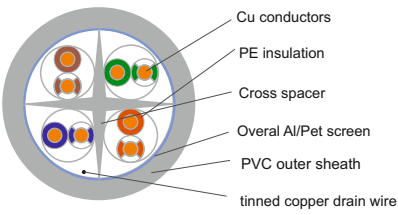


Technical data:

Thermal parameters:
Temperature range:
 operating temperature: -30 °C to 70 °C
 min. installation temp: -10 °C

Electrical parameters:
Conductor diameter: 0,54 ± 0,015 mm
Insulated core diameter: 1,06 ± 0,03 mm
DC loop resistance at 20 °C (max):
 165 Ω/km
Insulation resistance (min): 5 GΩ x km
Resistance unbalance within a pair: ≤ 2 %
Mutual capacitance at 1 kHz: 50 ± 5 nF/km
Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km
Nominal voltage: 150 V
Test voltage at 1 min.:
 AC 50 Hz: 700 V
 DC: 1000 V
Characteristic impedance at 100 MHz:
 100 ± 5 Ω
NVP value: 69 %
Return loss dB (min):
 f = 4 + 10 MHz: 20 + 5 x log₁₀(f)
 f = 10 + 20 MHz: 25
 f = 20 + 350 MHz: 25 - 7 x log₁₀(f/20)
Coupling attenuation within the range of 30 + 100 MHz (min.): 55 dB
Transfer impedance at 10 MHz (max):
 100 mΩ/m.

Mechanical parameters:
Bending radius:
 during operation: ≥ 6 x Ø
 during installation: ≥ 8 x Ø



Design:

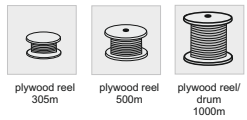
Conductors: solid round copper conductors
Insulation: special polyolefin compound
Core identification: wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn
Core arrangement: cores twisted in pairs, pairs twisted together with a cross spacer
Screen: Al/Pet screen with tinned copper drain wire
Outer sheath: PVC compound
Outer sheath colour: grey RAL 7035, other colours available on customer's request

Marking: BITNER BiTLAN F/UTP 4x2x23AWG(0,54) cat.6 350MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN F/UTP cat.6 350MHz cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1Gb/s. Additional collective Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables classified according to **EN 50575 (CPR)**.

Packaging:



Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0048	F/UTP cat.6	23AWG (0,54)	7,2	Eca	51	350

*Outer diameter tolerance: +/-5%
 Cable Factory BITNER reserves the right to modify the specifications without prior notice

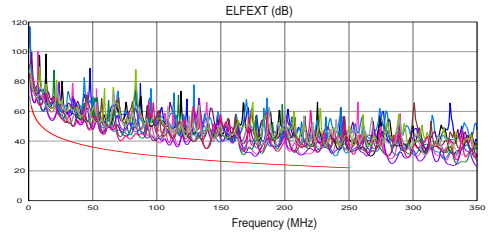
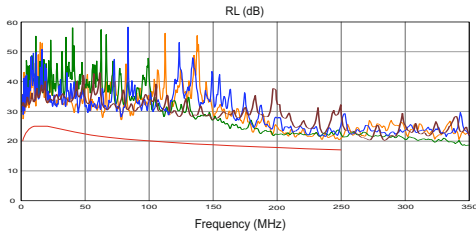
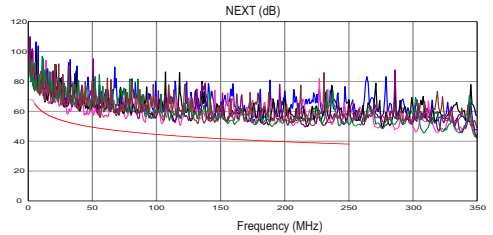
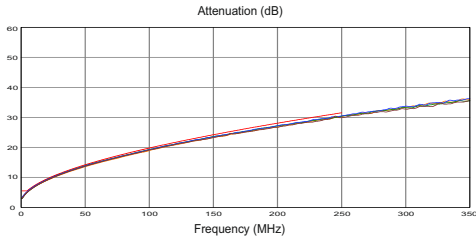
BiTLAN[®]F/UTP cat.6 350 MHz

Data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation ≤ dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT ≥ dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT ≥ dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT ≥ dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT ≥ dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] U/FTP cat.6 350 MHz



Data transmission cable, screened

BITNER BiTLAN U/FTP 4x2x23AWG(0,54) cat. 6 350MHz



LAN cables



internal application



EN 60332-1-2



data transmission

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,54 ± 0,015 mm

Insulated core diameter: 1,25 ± 0,03 mm

DC loop resistance at 20 °C (max):
165 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 ÷ 10 MHz: 20 + 5 x log₁₀(f)

f = 10 ÷ 20 MHz: 25

f = 20 ÷ 350 MHz: 25 - 7 x log₁₀(f/20)

Coupling attenuation within the range of 30 ÷ 100 MHz (min.): 55 dB

Transfer impedance at 10 MHz (max):

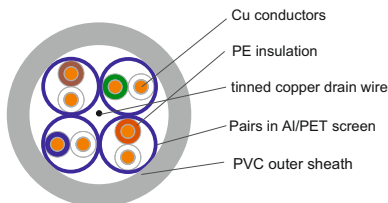
100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together with CuSn drain wire

Screen:

aluminium backed polyester tape on every pair

Outer sheath:

PVC compound

Outer sheath colour:

grey RAL 7035, other colours available on customer's request

Marking: BITNER BiTLAN U/FTP 4x2x23AWG(0,54) cat.6 350MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN U/FTP cat.6 350MHz cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1Gb/s. Additional individual Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
305m



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10082	U/FTP cat.6	23AWG	7,1	Eca	50	350

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

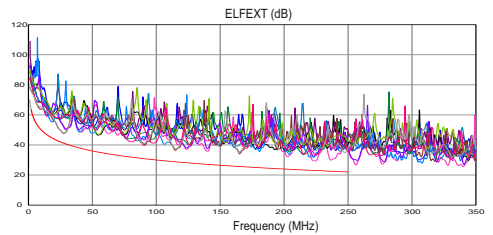
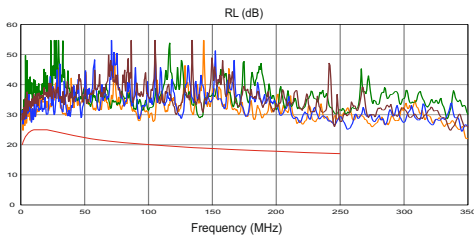
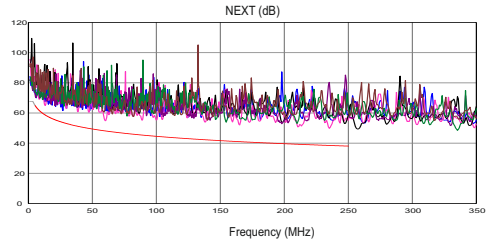
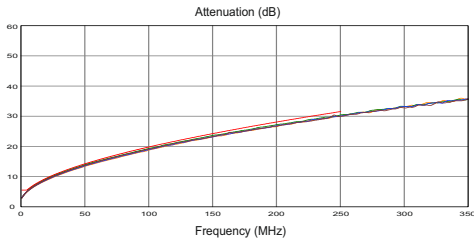
BiTLAN[®] U/FTP cat.6 350 MHz

Data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation ≤ dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT ≥ dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT ≥ dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT ≥ dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT ≥ dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

Transmission parameters graphs - examples of measurement results



BiTLAN® U/UTP cat.6 350 MHz

LSOH Halogen-free, data transmission cable



BITNER BiTLAN U/UTP 4x2x23AWG(0,54) cat. 6 350MHz LSOH



internal application



EN 60332-1-2



data transmission



halogen-free
EN 60754



low smoke emission
EN 61034

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,54 ± 0,015 mm

Insulated core diameter: 0,99 ± 0,03 mm

DC loop resistance at 20 °C (max):
165 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 67 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 350 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or,wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together with a circular filling element

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

Marking: BITNER BiTLAN U/UTP 4x2x23AWG(0,54) cat.6 350MHz LSOH
EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS
www.bitner.com.pl meters

Application:

BiTLAN U/UTP cat.6 350MHz LSOH cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1Gb/s. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks not exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:



box
(305m)



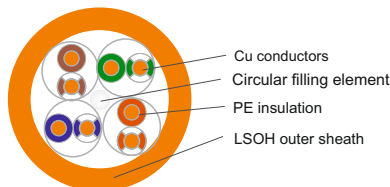
pallet 9150m
(30x305m)



plywood reel
500m



plywood reel/
drum
1000m



Cu conductors

Circular filling element

PE insulation

LSOH outer sheath

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10049	U/UTP cat.6 LSOH	23AWG(0,54)	5,8	Dca	38	350

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

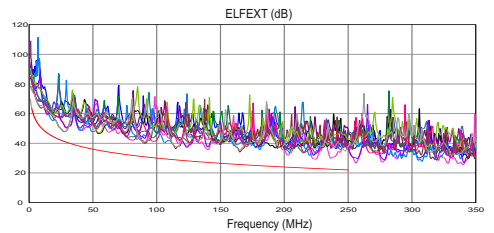
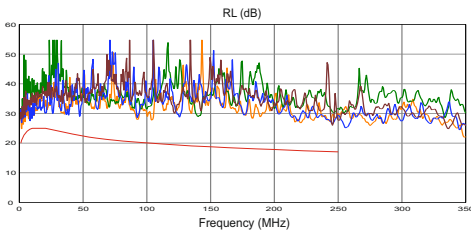
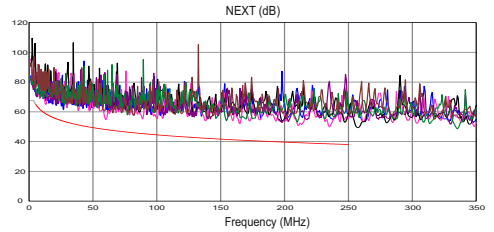
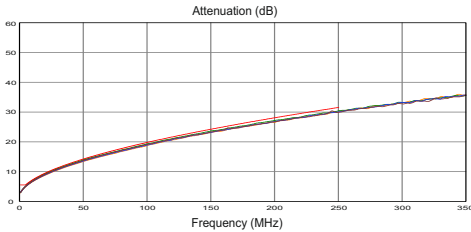
BiTLAN[®] U/UTP cat.6 350 MHz

LSOH Halogen-free, data transmission cable

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation ≤ dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT ≥ dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT ≥ dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT ≥ dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT ≥ dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] F/UTP cat.6 350 MHz

LSOH Halogen-free, data transmission cable, screened



BITNER BITLAN F/UTP 4x2x23AWG(0,54) cat. 6 350MHz LSOH



internal application



EN 60332-1-2



data transmission



halogen-free
EN 60754



low smoke emission
EN 61034

Technical data:

Thermal parameters

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters

Conductor diameter: 0,54 ± 0,015 mm

Insulated core diameter: 1,06 ± 0,03 mm

DC loop resistance at 20 °C (max):

165 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 67 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 350 MHz: 25 - 7 x log₁₀(f/20)

Coupling attenuation within the range

of 30 + 100 MHz (min.): 55 dB

Transfer impedance at 10 MHz (max):

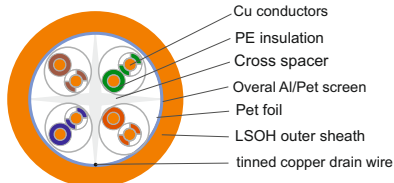
100 mΩ/m

Mechanical parameters

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together with a cross spacer

Screen:

aluminium backed polyester tape and tinned copper drain wire

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

Marking: BITNER BITLAN F/UTP 4x2x23AWG(0,54) cat.6 350MHz LSOH

EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS

www.bitner.com.pl meters

Application:

BiTLAN F/UTP cat.6 350MHz LSOH cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1Gb/s. Additional collective Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2 should be installed in places with increased fire safety requirements. Cables classified according to EN 50575 (CPR).

Packaging:



plywood reel
305m



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0050	F/UTP cat.6 LSOH	23AWG(0,54)	7,3	Dca	52	350

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®]F/UTP cat.6 350 MHz

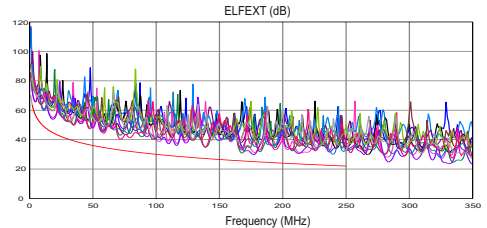
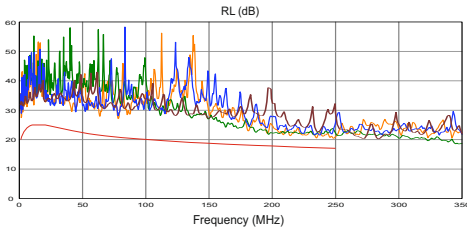
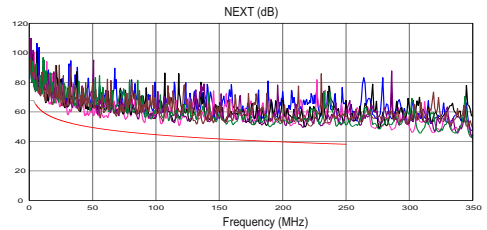
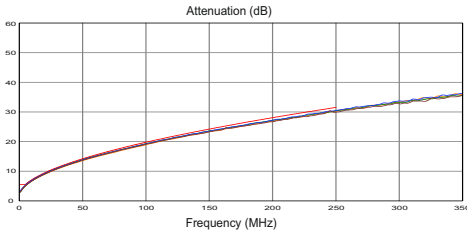
LSOH

Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation ≤ dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT ≥ dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT ≥ dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT ≥ dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT ≥ dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] U/FTP cat.6 350 MHz

LSOH Halogen-free, data transmission cable, screened



BITNER BiTLAN U/FTP 4x2x23AWG(0,54) cat. 6 350MHz LSOH



internal application



EN 60332-1-2



data transmission



halogen-free
EN 60754



low smoke emission
EN 61034

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,54 ± 0,015 mm

Insulated core diameter: 1,25 ± 0,03 mm

DC loop resistance at 20 °C (max):

165 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 ÷ 10 MHz: 20 + 5 x log₁₀(f)

f = 10 ÷ 20 MHz: 25

f = 20 ÷ 350 MHz: 25 - 7 x log₁₀(f/20)

Coupling attenuation within the range of 30 ÷ 100 MHz (min.): 55 dB

Transfer impedance at 10 MHz (max):

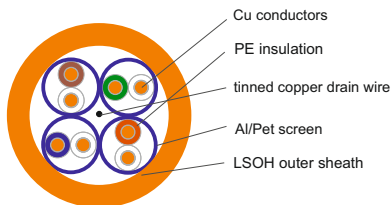
100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Cu conductors

PE insulation

tinned copper drain wire

Al/Pet screen

LSOH outer sheath

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together

with tinned copper drain wire

Screen:

aluminium backed polyester tape on every pair

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

Marking: BITNER BiTLAN U/FTP 4x2x23AWG(0,54) cat.6 350MHz LSOH

EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS

www.bitner.com.pl meters

Application:

BiTLAN U/FTP cat.6 350MHz LSOH cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1Gb/s. Additional individual Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
305m



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0083	U/FTP cat.6 LSOH	23AWG	7,1	Dca	50	350

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

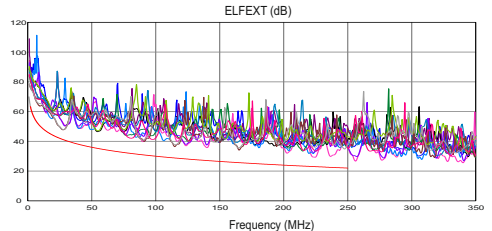
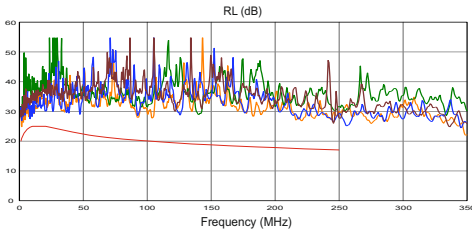
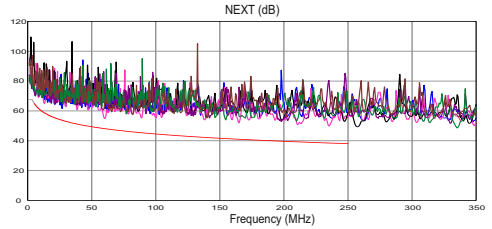
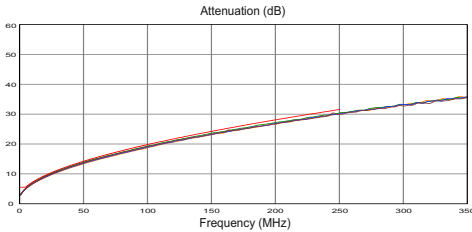
BiTLAN[®] U/FTP cat.6 350 MHz

LSOH Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation ≤ dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT ≥ dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT ≥ dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT ≥ dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT ≥ dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] F/FTP cat.6 350 MHz

LSOH Halogen-free, data transmission cable, screened



internal application



EN 60332-1-2



data transmission

halogen-free
EN 60754low smoke emission
EN 61034

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,54 ± 0,015 mm

Insulated core diameter: 1,24 ± 0,03 mm

DC loop resistance at 20 °C (max):

145 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 × log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 350 MHz: 25 - 7 × log₁₀(f/20)

Coupling attenuation within the range of 30 + 100 MHz (min.): 55 dB

Transfer impedance at 10 MHz (max):

100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 × Ø

during installation: ≥ 8 × Ø

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together

Screen 1:

aluminium backed polyester tape on every pair and

tinned copper drain wire

Screen 2:

aluminium backed polyester tape

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's

request

Marking: BITNER BiTLAN F/FTP 4x2x23AWG(0,54) cat.6 350MHz LSOH

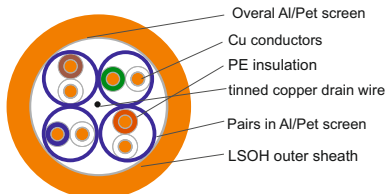
EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS

www.bitner.com.pl meters

Application:

BiTLAN F/FTP cat.6 350MHz LSOH cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1Gb/s. Additional individual and collective Al/Pet screens with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1 (2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2 should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:

plywood reel
305mplywood reel
500mplywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10111	F/FTP cat.6 LSOH	23AWG(0,5)	7,7	Dca	59	350

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

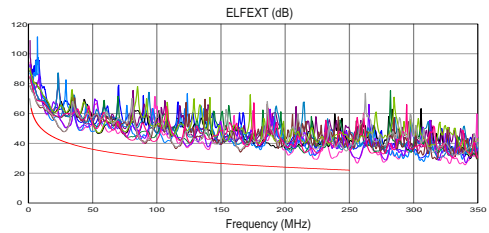
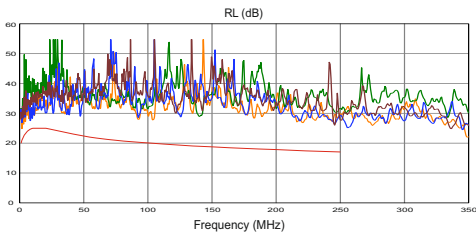
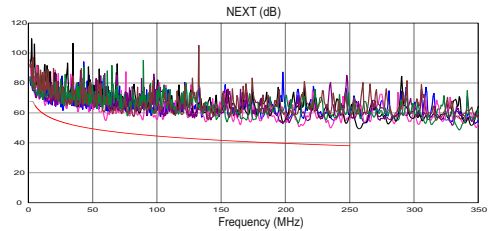
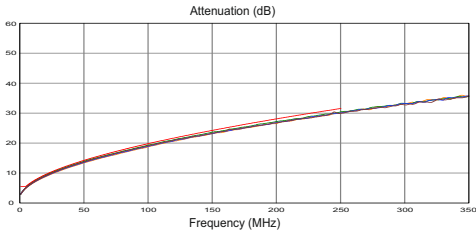
BiTLAN[®] F/FTP cat.6 350 MHz

LSOH Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation ≤ dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT ≥ dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT ≥ dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT ≥ dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT ≥ dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] U/UTP cat.6 outdoor

350 MHz

Data transmission cable suitable for external applications



BITNER BiTLAN U/UTP 4x2x23AWG(0,54) cat. 6 outdoor 350MHz



underground installation



external application



data transmission



UV resistance



oil resistant
EN 60811-2-1

Technical data:

Thermal parameters

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temp: -10 °C

Electrical parameters

Conductor diameter: 0,54 ± 0,015 mm

Insulated core diameter: 0,96 ± 0,03 mm

DC loop resistance at 20 °C (max):
165 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC: 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 67 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 350 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters

Bending radius:

during operation: ≥ 4 x Ø

during installation: ≥ 6 x Ø

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together with a circular filling element

Outer sheath:

polyethylene PE

Outer sheath colour:

black

Marking: BITNER BiTLAN U/UTP 4x2x23AWG(0,54) cat.6 outdoor 350MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN U/UTP cat.6 outdoor 350MHz cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1 Gb/s. Dedicated for fixed installations within outdoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards. Cables are filled with hydrophobic gel preventing water ingress and have UV resistant outer sheath allowing external application as well as direct burial. Cables classified according to **EN 50575 (CPR)**.

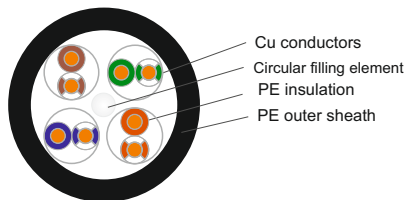
Packaging:



plywood reel
500m



plywood reel/
drum
1000m



Cu conductors

Circular filling element

PE insulation

PE outer sheath

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10065	U/UTP cat.6 outdoor	23AWG(0,54)	6,5	Fca	40	350

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] U/UTP cat.6 outdoor

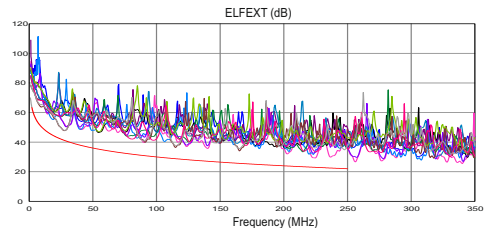
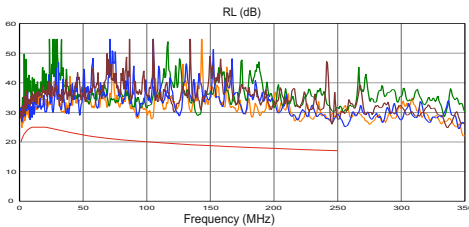
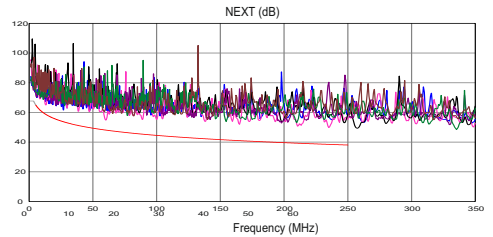
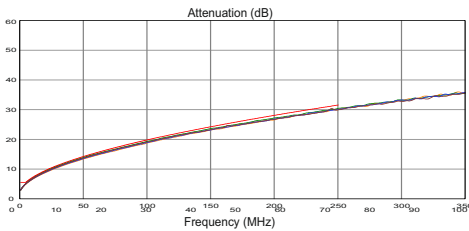
350 MHz

Data transmission cable suitable for external applications

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation ≤ dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT ≥ dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT ≥ dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT ≥ dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT ≥ dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] U/UTPf cat.6 outdoor



350 MHz

Data transmission cable suitable for external applications, jelly filled

BITNER BiTLAN U/UTPf 4x2x23AWG(0,54) cat. 6 outdoor 350MHz



underground installation



external application



data transmission



UV resistance



oil resistant
EN 60811-2-1



jelly filling

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,54 ± 0,015 mm

Insulated core diameter: 1,06 ± 0,01 mm

DC loop resistance at 20 °C (max):

165 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC: 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 67 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

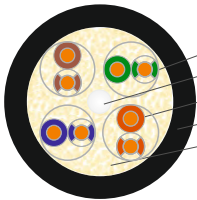
f = 20 + 350 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters:

Bending radius:

during operation: ≥ 4 x Ø

during installation: ≥ 6 x Ø



Cu conductors

Circular filling element

PE insulation

PE outer sheath

Jelly filling

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together with a circular filling element

Filling:

hydrophobic jelly filling

Outer sheath:

polyethylene PE

Outer sheath colour:

black

Marking: BITNER BiTLAN U/UTPf 4x2x23AWG(0,54) cat.6 outdoor 350MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN U/UTPf cat.6 outdoor 350MHz cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1 Gb/s. Dedicated for fixed installations within outdoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards. Cables are filled with hydrophobic gel preventing water ingress and have UV resistant outer sheath allowing external application as well as direct burial. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TJ0054	U/UTPf cat.6 outdoor	23AWG(0,54)	6,8	Fca	53	350

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] U/UTPf cat.6 outdoor

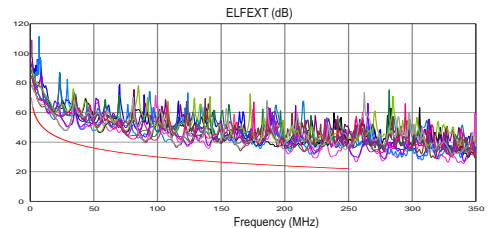
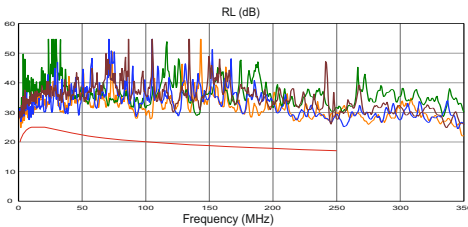
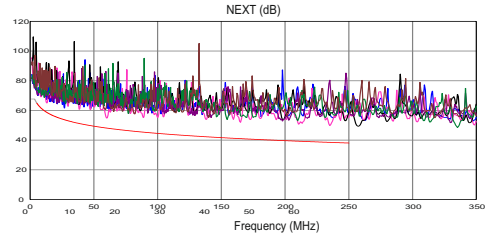
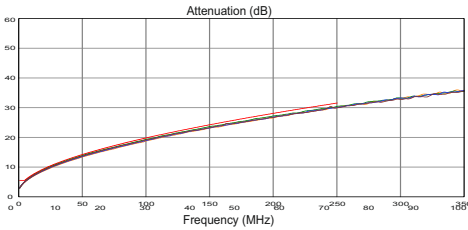
350 MHz

Data transmission cable suitable for external applications, jelly filled

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation ≤ dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT ≥ dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT ≥ dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT ≥ dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT ≥ dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] F/UTP cat.6 outdoor

350 MHz

Data transmission cable, screened,
suitable for external applications

BITNER BiTLAN F/UTP 4x2x23AWG(0,54) cat. 6 outdoor 350MHz



underground installation



external application



data transmission



UV resistance



oil resistant
EN 60811-2-1

Technical data:

Thermal parameters

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temp: -10 °C

Electrical parameters

Conductor diameter: 0,54±0,015mm

Insulated core diameter: 1,06 ± 0,03 mm

DC loop resistance at 20 °C (max):

165 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC 50Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 69 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 350 MHz: 25 - 7 x log₁₀(f/20)

Coupling attenuation within the range of 30 + 100 MHz (min.): 55 dB

Transfer impedance at 10 MHz (max):

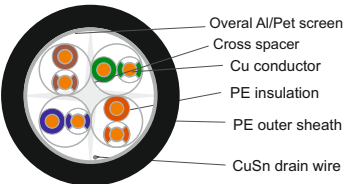
100 mΩ/m.

Mechanical parameters

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together with a cross spacer

Screen:

aluminium backed polyester tape and tinned copper drain wire

Outer sheath:

special PE compound

Outer sheath colour:

black

Marking: BITNER BiTLAN F/UTP 4x2x23AWG(0,54) cat.6 outdoor 350MHz

EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS

www.bitner.com.pl meters

Application:

BiTLAN[®]F/UTP cat.6 outdoor 350MHz cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 1Gb/s. Additional collective Al/Pet screen with CuSn drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. UV resistant outer sheath enables external application. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	O.D. [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0066	F/UTP cat.6 outdoor	23AWG(0,54)	8,0	Fca	51	350

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] F/UTP cat.6 outdoor

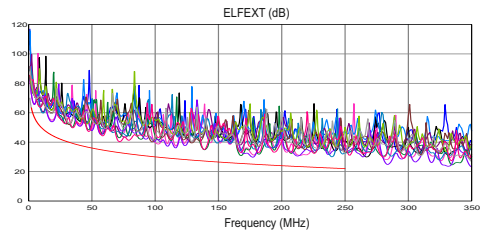
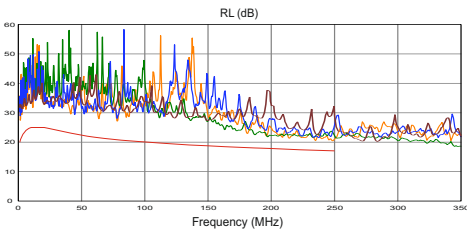
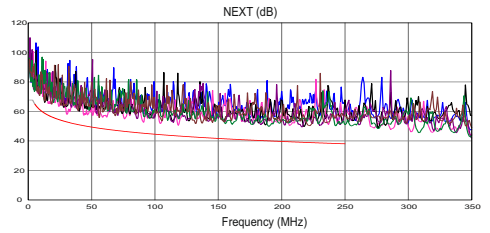
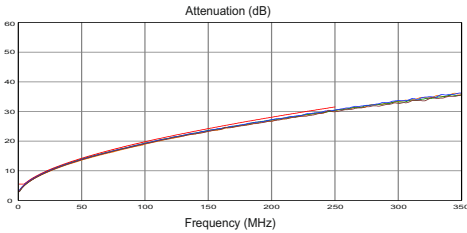
350 MHz

Data transmission cable, screened,
suitable for external applications

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation \leq dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT \geq dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT \geq dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT \geq dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT \geq dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

Transmission parameters graphs - examples of measurement results



BiTLAN® U/UTP cat.6 DUPLEX 350 MHz



LSOH Double halogen-free, data transmission cable,



BITNER BiTLAN U/UTP 2x(4x2x23AWG(0,54)) cat. 6 DUPLEX 350MHz LSOH



internal application



EN 60332-1-2



halogen-free
EN 60754



low smoke emission
EN 61034



data transmission

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,54 ± 0,015 mm

Insulated core diameter: 0,99 ± 0,03 mm

DC loop resistance at 20 °C (max):

165 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 67%

Return loss dB (min):

f = 4 + 10MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 350 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together with a circular filling element

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

Marking: BITNER BiTLAN U/UTP 2x(4x2x23AWG(0,54)) cat.6 DUPLEX 350MHz LSOH EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS
www.bitner.com.pl meters

Application:

BiTLAN U/UTP cat.6 DUPLEX 350MHz LSOH cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1Gb/s. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks not exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

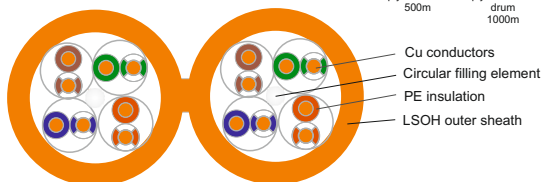
Packaging:



plywood reel
500m



plywood reel/
drum
1000m



Cat. no	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
Ti0107	U/UTP cat.6 DUPLEX LSOH	23AWG(0,54)	12,1x5,8	Dca	77	350

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

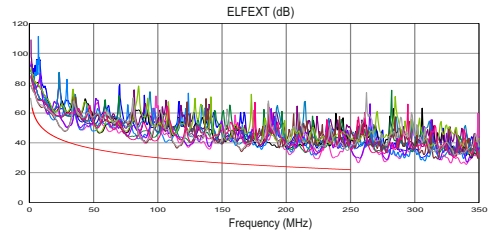
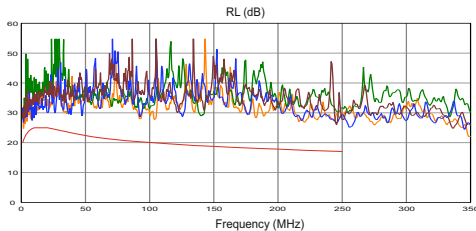
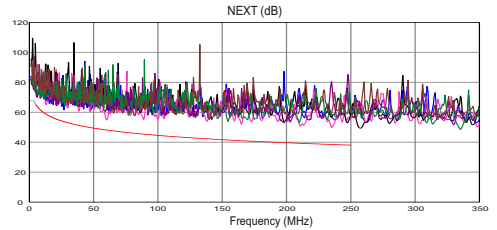
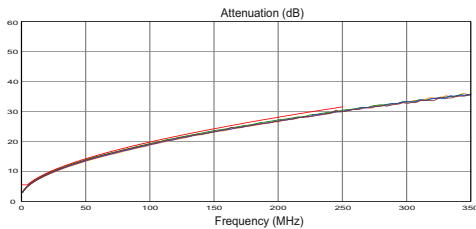
BiTLAN[®] U/UTP cat.6 DUPLEX 350 MHz

LSOH Double halogen-free, data transmission cable,

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation ≤ dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT ≥ dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT ≥ dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT ≥ dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT ≥ dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

Transmission parameters graphs - examples of measurement results



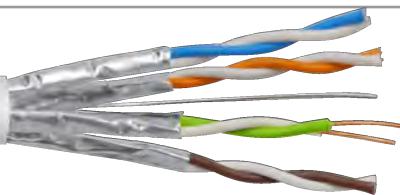
BiTLAN[®] U/FTP cat.6A 500 MHz



LAN cables

Data transmission cable, screened

BITNER BiTLAN U/FTP 4P cat. 6A 500MHz



internal application



EN 60332-1-2



data transmission

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,57 ± 0,015 mm

Insulated core diameter: 1,27 ± 0,03 mm

DC loop resistance at 20 °C (max):

145 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 74 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 x log₁₀(f/20)

f = 250 + 500 MHz: 17,3

Coupling attenuation within the range of 30 + 100 MHz (min.): 70 dB

Transfer impedance at 10 MHz (max):

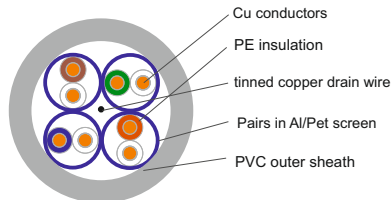
100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu, wh/or, wh/gn, wh/bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together with tinned copper drain wire
pairs individually screened with aluminium backed polyester tape

Screen:

PVC compound

Outer sheath:

grey RAL 7035, other colours available on customer's request

Outer sheath colour:

grey RAL 7035, other colours available on customer's request

Marking: BITNER BiTLAN U/FTP 4P cat.6A 500MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN U/FTP cat.6A 500 MHz cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Additional individual Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10074	U/FTP cat.6A	23AWG	7,5	Eca	54	500

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

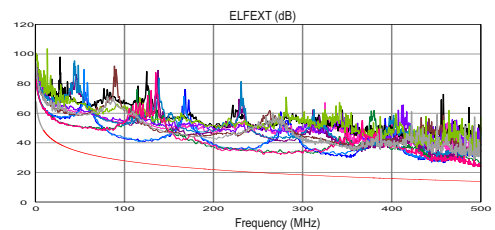
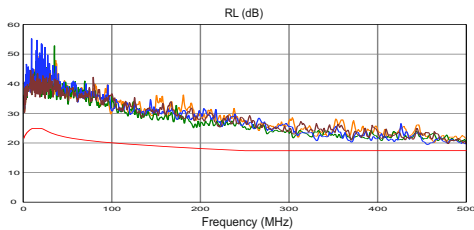
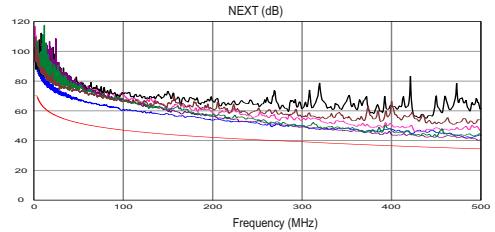
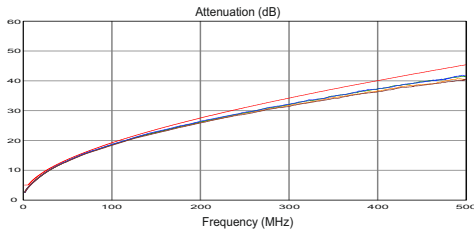
BiTLAN[®] U/FTP cat.6A 500 MHz

Data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation \leq dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT \geq dB	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT \geq dB	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT \geq dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT \geq dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] F/FTP cat.6A 500 MHz



Data transmission cable, screened



internal application



EN 60332-1-2



data transmission

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,57 ± 0,015 mm

Insulated core diameter: 1,29 ± 0,03 mm

DC loop resistance at 20 °C (max):
145 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 x log₁₀(f/20)

f = 250 + 500 MHz: 17,3

Coupling attenuation within the range

of 30 + 100 MHz (min.): 70 dB

Transfer impedance at 10 MHz (max):

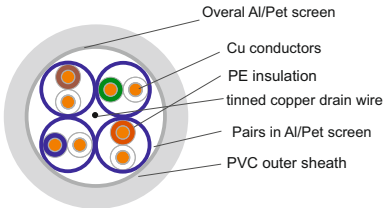
100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together

Screen 1:

aluminium backed polyester tape on every pair

Screen 2:

aluminium backed polyester tape, tinned

copper drain wire

Outer sheath:

PVC compound

Outer sheath colour:

grey RAL 7035, other colours available on customer's request

Marking: BITNER BiTLAN F/FTP 4P cat.6A 500MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN F/FTP cat.6A 500MHz cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Additional individual and collective Al/Pet screens with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables classified according to EN 50575 (CPR).

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0075	F/FTP cat.6A	23AWG	8,0	Eca	63	500

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

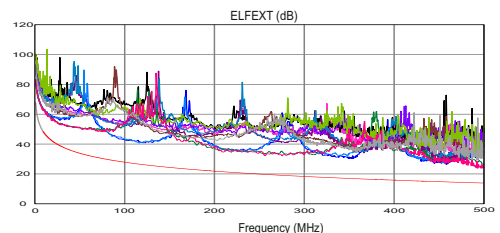
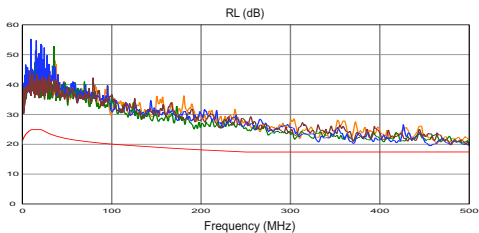
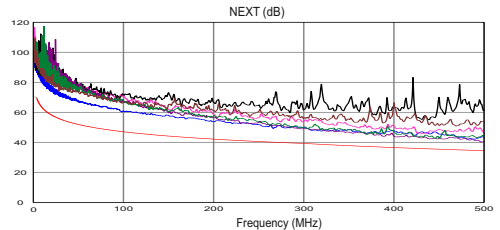
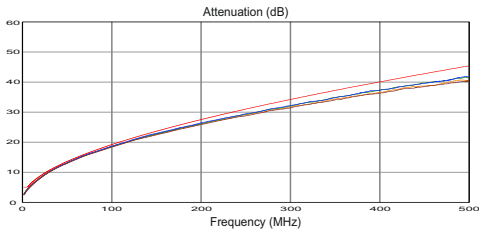
BiTLAN[®] F/FTP cat.6A 500 MHz

Data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation ≤ dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT ≥ dB	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT ≥ dB	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT ≥ dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT ≥ dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] S/FTP cat.6A 500 MHz



Data transmission cable, screened



LAN cables

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,57 ± 0,015 mm

Insulated core diameter: 1,3 ± 0,03 mm

DC loop resistance at 20 °C (max):
145 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 ÷ 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 x log₁₀(f/20)

f = 250 + 500 MHz: 17,3

Coupling attenuation within the range of 30 ÷ 100 MHz (min.): 70 dB

Transfer impedance at 10 MHz (max):

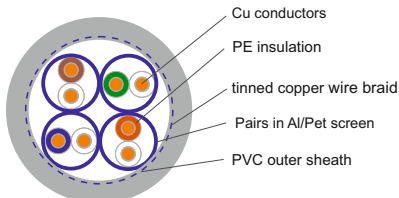
100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu, wh/or, wh/gn, wh/bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together

Screen 1:

aluminium backed polyester tape on every pair

Screen 2:

tinned copper wire braid

Outer sheath:

PVC compound

Outer sheath colour:

grey RAL 7035, other colours available on customer's request

Marking: BITNER BiTLAN S/FTP 4P cat.6A 500MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN S/FTP cat.6A 500MHz cables are applicable to computer networks with operating frequency band up to 500 MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Additional individual Al/Pet and collective screen acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables classified according to EN 50575 (CPR).

Packaging:



plywood reel
500m



plywood reel
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0076	S/FTP cat.6A	23AWG	7,8	Eca	63	500

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

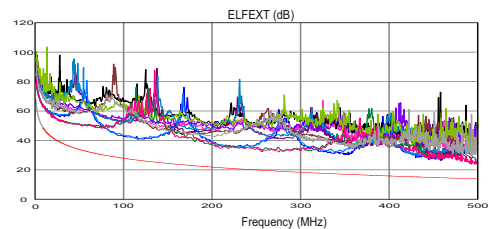
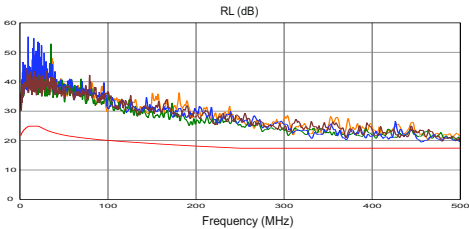
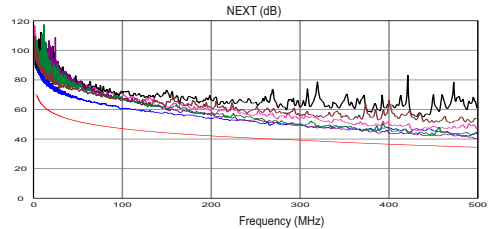
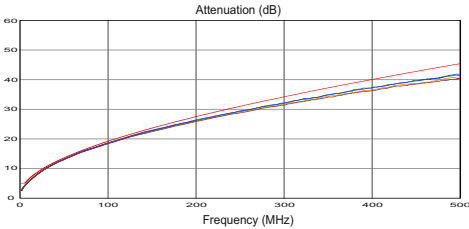
BiTLAN[®] S/FTP cat.6A 500 MHz

Data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation \leq dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT \geq dB	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT \geq dB	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT \geq dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT \geq dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] U/UTP cat.6A 500 MHz



LSOH Halogen-free, data transmission cable



internal application



EN 60332-1-2



halogen-free
EN 60754



low smoke emission
EN 61034



data transmission

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: $0,6 \pm 0,015$ mm

Insulated core diameter: $1,05 \pm 0,03$ mm

DC loop resistance at 20 °C (max):

145 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: $\leq 2 \%$

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

$100 \pm 5 \Omega$

NVP value: 69 %

Return loss dB (min):

$f = 4 + 10$ MHz: $20 + 5 \times \log_{10}(f)$

$f = 10 + 20$ MHz: 25

$f = 20 + 250$ MHz: $25 - 7 \times \log_{10}(f/20)$

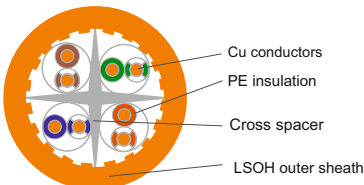
$f = 250 + 500$ MHz: 17,3

Mechanical parameters:

Bending radius:

during operation: $\geq 6 \times \varnothing$

during installation: $\geq 8 \times \varnothing$



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or,wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together with a cross spacer

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

Marking: BITNER BiTLAN U/UTP cat.6A 500MHz LSOH EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN U/UTP cat.6A 500MHz LSOH cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals with bitrate up to 10Gb/s. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks not exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10077	U/UTP cat.6A LSOH	22AWG (0,6)	7,8	Fca	61	500

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

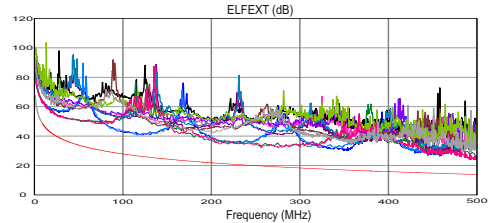
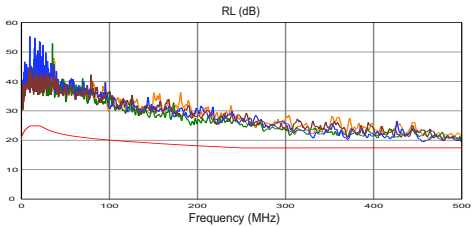
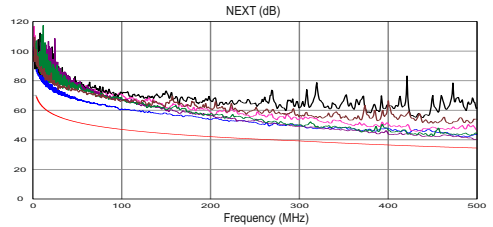
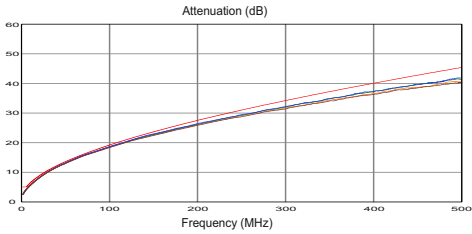
BiTLAN[®] U/UTP cat.6A 500MHz

LSOH Halogen-free, data transmission cable

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation \leq dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT \geq dB	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT \geq dB	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT \geq dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT \geq dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] U/FTP cat.6A 500 MHz



LSOH Halogen-free, data transmission cable, screened



Technical data:

Thermal parameters:

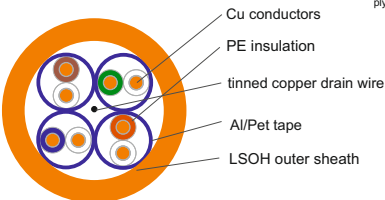
Temperature range:
operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,57 ± 0,015 mm
Insulated core diameter: 1,27 ± 0,03 mm
DC loop resistance at 20 °C (max):
145 Ω/km
Insulation resistance (min): 5 GΩ x km
Resistance unbalance within a pair: ≤ 2 %
Mutual capacitance at 1 kHz: 45 ± 5 nF/km
Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km
Nominal voltage: 150 V
Test voltage at 1 min:
AC 50 Hz: 700 V
DC: 1000 V
Characteristic impedance at 100 MHz:
100 ± 5 Ω
NVP value: 77 %
Return loss dB (min):
f = 4 + 10 MHz: 20 + 5 x log₁₀(f)
f = 10 + 20 MHz: 25
f = 20 + 250 MHz: 25 - 7 x log₁₀(f/20)
f = 250 + 500 MHz: 17,3
Coupling attenuation within the range of 30 + 100 MHz (min.): 70 dB
Transfer impedance at 10 MHz (max):
100 mΩ/m

Mechanical parameters:

Bending radius:
during operation: ≥ 6 x Ø
during installation: ≥ 8 x Ø



Design:

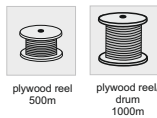
Conductors: solid round copper conductors
Insulation: special polyolefin compound
Core identification: wh/bu, wh/or, wh/gn, wh/bn
Core arrangement: cores twisted in pairs, screened pairs twisted together with tinned copper drain wire
Screen: pairs individually screened with aluminum backed polyester tape
Outer sheath: special LSOH compound
Outer sheath colour: orange RAL 2003, other colours available on customer's request

Marking: BITNER BiTLAN U/FTP 4P cat.6A 500MHz LSOH
EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS
www.bitner.com.pl meters

Application:

BiTLAN U/FTP cat.6A 500MHz LSOH cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Additional individual Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267 and IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:



Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0079	U/FTP cat.6A LSOH	23AWG	7,5	Dca	55	500

*Outer diameter tolerance: +/-5%
Cable Factory BITNER reserves the right to modify the specifications without prior notice

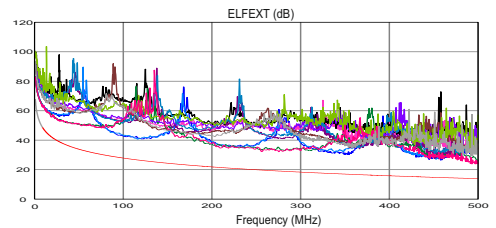
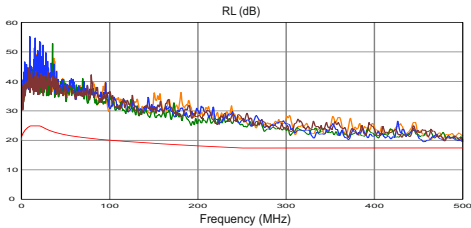
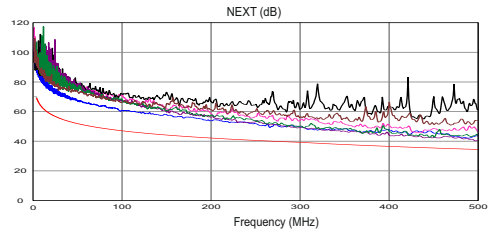
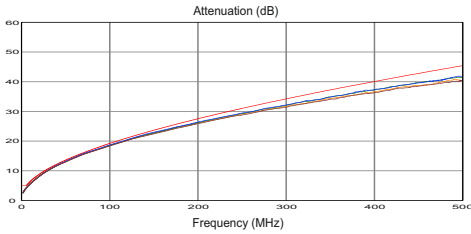
BiTLAN[®] U/FTP cat.6A 500 MHz

LSOH Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation ≤ dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT ≥ dB	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT ≥ dB	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT ≥ dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT ≥ dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] F/UTP cat.6A 500 MHz



LSOH Halogen-free, data transmission cable, screened



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,57 ± 0,015 mm

Insulated core diameter: 1,12 ± 0,03 mm

DC loop resistance at 20 °C (max):

145 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 69 %

Return loss (min):

f = 4 + 10 MHz: 20 + 5 × log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 × log₁₀(f/20)

f = 250 + 500 MHz: 17,3

Coupling attenuation within the range

of 30 + 100 MHz (min.): 70 dB

Transfer impedance at 10 MHz (max):

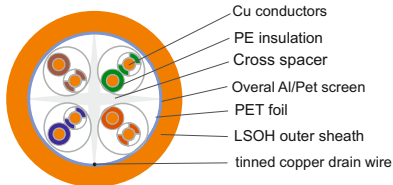
50 mΩ/m.

Mechanical parameters:

Bending radius:

during operation: ≥ 6 × Ø

during installation: ≥ 8 × Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together with a cross spacer

Screen:

aluminium backed polyester tape and tinned copper drain wire

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

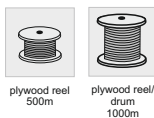
Marking: BITNER BiTLAN F/UTP 4P cat.6A 500MHz LSOH EN 50173-1

ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN F/UTP 4P cat.6A 500MHz LSOH cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Additional collective Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2 should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
500m

plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	O.D. [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0078	F/UTP cat.6A LSOH	23AWG	8,0	Dca	62	500

Cable Factory BITNER reserves the right to modify the specifications without prior notice

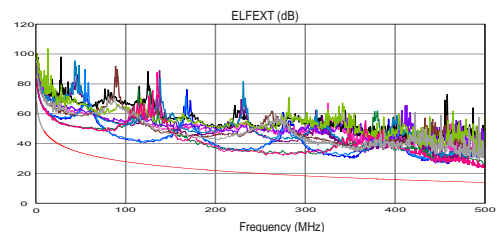
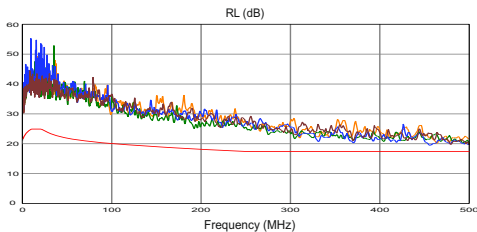
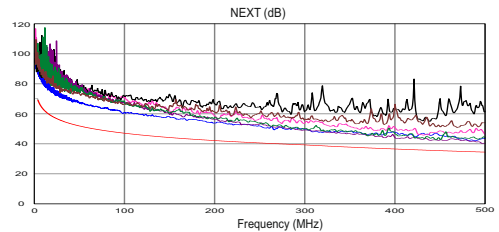
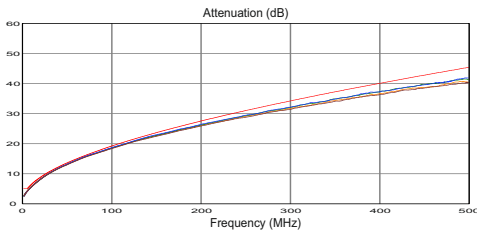
BiTLAN[®] F/UTP cat.6A 500 MHz

LSOH Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation ≤ dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT ≥ dB	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT ≥ dB	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT ≥ dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT ≥ dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] F/FTP cat.6A 500 MHz

RoHS 2015/863/EU



LVD 2014/35/EU

CPR

CPR 305/2011

24 months warranty

LSOH Halogen-free, data transmission cable, screened



BITNER BiTLAN F/FTP 4P cat. 6A 500MHz LSOH



internal application



EN 60332-1-2

halogen-free
EN 60754low smoke emission
EN 61034

data transmission

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,57 ± 0,015 mm

Insulated core diameter: 1,3 ± 0,03 mm

DC loop resistance at 20 °C (max):

145 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 x log₁₀(f/20)

f = 250 + 500 MHz: 17,3

Coupling attenuation within the range

of 30 + 100 MHz (min.): 70 dB

Transfer impedance at 10 MHz (max):

100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø

Design:

Conductors:

solid round copper conductors

Insulation:

special foam-skin polyolefin compound

Core identification:

wh/bu, wh/or, wh/gn, wh/bn

Core arrangement:

cores twisted in pairs, individually screened pairs twisted together

Screen 1:

aluminium backed polyester tape on every pair

Screen 2:

aluminium backed polyester tape, tinned

copper drain wire

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

Marking: BITNER BiTLAN F/FTP 4P cat.6A 500MHz LSOH EN 50173-1

ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN F/FTP cat.6A 500MHz LSOH cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Additional individual and collective Al/Pet screens with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

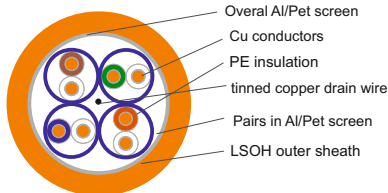
Packaging:



plywood reel
500m



plywood reel/
drum
1000m



Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10080	F/FTP cat.6A LSOH	23AWG	8,0	Dca	63	500

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

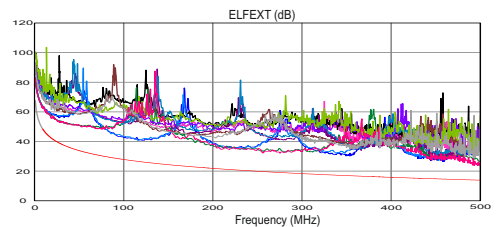
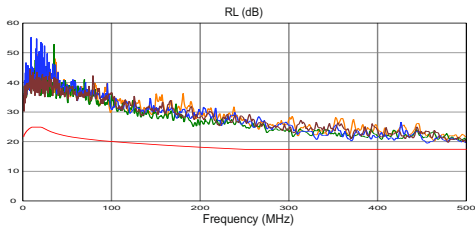
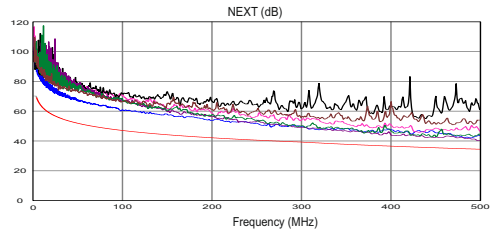
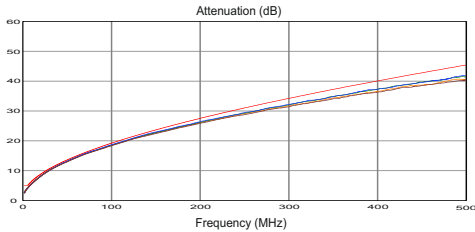
BiTLAN[®] F/FTP cat.6A 500 MHz

LSOH Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation ≤ dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT ≥ dB	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT ≥ dB	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT ≥ dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT ≥ dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] S/FTP cat.6A 500 MHz



LSOH Halogen-free, data transmission cable, screened

BITNER BiTLAN S/FTP 4P cat. 6A 500MHz LSOH



internal application



EN 60332-1-2



halogen-free
EN 60754



low smoke emission
EN 61034



data transmission

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,57 ± 0,015 mm

Insulated core diameter: 1,3 ± 0,03 mm

DC loop resistance at 20 °C (max):

145 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 350 MHz: 25 - 7 x log₁₀(f/20)

f = 250 + 500 MHz: 17,3

Coupling attenuation within the range of 30 + 100 MHz (min.): 70 dB

Transfer impedance at 10 MHz (max):

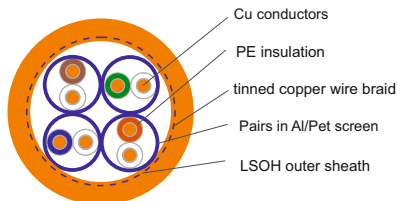
100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Cu conductors

PE insulation

tinned copper wire braid

Pairs in Al/Pet screen

LSOH outer sheath

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together

Screen 1:

aluminium backed polyester tape on every pair

Screen 2:

tinned copper wire braid

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003; other colours available on customer's request

Marking: BITNER BiTLAN S/FTP 4P cat.6A 500MHz LSOH EN 50173-1

ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN S/FTP cat.6A 500MHz LSOH cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Additional individual Al/Pet and collective screens acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2 should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0081	S/FTP cat.6A LSOH	23AWG	7,8	Dca	63	500

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

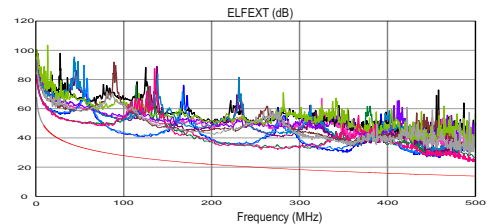
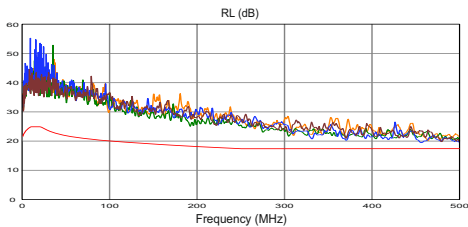
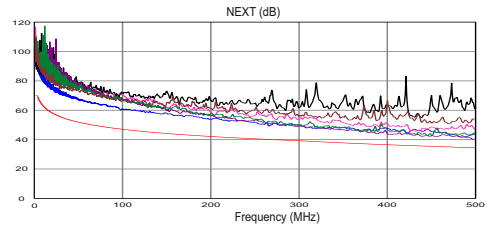
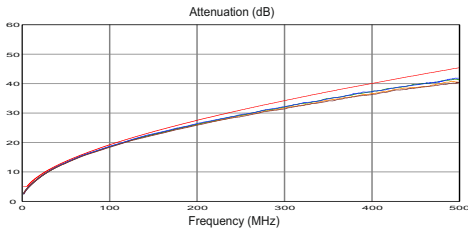
BiTLAN[®] S/FTP cat.6A 500 MHz

LSOH Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation ≤ dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT ≥ dB	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT ≥ dB	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT ≥ dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT ≥ dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] S/FTP cat.6A outdoor

RoHS 2015/863/EU



LVD 2014/35/EU

CPR

CPR 305/2011

24 months warranty

500 MHz

Data transmission cable suitable for external applications, screened

BITNER BiTLAN S/FTP 4P cat. 6A outdoor 500MHz



internal application



external application



data transmission



UV resistance

oil resistant
EN 60811-2-1

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,57 ± 0,015 mm

Insulated core diameter: 1,3 ± 0,03 mm

DC loop resistance at 20 °C (max):
145 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 350 MHz: 25 - 7 x log₁₀(f/20)

f = 250 + 500 MHz: 17,3

Coupling attenuation within the range of 30 + 100 MHz (min.): 70 dB

Transfer impedance at 10 MHz (max):

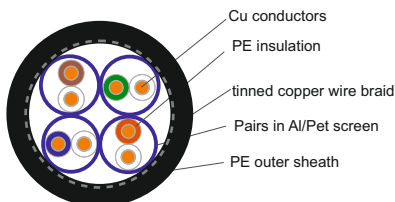
100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu, wh/or, wh/gn, wh/bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together

Screen 1:

aluminium backed polyester tape on every pair

Screen 2:

tinned copper wire braid

Outer sheath:

special PE compound

Outer sheath colour:

black

Marking: BITNER BiTLAN S/FTP 4P cat.6A outdoor 500MHz EN 50173-1
ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN S/FTP cat.6A outdoor 500MHz cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals with bitrate up to 10Gb/s. Dedicated for fixed installations within structured cabling systems as per EN 50173-1, ISO/IEC 11801-1, ANSI/TIA 568-C.2 standards. Common and individual shielding of the pairs additionally improves the teletransmission parameters against external electromagnetic interferences and crosstalks between the pairs, therefore they can be used in industrial networks. UV resistant outer sheath enables external application. Cables classified according to EN 50575 (CPR).

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire [mm]	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10090	S/FTP cat.6A outdoor	23AWG	8,3	Fca	57	500

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] S/FTP cat.6A outdoor

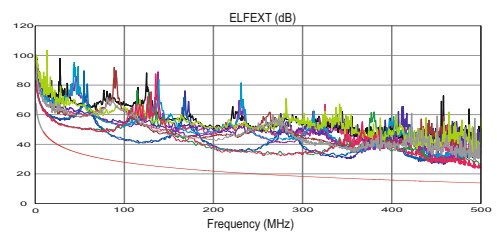
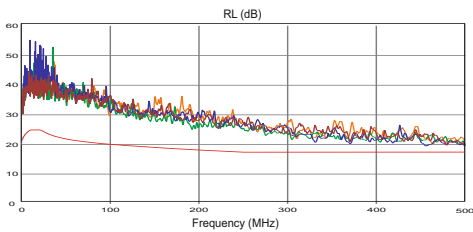
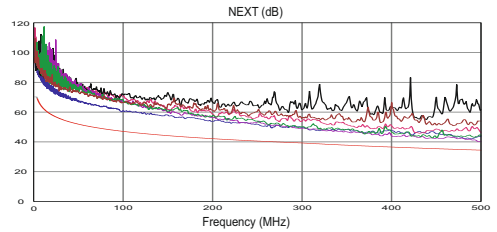
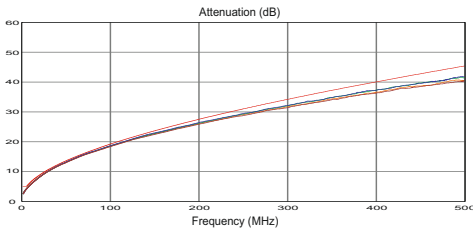
500 MHz

Data transmission cable suitable for external applications, screened

Requirements of teletransmission data:

Frequency Mhz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation ≤ dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT ≥ dB/100m	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT ≥ dB/100m	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT ≥ dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT ≥ dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] U/FTP cat.6A DUPLEX

500 MHz LSOH

Double data transmission cable

BITNER BiTLAN[®] U/FTP cat.6A DUPLEX 500MHz LSOH

internal application



EN 60332-1-2



data transmission

halogen-free
EN 60754low smoke emission
EN 61034

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
 installation temperature: -10 °C to 50 °C
 min. installation temperature: -10 °C

Electrical parameters:

Conductor diameter: 1,27 ± 0,03mm

Insulated core diameter: 1,30 ± 0,05mm

DC loop resistance at 20 °C (max):

145 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2%

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage - 1 min.:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 x log₁₀(f/20)

f = 250 + 500 MHz: 17,3

Coupling attenuation within the range

of 30 ± 100 MHz (min.): 70 dB

Transfer impedance at 10 MHz (max):

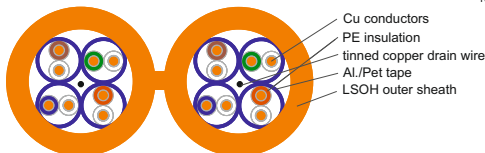
100 mΩ/m.

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Cu conductors
 PE insulation
 tinned copper drain wire
 Al./Pet tape
 LSOH outer sheath

plywood reel
500mplywood reel
drum
1000m

Design:

Conductors:

solid round copper conductors

Insulation:

special foam-skin polyolefin compound

Core identification:

wh/bu, wh/or, wh/gn, wh/bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together with tinned copper drain wire

Screen:

pairs individually screened with aluminum polyester tape

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

Marking: BITNER BiTLAN U/FTP 2x4P cat.6A DUPLEX 500MHz LSOH EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN U/FTP cat.6A DUPLEX 500MHz LSOH, cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Additional individual Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267 and IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
Ti0121	U/FTP cat.6A DUPLEX LSOH	23AWG	7,8	Dca	110	500

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] U/FTP cat.6A DUPLEX

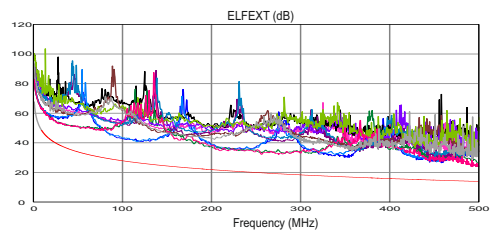
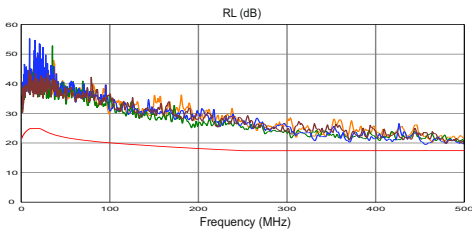
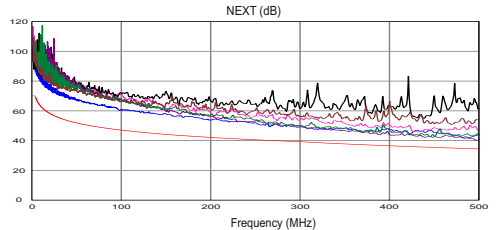
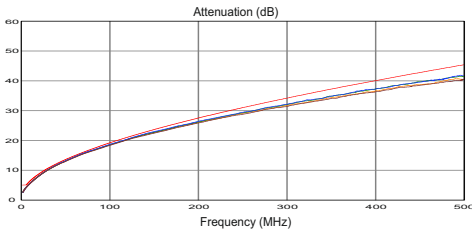
500 MHz LSOH

Double data transmission cable

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation \leq dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT \geq dB/100m	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT \geq dB/100m	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT \geq dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT \geq dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] S/FTP cat.7 1000 MHz

RoHS 2015/863/EU



LVD 2014/35/EU

CPR

CPR 3052011

24 months warranty

LSOH Halogen-free, data transmission cable, screened

BITNER BiTLAN S/FTP 4P cat. 7 1000MHz LSOH



internal application



EN 60332-1-2

halogen-free
EN 60754low smoke emission
EN 61034

data transmission

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,57 ± 0,015 mm

Insulated core diameter: 1,35 ± 0,03 mm

DC loop resistance at 20 °C (max):
145 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 x log₁₀(f/20)

f = 250 + 600 MHz: 17,3

Coupling attenuation within the range of 30 + 100 MHz (min.): 80 dB

Transfer impedance at 10 MHz (max):

10 mΩ/m.

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu, wh/or, wh/gn, wh/bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together with tinned copper drain wire

Screen 1:

aluminium backed polyester tape on every pair

Screen 2:

tinned copper wire braid

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

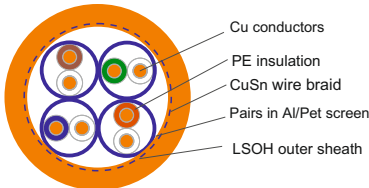
Marking: BITNER BiTLAN S/FTP 4P cat.7 1000MHz LSOH EN 50173-1

ISO/IEC 11801 IEC 61156-5 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN S/FTP cat.7 1000MHz LSOH cables are applicable to computer networks with operating frequency band up to 1000MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Cables meet the requirements of category 7 in 1+600 MHz range for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, IEC 61156-5 standards and are tested up to 1000 MHz range for information purposes. Common and individual shielding additionally improves the teletransmission parameters against external electromagnetic interferences and crosstalks between the pairs, therefore they can be used in industrial networks exposed. Cables have a halogen-free outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2 should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:

plywood reel
500mplywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0086	S/FTP cat.7 LSOH	23AWG	7,8	Dca	66	1000

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] S/FTP cat.7 1000 MHz

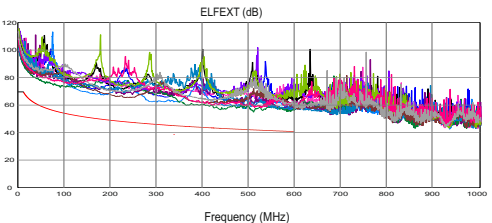
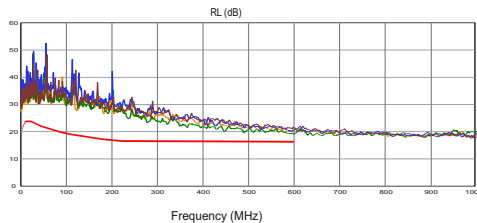
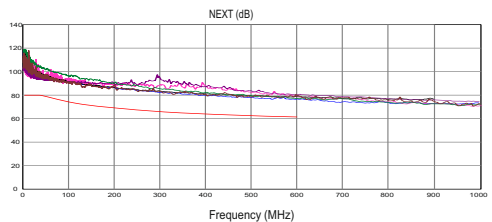
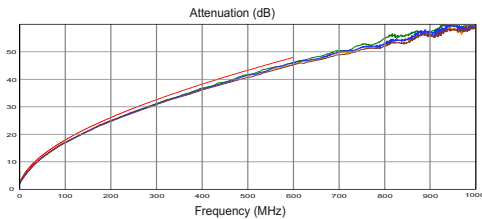
LSOH Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	155	200	300	600	750	900	1000
Attenuation ≤ dB/100m	2,0	3,6	5,7	7,2	8,1	10,1	14,5	18,5	23,4	26,8	33,3	48,9	55,4	61,5	67,6
NEXT ≥ dB	80,0	80,0	80,0	80,0	80,0	80,0	75,5	72,4	69,6	67,9	65,3	60,8	59,3	58,1	56,9
PS NEXT ≥ dB	77,0	77,0	70,0	77,0	77,0	77,0	72,5	69,4	66,6	64,9	62,3	57,8	56,3	55,1	53,9
ELFEXT ≥ dB/100m	80,0	80,0	74,0	69,9	68,0	64,1	58,1	54,0	50,2	48,0	44,5	38,4	36,5	34,9	33,3
PS ELFEXT ≥ dB/100m	77,0	77,0	71,0	66,9	65,0	61,1	55,1	51,0	47,2	45,0	41,5	35,4	33,5	31,9	30,3
RL ≥ dB	20,0	23,1	25,0	25,0	25,0	23,7	21,6	20,1	18,8	18,0	17,3	17,3	17,3	17,3	17,3

Values above the 600 MHz frequencies are for information purpose

Transmission parameters graphs - examples of measurement results



BiTLAN[®] S/FTP cat.7A 1200 MHz

LSOH

Halogen-free, data transmission cable, screened

BITNER BiTLAN S/FTP 4P cat. 7A 1200MHz LSOH



internal application



EN 60332-1-2



halogen-free
EN 60754



low smoke emission
EN 61034



data transmission



RoHS 2015/863/EU



LVD 2014/35/EU



CPR 305/2011



24 months warranty

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,64 ± 0,015 mm

Insulated core diameter: 1,50 ± 0,03 mm

DC loop resistance at 20 °C (max):

125 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 x log₁₀(f/20)

f = 250 + 600 MHz: 17,3

f = 600 + 1000 MHz: 17,3 - 10 x log₁₀(f/600)

Coupling attenuation within the range of 30 + 100 MHz (min.): 85 dB

Transfer impedance at 10 MHz (max):

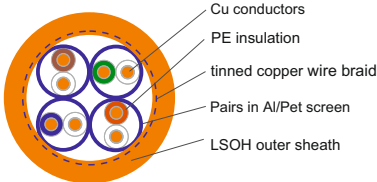
10 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Cu conductors

PE insulation

tinned copper wire braid

Pairs in Al/PE screen

LSOH outer sheath

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu, wh/or, wh/gn, wh/bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together

Screen 1:

aluminium backed polyester tape on every pair

Screen 2:

tinned copper wire braid

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, others colours available on customer's request

Marking: BITNER BiTLAN S/FTP 4P cat.7A 1200MHz LSOH EN 50173-1

ISO/IEC 11801-1 IEC 61156-5 ID no. CE RoHS www.bitner.com.pl meters

Application:

BiTLAN S/FTP cat.7A 1200MHz LSOH cables are applicable to computer networks with operating frequency band up to 1200MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Cables meet the requirements of category 7A in 1+1000MHz range for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, IEC 61156-5 standards and are tested up to 1200 MHz range for information purpose. Common and individual shielding additionally improves the teletransmission parameters and protects against external electromagnetic interferences and crosstalks between the pairs therefore cables can be used in industrial networks. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
TI0122	S/FTP cat.7A LSOH	22AWG	8,6	Fca	82	1200**

*Outer diameter tolerance: +/-5%

** Maximum tested band

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] S/FTP cat.7A 1200 MHz

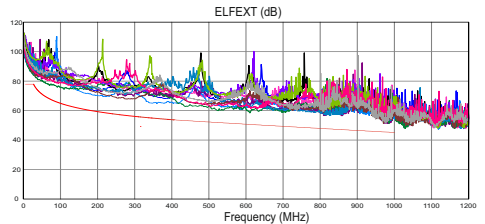
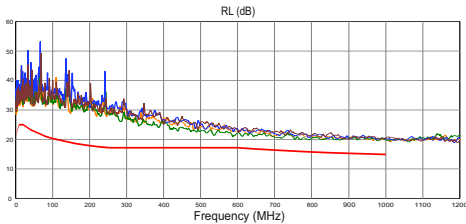
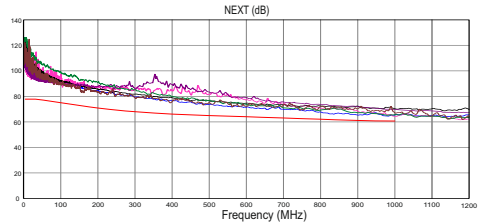
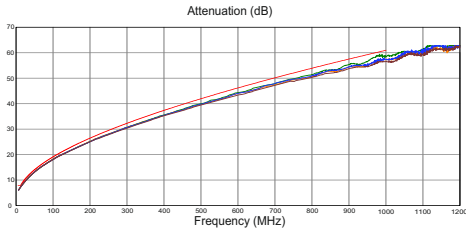
LSOH Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	155	200	300	600	750	900	1000	1200
Attenuation ≤ dB/100m	2,0	3,7	5,8	7,3	8,2	10,2	14,5	18,5	23,2	26,5	32,7	47,1	53,1	58,5	61,9	68,4
NEXT ≥ dB	78,0	78,0	78,0	78,0	78,0	78,0	78,0	75,4	72,5	70,9	68,2	63,7	62,3	61,1	60,4	59,2
PS NEXT ≥ dB	75,0	75,0	75,0	75,0	75,0	75,0	75,0	72,4	69,5	67,9	65,2	60,7	59,3	58,1	57,4	56,2
ELFEXT ≥ dB/100m	78,0	78,0	78,0	78,0	78,0	75,5	69,5	65,3	61,5	59,3	55,8	49,7	47,8	46,2	45,3	43,7
PS ELFEXT ≥ dB/100m	75,0	75,0	75,0	75,0	75,0	72,5	66,5	62,3	58,5	56,3	52,8	46,7	44,8	43,2	42,3	40,7
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,7	21,6	20,1	18,8	18,0	17,3	17,3	16,3	15,5	15,1	14,3

*Values above the 1000 MHz frequencies are for information purpose

Transmission parameters graphs - examples of measurement results

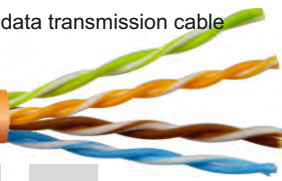


BITLAN® U/UTP cat.6 350 MHz

LSOH B2ca

Halogen-free, data transmission cable

BITNER BITLAN U/UTP 4x2x23AWG(0,54) cat. 6 350MHz LSOH B2ca



internal application



EN 60332-1-2



data transmission

halogen-free
EN 60754low smoke emission
EN 61034

B2ca-s1a,d1,a1



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,54 ± 0,015 mm

Insulated core diameter: 0,99 ± 0,03 mm

DC loop resistance at 20 °C (max):

165 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min.:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 67 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

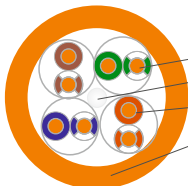
f = 20 + 350 MHz: 25 - 7 x log₁₀(f/20)

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Cu conductors

Circular filling element

PE insulation

LSOH outer sheath

Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together with a circular filling element

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, others colours available on customer's request

Marking: BITNER BITLAN U/UTP 4x2x23AWG(0,54) cat.6 350MHz LSOH B2ca
EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS
www.bitner.com.pl meters

Application:

BITLAN U/UTP cat.6 350MHz LSOH B2ca cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1Gb/s. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks not exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2 should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:

box
(305m)pallet 9150m
(30x305m)plywood reel
500mplywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg/km]	Bandwidth [MHz]
TI0119	U/UTP cat.6 LSOH B2ca	23AWG(0,54)	6,1	B2ca	47	350

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] U/UTP cat.6 350 MHz

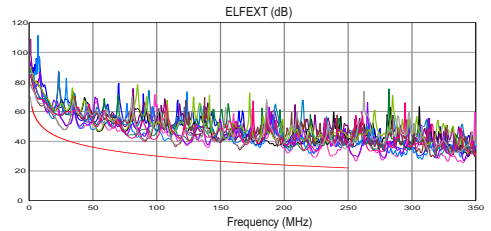
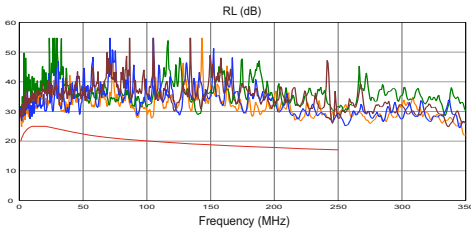
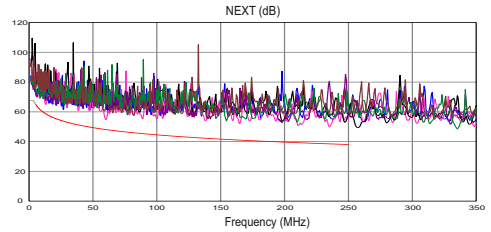
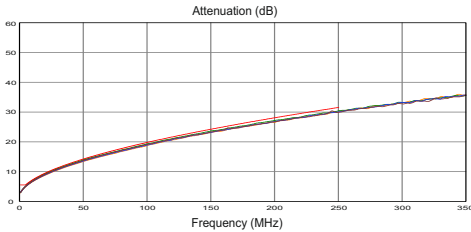
LSOH B2ca

Halogen-free, data transmission cable

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation ≤ dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT ≥ dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT ≥ dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT ≥ dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT ≥ dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

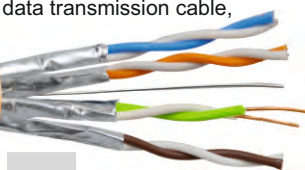
Transmission parameters graphs - examples of measurement results



BiTLAN[®] U/FTP cat.6A 500 MHz

LSOH B2ca Halogen-free, data transmission cable, screened

BITNER BiTLAN U/FTP 4P cat. 6A 500MHz LSOH B2ca



internal application



EN 60332-1-2



halogen-free
EN 60754



low smoke emission
EN 61034



data transmission

B2ca

B2ca-s1a,d1,a1

RoHS 2015/863/EU



LVD 2014/35/EU

CPR

CPR 305/2011

24 months warranty

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,57 ± 0,015 mm

Insulated core diameter: 1,27 ± 0,05 mm

DC loop resistance at 20 °C (max):
145 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 x log₁₀(f/20)

f = 250 + 500 MHz: 17,3

Coupling attenuation within the range of 30 + 100 MHz (min.): 70 dB

Transfer impedance at 10 MHz (max):

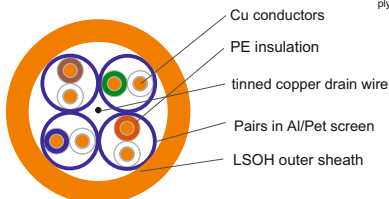
100 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu, wh/or, wh/gn, wh/bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together

Screen:

with tinned copper drain wire
pairs individually screened with aluminum backed polyester tape

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

Marking: BITNER BiTLAN U/FTP 4P cat.6A 500MHz LSOH B2ca

EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS

www.bitner.com.pl meters

Application:

BiTLAN U/FTP cat.6A 500MHz LSOH B2ca cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Additional individual Al/Pet screen with tinned copper drain wire acts as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

Packaging:



plywood reel
500m



plywood reel/
drum
1000m

Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg/km]	Bandwidth [MHz]
TI0117	U/FTP cat.6A LSOH B2ca	23AWG	7,5	B2ca	56	500

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] U/FTP cat.6A 500 MHz

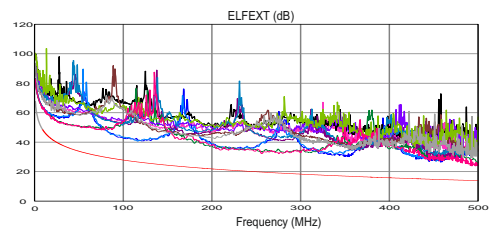
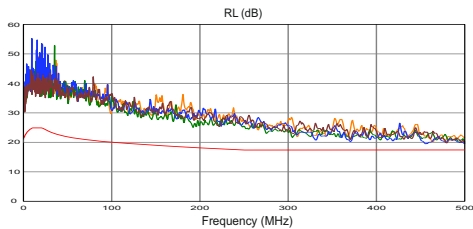
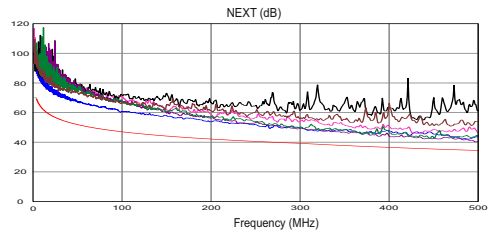
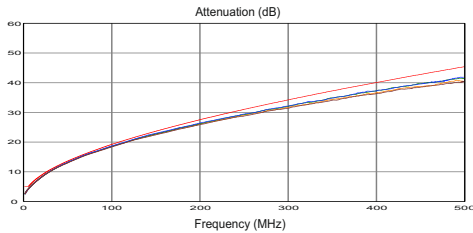
LSOH B2ca

Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation \leq dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT \geq dB	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT \geq dB	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT \geq dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT \geq dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL \geq dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] F/FTP cat.6A 500 MHz

LSOH B2ca Halogen-free, data transmission cable, screened

BITNER BiTLAN F/FTP 4P cat. 6A 500MHz LSOH B2ca



internal application



EN 60332-1-2



halogen-free
EN 60754



low smoke emission
EN 61034



data transmission



B2ca



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,57 ± 0,015mm

Insulated core diameter: 1,3 ± 0,05mm

DC loop resistance at 20 °C (max):
145 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2 %

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

$f = 4 + 10 \text{ MHz: } 20 + 5 \times \log_{10}(f)$

$f = 10 + 20 \text{ MHz: } 25$

$f = 20 + 250 \text{ MHz: } 25 - 7 \times \log_{10}(f/20)$

$f = 250 + 500 \text{ MHz: } 17,3$

Coupling attenuation within the range

of 30 ± 100 MHz (min.): 70 dB

Transfer impedance at 10 MHz (max):

100 mΩ/m.

Mechanical parameters:

Bending radius:

during operation: $\geq 6 \times \varnothing$

during installation: $\geq 8 \times \varnothing$

Design:

Conductors:

solid round copper conductors

Insulation:

special foam-skin polyolefin compound

Core identification:

wh/bu, wh/or, wh/gn, wh/bn

Core arrangement:

cores twisted in pairs, individually screened pairs twisted together

Screen 1:

aluminium backed polyester tape on every pair

Screen 2:

aluminium backed polyester tape, tinned copper drain wire

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's request

Marking: BITNER BiTLAN F/FTP 4P cat.6A 500MHz LSOH B2ca

EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS

www.bitner.com.pl meters

Application:

BiTLAN F/FTP cat.6A 500MHz LSOH B2ca cables are applicable to computer networks with operating frequency band up to 500MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Additional individual and collective Al/Pet screens with tinned copper drain wire act as a protection against external electromagnetic interferences. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks exposed to external electromagnetic interferences. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to **EN 50575 (CPR)**.

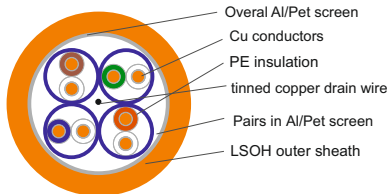
Packaging:



plywood reel
500m



plywood reel/
drum
1000m



Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg/km]	Bandwidth [MHz]
TI0118	F/FTP cat.6A LSOH B2ca	23AWG	8,0	B2ca	64	500

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] F/FTP cat.6A 500 MHz

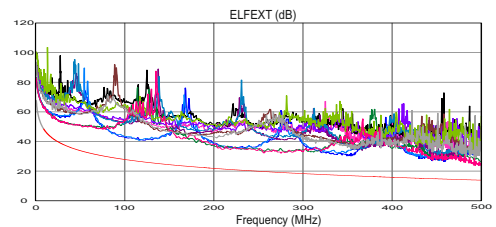
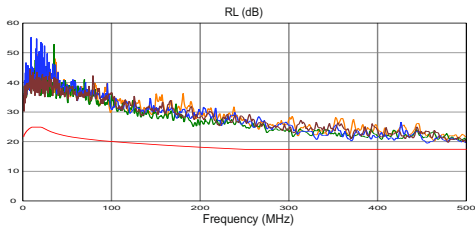
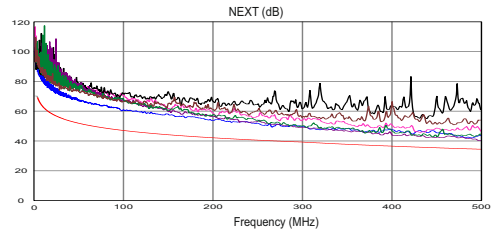
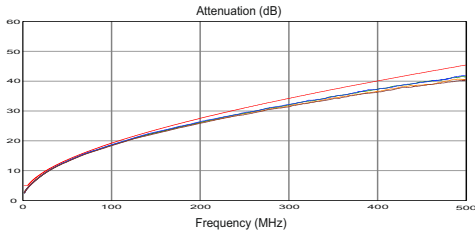
LSOH B2ca

Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	125	155	175	200	250	300	500
Attenuation ≤ dB/100m	2,1	3,8	5,9	7,5	8,4	10,5	15,0	19,1	21,5	24,1	25,7	27,6	31,1	34,3	45,3
NEXT ≥ dB	75,3	66,3	60,3	57,2	55,8	52,9	48,4	45,3	43,8	42,4	41,7	40,8	39,3	38,1	34,8
PS NEXT ≥ dB	72,3	63,3	57,3	54,2	52,8	49,9	45,4	42,3	40,8	39,4	38,7	37,8	36,3	35,1	31,8
ELFEXT ≥ dB/100m	68,0	56,0	48,0	43,9	42,0	38,1	32,1	28,0	26,1	24,2	23,1	22,0	20,0	18,5	14,0
PS ELFEXT ≥ dB/100m	65,0	53,0	45,0	41,9	39,0	35,1	29,1	25,0	23,1	21,2	20,1	19,0	17,0	15,5	11,0
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,6	21,5	20,1	19,4	18,8	18,4	18,0	17,3	17,3	17,3

Transmission parameters graphs - examples of measurement results



BiTLAN[®] S/FTP cat.7A 1200 MHz

LSOH B2ca

Halogen-free, data transmission cable, screened



BITNER BiTLAN S/FTP 4P cat. 7A 1200MHz LSOH B2ca



Internal application



EN 60332-1-2



EN 60332-3-24



halogen-free
EN 60754



low smoke emission
EN 61034



data transmission



B2ca-s1a,d1,a1

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 70 °C
min. installation temp: -10 °C

Electrical parameters:

Conductor diameter: 0,64 ± 0,015 mm

Insulated core diameter: 1,50 ± 0,03 mm

DC loop resistance at 20 °C (max):
125 Ω/km

Insulation resistance (min): 2 GΩ x km

Resistance unbalance within a pair: ≤ 2%

Mutual capacitance at 1 kHz: 45 ± 5 nF/km

Capacitance unbalance pair to ground

at 1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage at 1 min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 77 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10 + 20 MHz: 25

f = 20 + 250 MHz: 25 - 7 x log₁₀(f/20)

f = 250 + 600 MHz: 17,3

f = 600 + 1000 MHz: 17,3 - 10 x log₁₀(f/600)

Coupling attenuation within the range

of 30 + 100 MHz (min.): 85 dB

Transfer impedance at 10 MHz (max):

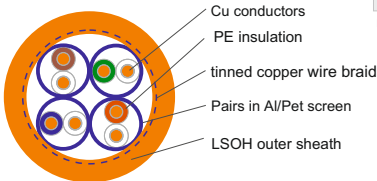
10 mΩ/m

Mechanical parameters:

Bending radius:

during operation: ≥ 6 x Ø

during installation: ≥ 8 x Ø



Design:

Conductors:

solid round copper conductors

Insulation:

special polyolefin compound

Core identification:

wh/bu, wh/or, wh/gn, wh/bn

Core arrangement:

cores twisted in pairs, screened pairs twisted together

Screen 1:

aluminium backed polyester tape on every pair

Screen 2:

tinned copper wire braid

Outer sheath:

special LSOH compound

Outer sheath colour:

orange RAL 2003, other colours available on customer's

request

Marking: BITNER BiTLAN S/FTP 4P cat.7A 1200MHz LSOH B2ca

EN 50173-1 ISO/IEC 11801 IEC 61156-5 ID no. CE RoHS www.bitner.com.pl
meters

Application:

BiTLAN S/FTP cat.7A 1200MHz LSOH B2ca cables are applicable to computer networks with operating frequency band up to 1200MHz. Suitable for transmission of data, audio and video signals, with bitrate up to 10Gb/s. Cables meet the requirements of category 7A in 1+1000 range for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, IEC 61156-5 standards and are tested up to 1200 MHz range for information purposes. Common and individual shielding additionally improves the teletransmission parameters and protects against external electromagnetic interferences and crosstalks between the pairs therefore cables can be used in industrial networks. Cables with flame retardant LSOH outer sheath ensuring low smoke emission acc. to EN 50268, IEC 61034-1(2) and limited emission of corrosive gases acc. to EN 50267, IEC 60754-2, should be installed in places with increased fire safety requirements. Cables classified according to EN 50575 (CPR).

Packaging:



plywood reel
500m



plywood reel
drum
1000m

Cat. no	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg/km]	Bandwidth [MHz]
TI0089	S/FTP cat.7A LSOH B2ca	22AWG	8,6	B2ca	82	1200**

*Outer diameter tolerance: +/-5%

** Maximum tested band

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTLAN[®] S/FTP cat.7A 1200 MHz

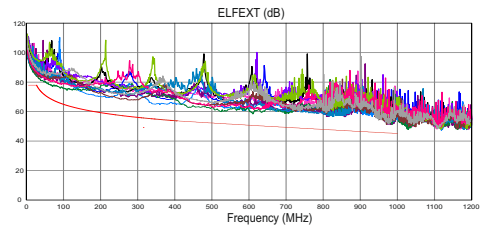
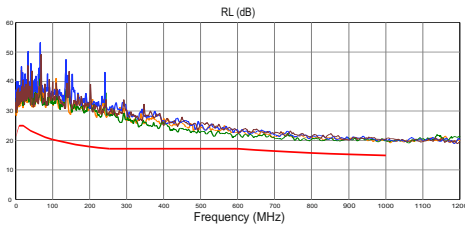
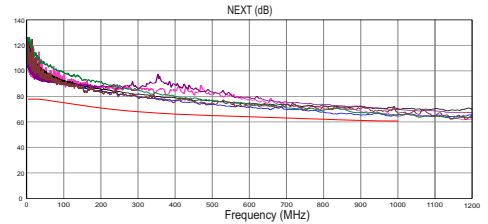
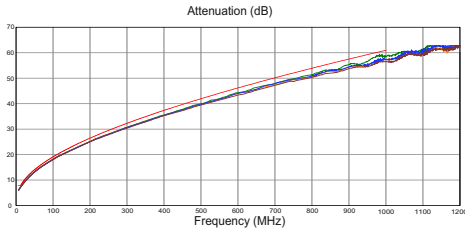
LSOH B2ca Halogen-free, data transmission cable, screened

Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	31,25	62,5	100	155	200	300	600	750	900	1000	1200
Attenuation ≤ dB/100m	2,0	3,7	5,8	7,3	8,2	10,2	14,5	18,5	23,2	26,5	32,7	47,1	53,1	58,5	61,9	68,4
NEXT ≥ dB	78,0	78,0	78,0	78,0	78,0	78,0	78,0	75,4	72,5	70,9	68,2	63,7	62,3	61,1	60,4	59,2
PS NEXT ≥ dB	75,0	75,0	75,0	75,0	75,0	75,0	75,0	72,4	69,5	67,9	65,2	60,7	59,3	58,1	57,4	56,2
ELFEXT ≥ dB/100m	78,0	78,0	78,0	78,0	78,0	75,5	69,5	65,3	61,5	59,3	55,8	49,7	47,8	46,2	45,3	43,7
PS ELFEXT ≥ dB/100m	75,0	75,0	75,0	75,0	75,0	72,5	66,5	62,3	58,5	56,3	52,8	46,7	44,8	43,2	42,3	40,7
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,7	21,6	20,1	18,8	18,0	17,3	17,3	16,3	15,5	15,1	14,3

*Values above the 1000 MHz frequencies are for information purpose

Transmission parameters graphs - examples of measurement results





Chapter IX

Data transmission and telecommunication cables

BiT L2 BUS DB	310
BiT L2 BUS LSOH	311
BiT L2 BUS outdoor	312
BiT L2 BUS Flex	313
BiT L2 BUS High Flex	314
BiT L2 BUS FC	315
BiT L2 BUS FC LSOH	316
BiT CAN BUS Drag Chain	317
BiT E-BUS	318
BiT E-BUS H	319
BiT Profibus PA	320
BiT Device	321
BiT Li2YCY-P(St)	322
BiT NOVAK	323
BiT KJAAM	324
BiT KJAAM-HF UV	325
ELQXB	326
ELQYB	328
FLAQQR	329
FQAR-PG	330
YTKSY	331
YTKSYekw	332
YnTKSY	333
YnTKSYekw	335
PT-LSHF	337
PTS-LSHF	338
BiTsensor [®] PE(St)CH B2ca	339

BiT L2 BUS DB

O2YS(St)CYY, Data transmission cables for Profibus network



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temp: -5 °C

Electrical parameters:

Wave impedance: 150 Ω ± 10 %

Conductor loop resistance (max.): 115 Ω/km

Screen resistance (max.): 9,7 Ω/km

Insulation resistance: 1 GΩ x km

Capacitance: 30 nF/km

Test voltage: 1500 V

Wave attenuation at a frequency of:

1 MHz = 1,2 dB/100 m

4 MHz = 2,2 dB/100 m

10 MHz = 3,2 dB/100 m

16 MHz = 4,2 dB/100 m

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

solid copper conductors 0,64 mm

Insulation:

made of foamed polyethylene with a thin external layer of solid polyethylene

Core identification:

red, green

Core arrangement:

cores twisted together with two fillers

Screens:

aluminium backed polyester tape and tinned copper wire braid

Sheath:

PVC compound, oil resistant (cf. chemical resistance table), self-extinguishing and flame retardant (as per EN 60332-1-2); colour: black

Application:

L2-BUS cables are intended for connecting components (standard 485) and transmission of analogue and digital signals. Paired construction ensures good symmetry with respect to earth, while the double screen protects against interferences from external electromagnetic fields, what guarantees very good transmission quality. Cables may be used in dry and damp rooms, and are suitable for fixed installations. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
EB0017	1x2x0,64	9,4	100

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT L2 BUS LSOH

O2YS(St)CH, Data transmission, halogen-free cables for Profibus network



Data transmission and telecommunication cables



Technical data:

Thermal parameters:

Temperature range:
operating temperature: -40 °C to 80 °C
min. installation temp: -5 °C

Electrical parameters:

Wave impedance: 150 Ω ±10%
Conductor loop resistance (max.): 115 Ω/km
Screen resistance (max.): 9,7 Ω/km
Insulation resistance: 1 GΩ x km
Capacitance: 30 nF/km
Test voltage: 1500 V
Wave attenuation at a frequency of:
1 MHz = 1,2 dB/100 m
4 MHz = 2,2 dB/100 m
10 MHz = 3,2 dB/100 m
16 MHz = 4,2 dB/100 m

Mechanical parameters:

Min. bending radius: 8 x Ø

Design:

Conductors: solid copper conductors 1 x 2 x 0,64 mm
Insulation: made of foamed polyethylene with a thin external layer of solid polyethylene
Core identification: red, green
Core arrangement: cores twisted together with two fillers
Screens: aluminium backed polyester tape and tinned copper wire braid
Outer sheath: special halogen-free, self-extinguishing and flame retardant (as per EN 60332-1-2); colour: purple

Application:

L2-BUS LSOH cables are intended for connecting components (standard 486) and transmission of analogue and digital signals. Paired construction ensures good symmetry with respect to earth, while the double screen protects against interferences from external electromagnetic fields, what guarantees very good transmission quality. Cables may be used in dry and damp rooms, and are suitable for fixed installations. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
EB0200	1x2x0,64	7,6	59

*Outer diameter tolerance: +/-5%
Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT L2 BUS outdoor

O2YS(St)C2Y, Data transmission cables for Profibus network, outdoor application



industrial application



internal application



external application



data transmission



EMC



UV resistance



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temp: -5 °C

Electrical parameters:

Wave impedance: 150 Ω ± 10%

Conductor loop resistance (max.): 115 Ω/km

Screen resistance (max.): 9,7 Ω/km

Insulation resistance: 1G Ω x km

Capacitance: 30 nF/km

Test voltage: 1.5 kV

Wave attenuation at a frequency of:

1 MHz = 1,2 dB/100 m

4 MHz = 2,2 dB/100 m

10 MHz = 3,2 dB/100 m

16 MHz = 4,2 dB/100 m

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

solid copper conductors 1 x 2 x 0,64 mm

Insulation:

made of foamed polyethylene with a thin external layer of solid polyethylene

Core identification:

red, green

Core arrangement:

cores twisted together with two fillers

Screens:

aluminium backed polyester tape and tinned copper wire braid

Outer sheath:

special PE, UV resistant; colour: black

Application:

The cables are intended for connecting L2-BUS components (standard 486) and transmission of analogue and digital signals. Paired construction ensures good symmetry with respect to earth, while the double screen protects against interferences from external electromagnetic fields, what guarantees very good transmission quality. Cables may be used in dry and damp rooms, outdoor and are suitable for fixed installations. Outer sheath is UV resistant. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
EB0003	1x2x0,64	7,6	50

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT L2 BUS Flex

LiO2YS(St)CY, Data transmission cables for Profibus network



Technical data:

Thermal parameters:

Temperature range:

fixed installation: -40 °C to 80 °C
flexible connections: -5 °C to 80 °C

Electrical parameters:

Min. installation temp: -5 °C
Wave impedance: 150 Ω +/-10%
Conductor loop resistance (max.): 172 Ω/km
Screen resistance (max.): 9,7 Ω/km
Insulation resistance: 1G Ω x km
Capacitance: 35 nF/km
Test voltage: 1.5 kV
Wave attenuation at a frequency of:
4 MHz = 2,5 dB/100 m
16 MHz = 5,2 dB/100 m

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

stranded, bare copper conductors 1 x 2 x 0,64 mm (7 x 0,21 mm)

Insulation:

made of foamed polyethylene with a thin external layer of solid polyethylene

Core identification:

red, green

Core arrangement:

cores twisted together with two fillers

Screens:

aluminium backed polyester tape and tinned copper wire braid

Outer sheath:

PVC compound, oil resistant (cf. chemical resistance table), self-extinguishing and flame retardant (as per EN 60332-1-2); colour: purple

Application:

The cables are intended for connecting L2-BUS components (standard 486) and Transmission of analogue and digital signals. Paired construction ensures good symmetry with respect to earth, while the double screen protects against interferences from external electromagnetic fields, what guarantees very good transmission quality. Cables may be used in dry and damp rooms, and are suitable for fixed installations and mobile devices. Cables classified according to **EN 50575 (CPR)**.

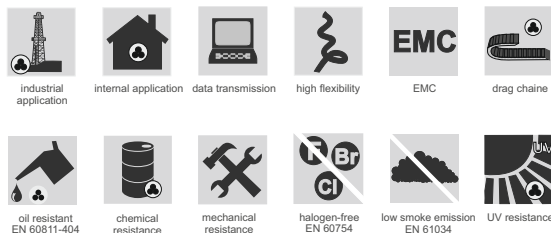
Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
EB0008	1x2x0,64 (7x0,21)	7,6	57

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT L2 BUS High Flex

LiO2YS(St)C11Y, Data transmission cables for Profibus network



Technical data:

Thermal parameters:

Temperature range:

fixed installation: -40 °C to 80 °C
flexible connections: -30 °C to 80 °C

Electrical parameters:

Wave impedance: 150 Ω ±10 %
Conductor loop resistance (max): 69,1 Ω/km
Insulation resistance: 1 GΩ x km
Capacitance: 35 nF/km
Test voltage: 1500 V
Wave attenuation at a frequency of:
4 MHz = 2,5 dB/100 m
16 MHz = 5,2 dB/100 m

Mechanical parameters:

Min. bending radius:
fixed installation: 5 x Ø
flexible connections: 10 x Ø

Design:

Conductors:

multi-stranded, bare copper conductors 1 x 2 x 0,64 mm (AWG 24/19)

Insulation:

made of foamed polyethylene with a thin external layer of solid polyethylene

Core identification:

red, green

Core arrangement:

cores twisted together with two fillers

Screens:

aluminium backed polyester tape and tinned copper wire braid

Outer sheath:

special PUR with increased mechanical and chemical resistance; colour: purple

Application:

Cables designed for connecting very flexible applications and transmission of analogue and digital signals. Paired construction ensures good symmetry with respect to earth, while double screen protects against interferences from external electromagnetic fields, what guarantees very good transmission quality. Cables may be used in dry and damp rooms, and are suitable especially for continuous bending in drag chains. Designed and tested to withstand minimum 5 million bending cycles. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
EB0018	1x2x0,64	8,1	78

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT L2 BUS FC

Data transmission cables for Profibus DP network, FastConnect



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temp: -5 °C

Electrical parameters:

Wave impedance: 150 Ω +/- 10%

Conductor loop resistance (max): 115 Ω/km

Screen resistance (max): 9,7 Ω/km

Insulation resistance: 1 GΩ x km

Capacitance: 30 nF/km

Test voltage: 1.5 kV

Peak operating voltage: 250 V (not for power applications)

Wave attenuation at a frequency of:

1 MHz = 1,2 dB/100 m

4 MHz = 2,2 dB/100 m

10 MHz = 3,2 dB/100 m

16 MHz = 4,2 dB/100 m

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

solid copper conductors 1 x 2 x 0,64 mm

Insulation:

made of foamed polyethylene with a thin external layer of solid polyethylene

Core identification:

red, green

Core arrangement:

cores twisted together

Inner sheath:

PVC compound

Screens:

aluminium backed polyester tape and tinned copper wire braid

Outer sheath:

PVC compound, oil resistant (cf. chemical resistance table), self-extinguishing and flame retardant (as per EN 60332-1-2); colour: purple

Application:

L2-BUS cables are intended for connecting components (standard 486) and transmission of analogue and digital signals. Paired construction ensures good symmetry with respect to earth, while double screen protects against interferences from external electromagnetic fields, what guarantees very good transmission quality. Cables may be used in dry and damp rooms, and are suitable for fixed installations. Special construction allows to strip the cable with the special stripping tool (FastConnect). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
EB0016	1x2x0,64	8,0	82

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BITNER BiT L2 BUS FC LSOH

Data transmission, halogen-free cables for Profibus DP network, FastConnect



industrial application



internal application



EN 60332-1-2



data transmission



halogen-free
EN 60754



low smoke emission
EN 61034



EMC



FastConnect

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temp: -5 °C

Electrical parameters:

Wave impedance: 150 Ω +/- 10%

Conductor loop resistance (max): 115 Ω/km

Screen resistance (max): 9,7 Ω/km

Insulation resistance: 1 GΩ x km

Capacitance: 30 nF/km

Test voltage: 1.5 kV

Wave attenuation at a frequency of:

1 MHz = 1,2 dB/100 m

4 MHz = 2,2 dB/100 m

10 MHz = 3,2 dB/100 m

16 MHz = 4,2 dB/100 m

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

solid copper conductors 1 x 2 x 0,64 mm
made of foamed polyethylene with a thin external layer of solid polyethylene

Insulation:

red, green

Core identification:

cores twisted together

Core arrangement:

special halogen-free compound

Inner sheath:

aluminium backed polyester tape and tinned copper wire braid

Screens:

special halogen-free, self-extinguishing and flame retardant (as per EN 60332-1-2); colour: purple

Outer sheath:

Application:

L2-BUS LSOH cables are intended for connecting components (standard 486) and transmission of analogue and digital signals. Paired construction ensures good symmetry with respect to earth, while double screen protects against interferences from external electromagnetic fields, what guarantees very good transmission quality. Cables may be used in dry and damp rooms, and are suitable for fixed installations. Special construction allows to strip the cable with the special stripping tool (FastConnect). Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
EB0210	1x2x0,64	8,0	82

*Outer diameter tolerance: +/-5%

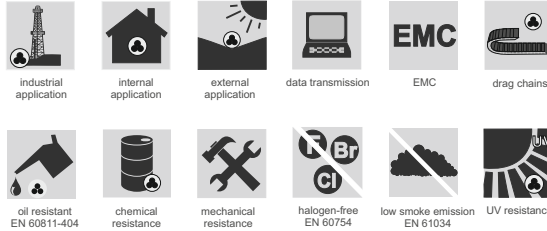
Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT CAN-BUS Drag Chain

Data transmission cables for CAN-BUS network, designed for drag chain operations



Data transmission and telecommunication cables



Technical data:

Thermal parameters:
Temperature range:
 fixed installation: -50 °C to 80 °C
 flexible connections: -40 °C to 80 °C

Electrical parameters:
Wave impedance: 120 Ω ± 15 %
Conductor resistance (max): 53 Ω/km
Insulation resistance: 5 GΩ x km
Capacitance: 40 nF/km
Test voltage: 1000 V

Mechanical parameters:
Min. bending radius:
 fixed installation: 5 x Ø
 flexible installation: 10 x Ø

Design:

Conductors: very finely stranded bare copper wires (42x0,1 mm)
Insulation: made of foamed polyethylene with a thin external layer of solid polyethylene
Core identification: white, brown
Core arrangement: cores twisted together
Wrapping: special fleece tape
Screen: tinned copper wire braid
Outer sheath: special PUR, with enhanced resistance to abrasion, chemicals, resistant to oil, industrial coolants and UV; colour: purple

Application:

BiT CAN-BUS Drag Chain Cables for data transmission in CAN (Control Area Network) is designed for continuous operation in drag chains withstanding at least 10M bending cycles within a chain. Cable suitable for operation both indoors and outdoors. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EB0050	1x2x0,34	7,0	60

*Outer diameter tolerance: +/-5%
 Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT E-BUS

EIB, KNX cable



internal application



EN 60332-1-2



data transmission

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temp.: -5 °C

Electrical parameters:

Wave impedance: 85 Ω ±15 %

Conductor loop resistance (max.): 73,2 Ω/km

Insulation resistance: 100 MΩ x km

Capacitance: 100 nF/km

Mechanical parameters:

Min. bending radius: 8 x Ø

Design:

Conductors: solid copper conductors, as per EN 60228

Insulation: PVC compound

Core identification:

for a one-pair arrangement: red, black
for a two-pair arrangement: 1p-white/yellow, 2p-red/black
for a four-pair arrangement: 1p-white/blue, 2p-yellow/red,
3p-white/green, 4p-white/brown

Core arrangement:

cores twisted in pairs, pairs twisted together
aluminium backed polyester tape with tinned copper
drain wire Ø 0,4 mm placed longitudinally underneath
the screen

Screen:

Sheath: PVC compound, oil resistant (cf. chemical resistance table), self-extinguishing and flame retardant (as per EN 60332-1-2); colour: green (one-pair cable), green (two-pair cable) or purple (four-pair cable)

Application:

Cable for transmission of BUS signals in intelligent building management systems based on standards of the European Installation Bus EIB. Signals received from system sensors (lighting, temperature, air conditioning, access control and others) are gathered in the EIB bus, and subsequently processed and used to control a device's operation. Cables can be installed in dry and damp rooms, both within and on walls, as well as in pipes, trays and cable ducts. They may also be used for external applications but suitably protected against direct exposure to sunlight. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Sheath colour
EB0151	1x2x0,8	5,6	37	green
EB0005	2x2x0,8	6,0	54	green
EB0007	4x2x0,8	9,3	92	purple
EB0007.07	4x2x0,8	9,3	92	green

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT E-BUS H

EIB, KNX halogen-free cable



internal application



EN 60332-1-2



halogen-free
EN 60754



low smoke emission
EN 61034



data transmission

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temp.: -5 °C

Electrical parameters:

Wave impedance: 85 Ω ±15 %

Conductor loop resistance (max.): 73,2 Ω/km

Insulation resistance: 100 MΩ x km

Capacitance: 100 nF/km

Mechanical parameters:

Min. bending radius: 8 x Ø

Design:

Conductors:

solid copper conductors, as per EN 60228

Insulation:

special halogen-free compound

Core identification:

for a one-pair arrangement: red, black
for a two-pair arrangement: 1p-white/yellow, 2p-red/black
for a four-pair arrangement: 1p-white/blue, 2p-yellow/red, 3p-white/green, 4p-white/brown

Core arrangement:

Screen:

cores twisted in pairs, pairs twisted together
aluminium backed polyester tape with tinned copper
drain wire Ø 0,4 mm placed longitudinally underneath
the screen

Outer sheath:

special halogen-free, self-extinguishing and flame
retardant (as per EN 60332-1-2); colour: green (one-pair
cable), green (two-pair cable) or purple (four-pair cable)

Application:

Cable for transmission of BUS signals in intelligent building management systems based on standards of the European Installation Bus EIB. Signals received from system sensors (lighting, temperature, air conditioning, access control and others) are gathered in the EIB bus, and subsequently processed and used to control a device's operation. Cables can be installed in dry and damp rooms, both within and on walls, as well as in pipes, trays and cable ducts. They may also be used for external applications but suitably protected against direct exposure to sunlight. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Sheath colour
EB0082	1x2x0,8	5,6	37	green
EB0080	2x2x0,8	6,0	54	green
EB0081	4x2x0,8	9,3	92	purple

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT Profibus PA

Data transmission cables for the Profibus networks



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temp.: -5 °C

Electrical parameters:

Wave impedance: 100 Ω ± 20 %

Conductor loop resistance (max.): 44 Ω/km

Insulation resistance: 1GΩ x km

Capacitance: 55 nF/km

Test voltage: 1.5 kV

Attenuation loss at a frequency of 39 kHz = 3 dB/km

Mechanical parameters:

Min. bending radius: 8 x Ø

Design:

Conductors:

solid copper conductors 1 x 2 x 1 mm

Insulation:

made of foamed polyethylene with a thin external layer of solid polyethylene

Core identification:

red, green

Core arrangement:

arrangement cores twisted together with two fillers

Screens:

aluminium backed polyester tape and tinned copper wire braid

Outer sheath:

PVC compound, oil resistant (cf. chemical resistance table), self-extinguishing and flame retardant (as per EN 60332-1-2); colour: blue (for explosion hazard zones) or black

Application:

The cables are intended for connecting PROFIBUS network components and signals transmission acc. to Profibus PA standard (Process Automation). Paired construction ensures good symmetry with respect to earth, while the double screen protects against interferences from external electromagnetic fields, what guarantees very good transmission quality. Cables may be used in dry and damp rooms, and are suitable for fixed installations. Blue sheathed cable is dedicated for explosion hazard zones, black sheathed one is resistant to UV radiation. Cables classified according to EN 50575 (CPR).

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]	Sheath colour
EB0010	1x2x1	7,6	80	black (UV)
EB0009	1x2x1	7,6	80	blue

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT Device



Data transmission cables for the DeviceNet™ networks, for fixed installations indoors



Technical data:

Thermal parameters:

Temperature range:
operating temperature: -40 °C to 80 °C
min. installation temp.: -5 °C

Electrical parameters:

Test voltage: 2000 V
Insulation resistance for the transmission pair
min. 200 MΩ x km
Wave impedance: 120 Ω ± 10 %
Approximate capacitance of the transmission: 40 nF/km
Attenuation loss:
thin
≤ 22.9 dB/km (1 MHz)
≤ 16.4 dB/km (500 kHz)
≤ 9.5 dB/km (125 kHz)

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors: multi-stranded, tinned copper conductors, class 5 acc. to EN 60228
Insulation: transmission pair conductors - PE, power supply conductors - PVC
Core identification: transmission pair: blue-white, power supply pair - red-black
Core arrangement: screened pairs twisted together with a drain wire
Individual screen: aluminium backed polyester tape
Collective screen: tinned copper wire braid with coverage ≥ 85%
Outer sheath: PVC compound, oil resistant (cf. chemical resistance table), self-extinguishing and flame retardant (as per EN 60332-1-2); colour: grey

Application:

The DeviceNet™ communication protocol has been developed by the Allen-Bradley company (currently Rockwell Automation). DeviceNet™ is a dedicated solution for connecting industrial controllers with input/output devices into a network structure. The possibility of supplying power to network devices directly through the communication bus considerably simplifies the creation of a scattered system. As a result, simple devices such as sensors with low power consumption do not require an additional power supply source. Cables are suitable for use in dry and damp rooms, for fixed installations. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EB0012	Thin (2x0,25 mm ²) + (2x0,34 mm ²)	7,0	84

*Outer diameter tolerance: +/-5%
Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT Li2YCY-P(St)

Data transmission cables, paired with reduced capacitance



Industrial application



Internal application



data transmission



EN 60332-1-2



high flexibility



EMC

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
installation temperature: -5 °C to 80 °C

Electrical parameters:

Operating voltage (max): U = 300 V

Test voltage: 1500 V

Insulation resistance: 5 GΩ x km

Approximate capacitance (at 800 Hz):

core/core 75 pF/m

Approx. inductance: 0,50 mH/km

Mechanical parameters:

Min. bending radius:

flexible connections: 12 x Ø

fixed installation: 6 x Ø

Design:

Conductors:

multi-stranded copper conductors, class 5
acc. to EN 60228

Insulation:

special polyethylene

Core identification:

colours as per DIN 47100

Core arrangement:

cores twisted in pairs, pairs individually screened with aluminium backed polyester tape and tinned copper drain wire Ø 0.4 mm

Collective screen:

tinned copper wire braid

Outer sheath:

PVC compound, oil resistant (cf. chemical resistance table), self-extinguishing and flame retardant (as per EN 60332-1-2); colour: grey

Application:

Cables designed for cabling data transmission systems, for transmission of signals under conditions of high attenuation requirements, and for crosstalk. Common braided screen provides additional protection against the impact of strong interfering fields. In order to maintain EMC electromagnetic compatibility, it is recommended to earth the screen at both ends of the cable. Cable is suitable for indoor applications only. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S31705	2x2x0,34	6,7	63,0
S31706	3x2x0,34	7,4	73,0
S31707	4x2x0,34	8,3	96,0
S31708	8x2x0,34	10,8	164,0
S31709	10x2x0,34	11,4	191,0
S31710	2x2x0,5	7,8	77,0
S31711	3x2x0,5	9,0	100,0
S31712	4x2x0,5	9,8	122,0
S31713	8x2x0,5	12,8	210,0
S31714	10x2x0,5	14,0	260,0

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S31715	2x2x0,75	9,6	115,0
S31716	3x2x0,75	10,9	142,0
S31717	4x2x0,75	12,1	175,0
S31718	8x2x0,75	16,2	315,0
S31719	10x2x0,75	17,3	368,0
S31720	2x2x1,0	10,4	135,0
S31721	3x2x1,0	11,8	168,0
S31722	4x2x1,0	13,5	215,0
S31723	8x2x1,0	18,0	361,0
S31724	10x2x1,0	19,0	450,0

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Cables for industrial process control computer systems and instrumentation



Technical data:

Thermal parameters:

Temperature range:
 operating temperature: -40 °C to 80 °C
 min. installation temperature: -5 °C

Electrical parameters:

Max operating voltage: 75 V
Conductor resistance (20 °C) max:
 81 Ω/km
Insulation resistance (min): 100 MΩ x km
Test voltage: 500 V
Effective capacitance in pair (800 Hz):
 80 nF/km
Characteristic impedance (10MHz):
 75 Ω ± 10 %

Mechanical parameters:

Min bendig radius: 10 x Ø

Design:

Conductors: tinned copper conductors, stranded class 2, cross section 0,5 mm² (construction 7 x 0,3 mm)
Insulation: PVC compound
Core identification: orange and white with printed numbers
Common screen: aluminium backed polyester tape, tinned copper drain wire class 2, 0,5 mm² (construction 7 x 0,3 mm) placed under the tape
Outer sheath: special self-extinguishing, flame retardant (PN-EN 60332-1-2) PVC compound; colour: grey, RAL 7035

Application:

Cables are intended for analog and digital signals transmission. Screened pairs, twisted together ensure very good attenuation loss characteristics while common screen protects against external electromagnetic fields. They are suitable for fixed installations in places not exposed to mechanical stresses. They are intended for internal application only. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S10670	2x2x0,5+0,5	7,0	62
S10671	4x2x0,5+0,5	8,8	94
S10672	8x2x0,5+0,5	11,3	160
S10673	12x2x0,5+0,5	13,0	230
S10674	24x2x0,5+0,5	17,0	415
S10675	48x2x0,5+0,5	24,0	800

*Outer diameter tolerance: +/-5%
 Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiT KJAAM

Data transmission cables for numerical control systems



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temperature: -5 °C

Electrical parameters:

Operating voltage (peak value): 75 V

Test voltage: 2000 V

Conductor loop resistance (20 °C) max:
81 Ω/km

Effective capacitance in pair (800 Hz):
80 nF/km

Insulation resistance (min): 5 GΩ/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:	stranded tinned copper conductors class 2, cross section 0,5 mm ² (7 x 0,3 mm)
Insulation:	PE, insulation thickness 0,4 mm
Core identification:	blue and red
Individual screen:	aluminium backed polyester tape with stranded, tinned copper drain wire 0,5 mm ² (7 x 0,3 mm) placed under the tape and twisted together with cores
Core arrangement:	screened pairs twisted together and wrapped with numbered identification tapes
Collective screen:	aluminium backed polyester tape with stranded tinned copper drain wire 0,5 mm ² (7 x 0,3 mm) placed under the tape
Outer sheath:	PVC compound self-extinguishing and flame retardant (as per EN 60332-1-2); colour: grey

Application:

Cables designed for analog and digital signals transmission, protected against interferences from external electromagnetic fields by collective screen. Individually screened, twisted pairs ensure very good coefficient of attenuation loss. Cables designed for indoor applications. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]
S10550	2x(2+1)x0,5+0,5	9,3	79
S10551	4x(2+1)x0,5+0,5	10,8	135
S10552	8x(2+1)x0,5+0,5	14,6	237
S10553	12x(2+1)x0,5+0,5	16,5	326
S10554	24x(2+1)x0,5+0,5	24,0	640

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BIT KJAAM-HF UV

Halogen-free data transmission cables for numerical control systems



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temperature: -5 °C

Electrical parameters:

Operating voltage (peak value): 75 V

Test Voltage: 2000 V

Conductor loop resistance (20 °C) max:

81 Ω/km

Insulation resistance (min): 2 GΩ x km

Effective capacitance in pair (800 Hz):

80 nF/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

stranded tinned copper conductors class 2, cross section 0,5 mm² (7 x 0,3 mm)

Insulation:

PE, insulation thickness 0,4 mm

Core identification:

blue and red

Individual screen:

aluminium backed polyester tape with stranded, tinned copper drain wire 0,5 mm² (7 x 0,3 mm) placed under the tape and twisted together with cores

Core arrangement:

screened pairs twisted together and wrapped with numbered identification tapes

Collective screen:

aluminium backed polyester tape with stranded tinned copper drain wire 0,5 mm² (7 x 0,3 mm) placed under the tape

Outer sheath:

special halogen-free, self-extinguishing and flame retardant (as per EN 60332-1-2); colour: black

Application:

Cables designed for analog and digital signals transmission, protected against interferences from external electromagnetic fields by collective screen. Individually screened twisted pairs ensure very good coefficient of attenuation loss. Cables designed for applications not exposed to mechanical stresses both indoor and outdoor. Outer sheath resistant to UV radiation and weather conditions. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
S10590	2x(2+1)x0,5+0,5	10,7	115
S10591	4x(2+1)x0,5+0,5	11,6	160
S10592	8x(2+1)x0,5+0,5	15,5	280
S10593	12x(2+1)x0,5+0,5	17,5	370
S10594	24x(2+1)x0,5+0,5	24,4	690

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

ELQXB

Halogen-free, paired telecommunication cable



internal application



EN 60332-1-2



halogen-free
EN 60754

RoHS 2015/863/EU



LVD 2014/35/EU

CPR

CPR 305/2011

24 months warranty

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temperature: -5 °C

Electrical parameters:

Operating voltage: 100 V

Conductor resistance at 20 °C (max.):

97,5 Ω/km

Insulation resistance: 5 GΩ x km

Max loop resistance unbalance: 2 %

Max capacitance in pair: core/core:

59 nF/km

Max capacitance unbalance:

for ≤ 6 x 2 x 0,5 : 400 pF/500 m

for ≥ 10 x 2 x 0,5: 150 pF/500 m

Attenuation loss at 1 Mhz: 21 dB/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Standards:

IEC 60332-1
IEC 60754-2
SS 424 16 08

Design:

Conductors:

solid, bare, copper conductors

Insulation:

special PE

Core identification:

core "a" - blue, orange, green, brown, grey
core "b" - white or red with 2 longitudinal stripes of colour "a" core

Core arrangement:

cores twisted in pairs, pairs in bundles wrapped with identification tapes, bundles twisted together in layers

Outer sheath:

special, halogen-free and flame retardant compound acc. to EN 60332-1-2, colour: white

Application:

Halogen-free data transmission cable for numerical control systems. Suitable for fixed installations indoors. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
TP1000	1x4x0,5*	3,4	17
TP1001	2x2x0,5	4,1	22
TP1002	4x2x0,5	5,6	36
TP1003	6x2x0,5	6,5	48
TP1004	10x2x0,5	7,7	73,5
TP1005	20x2x0,5	10,4	137
TP1006	30x2x0,5	12,2	196
TP1007	50x2x0,5	15,5	325
TP1008	100x2x0,5	20,5	565

*Outer diameter tolerance: +/-5%

(*) 1x4x0,5 mm twisted as diagonal pair

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: On customer's request other cross sections or number of cores can be produced

ELQXB

Halogen-free, paired telecommunication cable

Insulation colours:

1-100 pairs Pair	Insulation colours:	
	a	b
1	blue	white-blue
2	orange	white-orange
3	green	white-green
4	brown	white-brown
5	grey	white-grey
6	blue	red-blue
7	orange	red-orange
8	green	red-green
9	brown	red-brown
10	grey	red-grey

core A	core B	core C	core D
blue	turquoise	white	violet

Units:	identification tape for each unit of 10 pairs
Pair 1-10	blue
Pair 11-20	orange
Pair 21-30	green
Pair 31-40	brown
Pair 41-50	grey
Pair 51-60	white
Pair 61-70	red
Pair 71-80	black
Pair 81-90	yellow
Pair 91-100	violet

ELQYB

Halogen-free, sensor cable for fire alarm installations



internal application



EN 60332-1-2



halogen-free
EN 60754



low smoke emission
EN 61034

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temperature: -5 °C

Electrical parameters:

Operating voltage: 100 V

Insulation resistance: 5 GΩ x km

Max capacitance in pair: 50 nF/km

Attenuation loss (800 Hz): 0,6 dB/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

solid, bare, copper conductors

Insulation:

special solid PE

Core arrangement:

cores twisted in pairs, pairs twisted together

Outer sheath:

special, halogen-free and flame retardant compound
acc. to EN 60332-1-2; colour: red or white

Application:

Halogen-free, low smoke sensor cable for fire alarm installations. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
TP1070	1x2x1	5,8	38
TP1071	10x2x1	16,1	280

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

FLAQQBR

Halogen-free, composite power supply and signalling cable



internal application



EN 60332-1-2



halogen-free
EN 60754



low smoke emission
EN 61034

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -15 °C to 80 °C
installation temperature: -10 °C to 50 °C

Electrical parameters:

Operating voltage: 100 V

Conductor resistance:

for 0,22 mm² (max) 90 Ω/km
for 1,0 mm² (max) 20,2 Ω/km

Insulation resistance:

for HFFR insulated conductors (min)
500 MΩ x km
for PE insulated conductors (min)
5000 MΩ x km

Max capacitance in signalling pair:

for 1 x 2 x 0,22: 75 nF/km
for 2 x 2 x 0,22: 65 nF/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

power conductors: stranded, tinned copper conductors
1,0 mm² (7 x 0,43 mm)

Signalling conductors:

stranded, bare copper conductors 0,22 mm² (7 x 0,2 mm)

Insulation:

power conductors: halogen free, flame retardant compound

Signalling conductors:

PE

Core identification:

power conductors: red, black

signalling conductors: white, blue

Core arrangement:

power cores twisted together with signalling pair
(on signalling pair) aluminium backed polyester tape with
tinned copper drain wire

Screen:

special, halogen-free and flame retardant compound
acc. to EN 60332-1-2; colour: white

Outer sheath:

Application:

Halogen-free composite cable for application in control and measuring systems. Cable's construction combines both signalling and power supply. Designed for indoor installations. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
TP1050	2x1+1x2x0,22	6,5	59
TP1051	2x1+2x2x0,22	8,0	76

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: On customer's request other cross sections or number of cores can be produced

FQAR-PG

Halogen-free, screened signalling cable



internal application



EN 60332-1-2



halogen-free
EN 60754



low smoke emission
EN 61034



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 70 °C
installation temperature: -20 °C to 70 °C

Electrical parameters:

Conductor resistance (max.):

for 0,5 mm² 40,4 Ω/km
for 1,0 mm² 20,2 Ω/km

Insulation resistance (min.):

2 GΩ x km

Test voltage:

1.4 kV AC 1min.

Crosstalk attenuation at 1 kHz (min.):

100 dB

Near-end crosstalk NEXT at 100kHz (min.):

60 dB

Transfer impedance

at 10 kHz (max.): 100 mΩ/m

at 10 MHz (max.): 1000 mΩ/m

Mechanical parameters:

Min. bending radius:

fixed installation: 12 x Ø

Design:

Conductors:

0,5 mm²: tinned copper, stranded, IEC 60228, class 2
(7 x 0.30 mm)

1,0 mm²: tinned copper, stranded, IEC 60228, class 2
(7 x 0.43 mm)

Insulation:

halogen free polyolefin

Core identification:

black with printed numbers

Core arrangement:

cores twisted together to form a pairs, pairs shall be laid up in concentric layers to form a round cable

Screen:

aluminium backed polyester tape with tinned copper drain wire

Outer sheath:

special halogen-free thermoplastic compound, flame retardant acc. IEC 60332-1-2; colour: light grey

Application:

Halogen-free flame retardant signalling cables used for fixed installation indoors and outdoors for control and signalling functions in power electrical applications. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
TP1080	2x0,5	6,4	50
TP1081	2x2x0,5	7,2	70
TP1082	4x2x0,5	10,5	115
TP1083	2x1	7,2	66
TP1084	2x2x1	8,1	98
TP1085	4x2x1	12,3	174

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: On customer's request other cross sections or number of cores can be produced



Internal application



EN 60332-1-2

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 70 °C
 min. installation temperature: -10 °C

Mechanical parameters:

Bending radius: 10 x Ø

Design:

Conductors:

solid copper conductors

Insulation:

PVC compound

Insulation colours:

acc. to PN-92/T-90321

Core identification:

pairs 1-21: pairs twisted together in layers
 pairs 25-53: pairs twisted in bundles, bundles twisted together in layers

Outer sheath:

PVC compound, self-extinguishing and flame retardant
 acc. to EN 60332-1-2; colour: white

Application:

Cables designed for connections of telephone and tele-transmission devices. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
TS0037	1x2x0,4	3,0	12
TS0038	2x2x0,4	3,8	16
TS0039	3x2x0,4	4,2	23
TS0040	5x2x0,4	4,8	31
TS0041	6x2x0,4	5,4	38
TS0042	7x2x0,4	5,4	43
TS0043	10x2x0,4	6,2	55
TS0044	12x2x0,4	6,6	63
TS0045	14x2x0,4	7,3	71
TS0046	21x2x0,4	8,6	102
TS0047	28x2x0,4	9,6	128
TS0048	30x2x0,4	10,9	137
TS0049	35x2x0,4	11,8	160
TS0050	42x2x0,4	15,0	187
TS0051	48x2x0,4	16,0	205
TS0052	53x2x0,4	16,5	228
TS0002	1x2x0,5	3,0	15
TS0003	2x2x0,5	3,9	20
TS0005	3x2x0,5	4,2	29
TS0007	5x2x0,5	4,8	39
TS0008	6x2x0,5	5,4	48
TS0009	7x2x0,5	5,8	54
TS0011	10x2x0,5	6,4	70
TS0012	12x2x0,5	6,9	81
TS0013	14x2x0,5	7,4	91
TS0015	21x2x0,5	9,1	135
TS0017	28x2x0,5	10,3	175
TS0018	30x2x0,5	11,3	190
TS0019	35x2x0,5	12,2	220

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
TS0020	42x2x0,5	13,3	250
TS0021	48x2x0,5	14,4	280
TS0022	53x2x0,5	14,9	305
TS0023	1x2x0,6	3,2	18
TS0024	2x2x0,6	4,1	28
TS0025	3x2x0,6	4,7	32
TS0026	5x2x0,6	5,4	51
TS0061	6x2x0,6	5,8	62
TS0062	7x2x0,6	6,2	70
TS0063	10x2x0,6	7,0	91
TS0064	12x2x0,6	7,6	110
TS0065	14x2x0,6	8,0	122
TS0066	21x2x0,6	9,7	180
TS0028	1x2x0,8	4,0	25
TS0029	2x2x0,8	5,4	38
TS0031	3x2x0,8	6,3	59
TS0032	5x2x0,8	7,5	87
TS0033	6x2x0,8	8,0	104
TS0034	7x2x0,8	8,6	118
TS0035	10x2x0,8	10,0	164
TS0053	12x2x0,8	10,7	191
TS0054	14x2x0,8	11,3	218
TS0036	21x2x0,8	13,7	310
TS0055	28x2x0,8	20,5	408
TS0056	30x2x0,8	21,0	434
TS0057	35x2x0,8	23,5	495
TS0058	42x2x0,8	24,5	602
TS0059	48x2x0,8	26,0	674
TS0060	53x2x0,8	27,0	740

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

YTKSYekw

Screened telecommunication station cable



Internal application



EN 60332-1-2



RoHS 2015/863/EU



LVD 2014/35/EU



CPR 305/2011



24 months warranty

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 70 °C
min. installation temperature: -10 °C

Mechanical parameters:

Bending radius: 10 x Ø

Design:

Conductors:

solid copper conductors

Insulation:

PVC compound

Insulation colours:

acc to PN-92/T-90321

Core identification:

pairs 1-21: pairs twisted together in layers pairs 25-53: pairs twisted in bundles, bundles twisted together in layers

Screen:

aluminium backed polyester tape with tinned copper drain wire

Outer sheath:

PVC compound, self-extinguishing and flame retardant acc. to EN 60332-1-2; colour: white

Application:

Cables designed for connections of telephone and tele-transmission devices with additional protection against electromagnetic interferences. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
TS0132	1x2x0,4	3,7	14
TS0133	2x2x0,4	4,0	20
TS0134	3x2x0,4	4,2	24
TS0135	5x2x0,4	5,0	32
TS0136	6x2x0,4	5,6	40
TS0137	7x2x0,4	6,0	45
TS0138	10x2x0,4	6,4	57
TS0139	12x2x0,4	7,0	65
TS0140	14x2x0,4	7,5	73
TS0141	21x2x0,4	9,0	105
TS0142	28x2x0,4	10,5	132
TS0143	30x2x0,4	11,4	139
TS0144	35x2x0,4	12,5	163
TS0145	42x2x0,4	15,0	190
TS0146	48x2x0,4	16,0	212
TS0147	53x2x0,4	16,5	230
TS0100	1x2x0,5	3,9	16
TS0101	2x2x0,5	4,1	24
TS0103	3x2x0,5	4,4	30
TS0105	5x2x0,5	5,0	43
TS0106	6x2x0,5	5,6	53
TS0107	7x2x0,5	6,0	59
TS0108	10x2x0,5	6,6	78
TS0109	12x2x0,5	7,1	89
TS0110	14x2x0,5	7,6	101
TS0112	21x2x0,5	9,3	146
TS0114	28x2x0,5	10,6	190
TS0115	30x2x0,5	11,6	202
TS0116	35x2x0,5	12,5	230

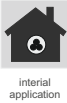
Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
TS0117	42x2x0,5	16,5	269
TS0118	48x2x0,5	17,5	302
TS0119	53x2x0,5	18,5	330
TS0120	1x2x0,6	4,2	20
TS0121	2x2x0,6	5,6	26
TS0122	3x2x0,6	6,5	35
TS0132	5x2x0,6	7,7	49
TS0133	6x2x0,6	8,2	65
TS0134	7x2x0,6	8,8	72
TS0135	10x2x0,6	10,2	86
TS0136	12x2x0,6	10,9	98
TS0137	14x2x0,6	11,5	118
TS0138	21x2x0,6	13,9	162
TS0123	1x2x0,8	4,2	26
TS0124	2x2x0,8	5,6	43
TS0126	3x2x0,8	6,5	61
TS0127	5x2x0,8	7,7	89
TS0128	6x2x0,8	8,2	107
TS0129	7x2x0,8	8,8	121
TS0130	10x2x0,8	10,2	166
TS0148	12x2x0,8	10,9	194
TS0149	14x2x0,8	11,5	220
TS0131	21x2x0,8	13,9	313
TS0150	28x2x0,8	15,5	411
TS0151	30x2x0,8	18,0	437
TS0152	35x2x0,8	21,2	502
TS0153	42x2x0,8	24,5	606
TS0154	48x2x0,8	26,0	683
TS0155	53x2x0,8	27,5	747

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

YnTKSY

Fire alarm cables for fixed installations



Technical data:

Thermal parameters:

Temperature range:
operating temperature: -40 °C to 70 °C
min. installation temperature: -5 °C

Electrical parameters:

Operating voltage: 150 V

Test voltage:
AC 1500 V
DC 2250 V

Insulation resistance: >200 MΩ x km

Pair loop resistance at 20 °C (max.):

0,8 mm: 75,0 Ω/km

1,0 mm: 48,0 Ω/km

1,4 mm: 26,6 Ω/km

1,5 mm²: 24,2 Ω/km

1,8 mm: 14,96 Ω/km

2,3 mm: 9,60 Ω/km

2,8 mm: 6,40 Ω/km

Conductor capacitance:

max. 120 nF/km

average 100 nF/km

Inductance: ca.0,7 mH/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Core colours:

Pair no.	Cores colours	
	a	b
1	white	blue
2		orange
3		green
4		brown
5		grey
6		blue
7		orange
8	red	green
9		brown
10		grey
11	black	blue
12		orange
13		green
14		brown
Quad number		white
1	white	orange

Design:

Conductors: solid copper conductor, class 1
Insulation: PVC compound
Core identification: acc. to PN-92/T-90320 (90321)
Core arrangement: cores twisted in pairs, pairs twisted together
Outer sheath: PVC compound, self-extinguishing and highly flame retardant acc. to EN 60332-1-2, EN 60332-3-24, IEC 60332-3, cat. C, oxygen index >29; colour: red

Application:

Special cables for connections of telephone switchboards and data transmission devices, using analogue and digital signals for control and fire alarm installations. Cables are used mainly as transmission lines and power line for fire alarm systems' devices (sensors, linear modules) and for autonomous fire fighting control systems and smoke extraction systems. Cables are suitable for installations used at the „0" moment of fire detection (moment of fire detection by the fire detection centre). Cables are intended for transmission of signal to auxiliary devices, which in case of fire detection are run by the central fire alarm (power cut-off, bringing down the lifts/elevators, ventilation cut-off). Cables classified according to **EN 50575 (CPR)**.

YnTKSY

Fire alarm cables for fixed installations

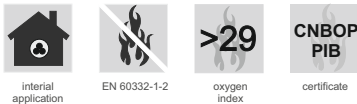
Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
TN0001	1x2x0,8	4,0	22
TN0002	1x4x0,8	4,6	35
TN0003	2x2x0,8	5,4	38
TN0004	3x2x0,8	6,5	55
TN0005	4x2x0,8	7,0	70
TN0006	5x2x0,8	7,7	83
TN0009	6x2x0,8	8,1	100
TN0405	7x2x0,8	9,1	117
TN0402	10x2x0,8	10,4	161
TN0007	1x2x1,0	4,7	31
TN0013	1x4x1,0	6,0	59
TN0008	2x2x1,0	7,0	58
TN0010	3x2x1,0	7,8	83
TN0014	4x2x1,0	8,3	109
TN0404	5x2x1,0	9,5	140
TN0015	7x2x1,0	10,7	180
TN0016	10x2x1,0	12,2	245
TN0017	12x2x1,0	14,7	295
TN0018	14x2x1,0	16,0	340
TN0019	1x2x1,4	6,3	56
TN0020	1x4x1,4	7,3	96
TN0021	2x2x1,4	9,4	107
TN0022	3x2x1,4	10,3	150
TN0023	4x2x1,4	12,2	195
TN0024	5x2x1,4	13,4	235
TN0025	7x2x1,4	14,8	315
TN0026	10x2x1,4	17,8	450
TN0027	1x2x1,5 mm ²	6,3	56
TN0028	1x4x1,5 mm ²	7,3	96
TN0029	2x2x1,5 mm ²	9,4	107
TN0030	3x2x1,5 mm ²	10,3	150
TN0031	4x2x1,5 mm ²	12,2	195
TN0032	5x2x1,5 mm ²	13,4	235
TN0033	7x2x1,5 mm ²	14,8	315
TN0034	10x2x1,5 mm ²	17,8	450
TN0035	1x2x1,8	7,5	82
TN0036	1x4x1,8	8,9	147
TN0037	2x2x1,8	11,2	160
TN0038	3x2x1,8	12,6	225
TN0039	4x2x1,8	14,7	290
TN0040	5x2x1,8	16,2	355
TN0041	7x2x1,8	18,3	495
TN0042	10x2x1,8	21,6	680
TN0043	1x2x2,3	8,9	122
TN0044	1x4x2,3	10,4	217
TN0045	2x2x2,3	13,3	235
TN0046	3x2x2,3	14,7	330
TN0047	4x2x2,3	17,6	450
TN0048	5x2x2,3	19,4	550
TN0049	7x2x2,3	21,5	740
TN0050	10x2x2,3	25,8	1050
TN0051	1x2x2,8	10,1	168
TN0052	1x4x2,8	12,0	310
TN0053	2x2x2,8	15,2	325
TN0054	3x2x2,8	16,9	465
TN0055	4x2x2,8	20,2	625
TN0056	5x2x2,8	22,3	765
TN0057	7x2x2,8	25,2	1060
TN0058	10x2x2,8	30,1	1510

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

YnTKSYekw

Screened fire alarm cables for fixed installations



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 70 °C
min. installation temperature: -5 °C

Electrical parameters:

Operating voltage: 150 V

Test voltage:

AC 1500 V
DC 2250 V

Insulation resistance: > 200 MΩ x km

Pair loop resistance at 20 °C (maximum):

0,8 mm - 75,0 Ω/km
1,0 mm - 48,0 Ω/km
1,4 mm - 26,6 Ω/km
1,5 mm² - 24,2 Ω/km
1,8 mm - 14,96 Ω/km
2,3 mm - 9,60 Ω/km
2,8 mm - 6,40 Ω/km

Conductor capacitance:

max. 150 nF/km
average 140 nF/km

Inductance: ca. 0,7 mH/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Core colours:

Pair no.	Cores colours	
	a	b
1	white	blue
2		orange
3		green
4		brown
5		grey
6		blue
7	red	orange
8		green
9		brown
10		grey
11		blue
12		orange
13	black	green
14		brown
15		grey
16		blue
17		orange
18		green
19	yellow	brown
20		grey
Quad number		
1	white white	blue orange

Design:

Conductors:

solid copper conductor, class 1

Insulation:

PVC compound

Core identification:

acc. to PN-92/T-90320 (90321)

Core arrangement:

cores twisted in pairs, pairs twisted together

Screen:

aluminium backed polyester tape with tinned copper drain wire

Outer sheath:

PVC compound, self-extinguishing and highly flame retardant
acc. to EN 60332-1, EN 60332-3-24, IEC 60332-3-24,
cat. C), oxygen index >29; colour: red

Application:

Special cables for connections of telephone switchboards and data transmission devices, using analogue and digital signals for control and fire alarm installations. Cables are used mainly as transmission lines and power line for fire alarm systems' devices (sensors, linear modules) and for autonomous fire fighting control systems and smoke extraction systems. Cables are suitable for installations used at the „0“ moment of fire detection (moment of fire detection by the fire detection centre). Cables are intended for transmission of signal to auxiliary devices, which in case of fire detection are run by the central fire alarm (power cut-off, bringing down the lifts/elevators, ventilation cut-off). Electrostatic screen protects the cables against external electromagnetic fields' interferences. Cables classified according to **EN 50575 (CPR)**.

YnTKSYekw

Screened fire alarm cables for fixed installations

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
TN0100	1x2x0,8	4,2	25
TN0101	1x4x0,8	4,8	41
TN0102	2x2x0,8	5,8	43
TN0103	3x2x0,8	6,6	60
TN0104	4x2x0,8	7,1	75
TN0105	5x2x0,8	7,9	90
TN0112	6x2x0,8	8,5	107
TN0106	7x2x0,8	9,2	122
TN0107	10x2x0,8	10,2	168
TN0113	12x2x0,8	12,3	197
TN0114	14x2x0,8	13,3	225
TN0115	20x2x0,8	14,3	307
TN0108	1x2x1,0	4,9	35
TN0408	1x4x1,0	5,9	60
TN0109	2x2x1,0	7,1	65
TN0411	3x2x1,0	8,0	90
TN0116	4x2x1,0	8,5	115
TN0412	5x2x1,0	9,7	145
TN0117	7x2x1,0	10,9	188
TN0406	10x2x1,0	12,4	255
TN0118	12x2x1,0	15,4	305
TN0119	14x2x1,0	16,6	350
TN0120	1x2x1,4	7,0	62
TN0121	1x4x1,4	7,9	101
TN0122	2x2x1,4	10,3	123
TN0123	3x2x1,4	10,9	155
TN0124	4x2x1,4	12,8	205
TN0125	5x2x1,4	14,0	245
TN0126	7x2x1,4	15,4	320
TN0127	10x2x1,4	18,4	460
TN0407	1x2x1,5 mm ²	6,8	62
TN0409	1x4x1,5 mm ²	7,9	101
TN0128	2x2x1,5 mm ²	10,3	133
TN0129	3x2x1,5 mm ²	11,5	160
TN0130	4x2x1,5 mm ²	12,8	205
TN0131	5x2x1,5 mm ²	14,0	245
TN0132	7x2x1,5 mm ²	15,4	320
TN0133	10x2x1,5 mm ²	18,4	460
TN0134	1x2x1,8	8,2	88
TN0135	1x4x1,8	9,6	155
TN0136	2x2x1,8	12,1	170
TN0137	3x2x1,8	13,2	235
TN0138	4x2x1,8	15,3	300
TN0139	5x2x1,8	16,8	365
TN0140	7x2x1,8	18,9	505
TN0141	10x2x1,8	22,2	695
TN0142	1x2x2,3	9,5	130
TN0143	1x4x2,3	11,0	225
TN0144	2x2x2,3	13,9	245
TN0145	3x2x2,3	15,4	340
TN0146	4x2x2,3	18,2	460
TN0147	5x2x2,3	20,0	560
TN0148	7x2x2,3	22,1	750
TN0149	10x2x2,3	24,1	1060
TN0150	1x2x2,8	10,7	175
TN0151	1x4x2,8	12,6	320
TN0152	2x2x2,8	15,9	330
TN0153	3x2x2,8	17,9	470
TN0154	4x2x2,8	20,8	630
TN0155	5x2x2,8	23,3	770
TN0156	7x2x2,8	25,8	1070
TN0157	10x2x2,8	30,7	1520

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

PT-LSHF

Halogen free signal cables



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
installation temperature: -5 °C to 50 °C

Electrical parameters:

Maximum operating voltage: 75 V

Test voltage - 700 V: 50 Hz

Max. DC resistance of the conductor at 20 °C:
65 Ω/km

Insulation resistance (min): 500 MΩ x km

Max. capacity pair / core to core: 75 nF/km

Capacitance unbalance pair to pair: 800 pF

Mechanical parameters:

Minimum bending radius: 10 x Ø

Design:

Conductor:

solid, tinned copper wire (Ø 0,6 mm)

Conductor insulation:

polyethylene PE

Core identification:

coloured conductors according to "Technical data" table

Core arrangement:

cores twisted in pairs, pairs twisted together

Outer sheath:

special halogen-free polymer, self-extinguishing and flame-retardant (acc. to EN 60332-1-2); colour: white

Application:

PT-LSHF halogen free cables are used in data communication and alarm systems, low-voltage - including building management system. For indoor use. Cables classified according to **EN 50575 (CPR)**.

Technical data

Pair no.	Colour
1	Black-blue
2	Black-orange
3	Black-green
4	Black-brown
5	Black-grey
6	Blue-white
7	Blue-orange
8	Blue-green
9	Blue-brown
10	Blue-grey

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
TP1500	1x4x0,6	4,2	29
TP1501	2x2x0,6	5,0	32
TP1502	3x2x0,6	5,4	40
TP1503	4x2x0,6	6,2	50
TP1504	5x2x0,6	7,1	65
TP1505	6x2x0,6	7,4	73
TP1506	8x2x0,6	8,1	90
TP1507	10x2x0,6	9,1	111
TP1508	20x2x0,6	11,9	205

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

PTS-LSHF

Screened halogen free signal cables



internal application



EN 60332-1-2



halogen-free
EN 60754



UV resistance

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
installation temperature: -5 °C to 50 °C

Electrical parameters:

Maximum operating voltage: 75 V

Test voltage:

core - core: 1000 V, 50 Hz
core - screen: 1000 V, 50 Hz

Max. DC resistance of the conductor at 20 °C:
65 Ω/km

Mechanical parameters:

Minimum bending radius: 10 x Ø

Design:

Conductor: solid, tinned copper wire (Ø 0,6 mm)
Conductor insulation: polyethylene PE
Core identification: coloured conductors according to "Technical data" table
Core arrangement: cores twisted in pairs, pairs twisted together
Screen: metal foil with tinned copper drain wire
Outer sheath: special halogen-free polymer, self-extinguishing and flame-retardant (acc. to EN 60332-1-2); colour: white

Application:

PTS-LSHF screened halogen free cables are used in data communication and alarm systems, low-voltage - including building management system. For use indoors. Cables classified according to **EN 50575 (CPR)**.

Technical data

Pair no.	Colour
1	black-blue
2	black-orange
3	black-green
4	black-brown
5	black-grey
6	blue-white
7	blue-orange
8	blue-green
9	blue-brown
10	blue-grey

Cat. no.	n x 2 x mm	Outer diameter* [mm]	Approximate cable weight [kg/km]
TP1550	1x4x0,6	4,3	31
TP1551	2x2x0,6	5,1	34
TP1552	3x2x0,6	5,5	42
TP1553	4x2x0,6	6,3	52
TP1554	5x2x0,6	7,2	67
TP1555	6x2x0,6	7,5	75
TP1556	8x2x0,6	8,2	92
TP1557	10x2x0,6	9,2	113
TP1558	20x2x0,6	12,0	207

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

BiTsensor® PE(St)CH B2ca

Halogen-free cable for RS 485 transmission



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -30 °C to 80 °C
min. installation temperature: -20 °C

Electrical parameters:

Operating voltage: 300 V

Test voltage: 2500 V

Wave impedance: 120 Ω ± 10%

Max. capacitance in pair: 42 nF/km

Mechanical parameters:

Min. bending radius: 30 mm

Design:

Conductors:

stranded tinned copper conductors class 2
acc. to EN 60228, IEC 60228

Insulation:

foamed polyethylene with a thin external layer of solid polyethylene

Core identification:

acc. to the table

Screens:

aluminium backed polyester tape on every pair and tinned copper drain wire

Outer sheath:

special halogen-free, self-extinguishing and flame retardant compound (acc. to EN 60332-1-2, IEC 60332-1, EN 60332-3-24, IEC 60332-3-24 cat. C), colour: green

Application:

Cable BiTsensor®PE(St)CH B2ca is dedicated for EIA/RS-485 transmission. The cable has a low capacity, thus ensuring high transmission speed for long connections. Used in protocol-based networks BACnet MS/TP, Linknet, MODbus RTU, etc. Cables may be used in dry and damp rooms, and are suitable for fixed installations. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Conductor colours
EB0250	1x2x0,22	5,6	41	white, blue
EB0251	2x2x0,22	7,1	62	Pair 1: white, blue Pair 2: red, black

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify specifications without prior notification



Chapter X

Instrumentation cables 500 V

BiT RE-2Y(St)Y-FR	342
BiT RE-2Y(St)Yv-FR	344
BiT RE-2Y(St)Y-FR PiMF	346
BiT RE-2Y(St)Y-FR TiMF	348
BiT RE-2Y(St)YSWAY-FR	350
BiT RE-2Y(St)H	352
BiT RE-2Y(St)HSAWAH	354

Please note that we can also produce the following constructions
(as well as their XLPE versions) on customer's request:

BiT RE-2Y(St)Yv-FR PiMF
BiT RE-2Y(St)Yv-FR TiMF
BiT RE-2Y(St)YSWAY-FR PiMF
BiT RE-2Y(St)YSWAY-FR TiMF
BiT RE-2Y(St)Hv
BiT RE-2Y(St)H PiMF
BiT RE-2Y(St)Hv PiMF
BiT RE-2Y(St)H TiMF
BiT RE-2Y(St)Hv TiMF
BiT RE-2Y(St)HSAWAH PiMF
BiT RE-2Y(St)HSAWAH TiMF

BiT RE-2Y(St)Y-FR



PVC sheathed instrumentation cables with collective electrostatic screen, rated 500 V



industrial application



internal application



EN 60332-1-2



EN 60332-3-24



data transmission



UV resistance

Technical data:

Thermal parameters:

Temperature range:
operating temperature: -40 °C to 80 °C
min. installation temperature: -5 °C

Electrical parameters:

Operating voltage (peak value): U = 500 V
Test voltage:
Core/core: 2000 V
Core/screen: 2000 V
Insulation resistance: > 5 GΩ x km

Mechanical parameters:

Min. bending radius: 7,5 x Ø

Design:

Conductors:

bare, stranded copper conductors class 2
acc. to EN 60228
polyethylene (PE)*

Insulation:

Core identification:

Pairs:

core A – black, core B – white (black numbering on the white core)

Triples:

core A – black, core B – white, core C – red (black numbering on the white core)

Core arrangement:

Pairs:

cores twisted in pairs, pairs twisted together and wrapped with polyester tape (PET)

Triples:

cores twisted in triples, triples twisted together and wrapped with polyester tape (PET)

Screen:

aluminum backed polyester tape with stranded tinned copper drain wire underneath (0,5 mm²)

Outer sheath:

PVC compound, self-extinguishing and flame retardant (as per EN 60332-1-2, EN 60332-3-24, IEC 60332-3 cat. C), UV resistant; colour: black, blue**

Application:

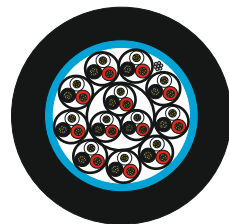
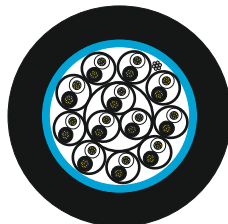
Cables designed for data transmission in numerical control systems ensuring optimum transmission of data up to 200 Kbit/s. Collective electrostatic screen protects against external interferences. Cables are suitable for application indoor and in dry and damp rooms. Outer sheath is UV resistant. Cables classified according to **EN 50575 (CPR)**.

* Available also with XLPE insulation – BIT RE-2X(St)Y-FR

** Cables with blue sheath have got extended catalogue numbers ending -06. E.g. Catalogue no. for BIT RE-2Y(St)Y-FR 1x2x0,5 with black outer sheath is ID5000 Catalogue no. for IB-BIT RE-2Y(St)Y 1x2x0,5 with blue outer sheath is ID5000.06. Cables are available also with oil resistant outer sheath (-OR ending). Catalogue no. for BIT RE-2Y(St)Y-OR 1x2x0,5 is ID5000.OR

Electrical parameters:

	Capacitance [nF/km]	Conductor resistance [Ω/km]	Inductivity 1 mH/km L/R [μH/Ω]
For one pair/triple:			
0,5 mm ²	100	36,7	25
0,75 mm ²	100	25,0	25
1,0 mm ²	100	18,5	25
1,3 mm ²	100	14,2	40
1,5 mm ²	100	12,3	40
Up to four pairs/triples:			
0,5 mm ²	75		
0,75 mm ²	75		
1,0 mm ²	75		
1,3 mm ²	85		
1,5 mm ²	85		
Over four pairs/triples:			
0,5 mm ²	65		
0,75 mm ²	65		
1,0 mm ²	65		
1,3 mm ²	75		
1,5 mm ²	75		



BiT RE-2Y(St)Y-FR

PVC sheathed instrumentation cables with collective electrostatic screen, rated 500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5000	1x2x0,5	6,2	44
ID5001	2x2x0,5	9,7	88
ID5002	4x2x0,5	11,0	69
ID5003	5x2x0,5	12,3	146
ID5004	6x2x0,5	13,1	161
ID5005	8x2x0,5	14,4	199
ID5006	10x2x0,5	16,3	247
ID5007	12x2x0,5	16,9	282
ID5008	16x2x0,5	19,1	356
ID5009	20x2x0,5	21,3	445
ID5010	24x2x0,5	23,5	521
ID5011	1x2x0,75	6,7	52
ID5012	2x2x0,75	10,5	108
ID5013	4x2x0,75	12,3	149
ID5014	5x2x0,75	13,4	184
ID5015	6x2x0,75	14,4	204
ID5016	8x2x0,75	16,0	262
ID5017	10x2x0,75	17,9	316
ID5018	12x2x0,75	18,6	363
ID5019	16x2x0,75	21,2	473
ID5020	20x2x0,75	23,7	584
ID5021	24x2x0,75	26,0	685
ID5022	1x2x1,0	7,2	63
ID5023	2x2x1,0	11,1	124
ID5024	4x2x1,0	12,9	176
ID5025	5x2x1,0	14,2	218
ID5026	6x2x1,0	15,2	242
ID5027	8x2x1,0	16,9	312
ID5028	10x2x1,0	18,9	378
ID5029	12x2x1,0	19,8	446
ID5030	16x2x1,0	22,4	570
ID5031	20x2x1,0	25,0	706
ID5032	24x2x1,0	27,8	845
ID5033	1x2x1,3	7,5	72
ID5034	2x2x1,3	11,8	148
ID5035	4x2x1,3	13,5	210
ID5036	5x2x1,3	15,1	268
ID5037	6x2x1,3	16,1	300
ID5038	8x2x1,3	17,9	387
ID5039	10x2x1,3	20,0	470
ID5040	12x2x1,3	21,0	555
ID5041	16x2x1,3	23,8	712
ID5042	20x2x1,3	26,5	881
ID5043	24x2x1,3	29,5	1054
ID5044	1x2x1,5	7,8	76
ID5045	2x2x1,5	12,3	158
ID5046	4x2x1,5	14,4	231
ID5047	5x2x1,5	15,8	286
ID5048	6x2x1,5	16,9	320
ID5049	8x2x1,5	18,8	413
ID5050	10x2x1,5	21,2	512
ID5051	12x2x1,5	22,0	592
ID5052	16x2x1,5	25,2	773
ID5053	20x2x1,5	28,0	955
ID5054	24x2x1,5	31,0	1126

triple cables

Cat. no.	n x 3 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5055	1x3x0,5	6,5	52
ID5056	2x3x0,5	11,1	117
ID5057	4x3x0,5	13,2	164
ID5058	5x3x0,5	14,5	200
ID5059	6x3x0,5	15,9	238
ID5060	8x3x0,5	18,0	295
ID5061	10x3x0,5	20,6	350
ID5062	12x3x0,5	21,3	400
ID5063	16x3x0,5	24,2	535
ID5064	20x3x0,5	26,7	660
ID5065	24x3x0,5	30,0	763
ID5066	1x3x0,75	7,2	67
ID5067	2x3x0,75	12,2	144
ID5068	4x3x0,75	14,5	208
ID5069	5x3x0,75	16,0	254
ID5070	6x3x0,75	17,7	313
ID5071	8x3x0,75	19,8	378
ID5072	10x3x0,75	22,9	462
ID5073	12x3x0,75	23,7	531
ID5074	16x3x0,75	26,9	701
ID5075	20x3x0,75	29,7	871
ID5076	24x3x0,75	33,5	1026
ID5077	1x3x1,0	7,5	77
ID5078	2x3x1,0	13,1	175
ID5079	4x3x1,0	15,3	247
ID5080	5x3x1,0	16,8	303
ID5081	6x3x1,0	18,7	370
ID5082	8x3x1,0	20,9	453
ID5083	10x3x1,0	24,0	543
ID5084	12x3x1,0	25,0	641
ID5085	16x3x1,0	28,5	849
ID5086	20x3x1,0	31,6	1072
ID5087	24x3x1,0	35,4	1246
ID5088	1x3x1,3	7,8	90
ID5089	2x3x1,3	13,7	204
ID5090	4x3x1,3	16,3	306
ID5091	5x3x1,3	17,9	375
ID5092	6x3x1,3	19,8	454
ID5093	8x3x1,3	22,2	563
ID5094	10x3x1,3	25,5	678
ID5095	12x3x1,3	26,6	801
ID5096	16x3x1,3	30,2	1059
ID5097	20x3x1,3	33,6	1336
ID5098	24x3x1,3	37,7	1576
ID5099	1x3x1,5	8,2	96
ID5100	2x3x1,5	14,4	218
ID5101	4x3x1,5	17,1	326
ID5102	5x3x1,5	18,8	400
ID5103	6x3x1,5	20,8	483
ID5104	8x3x1,5	23,3	601
ID5105	10x3x1,5	27,0	738
ID5106	12x3x1,5	28,1	869
ID5107	16x3x1,5	31,9	1148
ID5108	20x3x1,5	35,5	1447
ID5109	24x3x1,5	39,9	1705

*Outer diameter tolerance: +/-5%
Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

BiT RE-2Y(St)Yv-FR



PVC sheathed instrumentation cables with collective electrostatic screen and reinforced outer sheath, rated 500 V



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temperature: -5 °C

Electrical parameters:

Operating voltage (peak value): U = 500 V

Test voltage:

Core/core: 2000 V

Core/screen: 2000 V

Insulation resistance: > 5GΩ x km

Mechanical parameters:

Min. bending radius: 7,5 x Ø

Design:

Conductors:

bare, stranded copper conductors class 2
acc. to EN 60228
polyethylene (PE)*

Insulation:

Core identification:

Pairs:

core A – black, core B – white
(black numbering on the white core)

Triples:

core A – black, core B – white, core C – red
(black numbering on the white core)

Core arrangement:

Pairs:

cores twisted in pairs, pairs twisted together and wrapped with polyester tape (PET)

Triples:

cores twisted in triples, triples twisted together and wrapped with polyester tape (PET)

Screen:

aluminum backed polyester tape with stranded tinned copper drain wire underneath (0,5 mm²)

Outer sheath:

PVC compound, self-extinguishing and flame retardant (as per EN 60332-1-2, EN 60332-3-24, IEC 60332-3 cat. C), UV resistant; colour: black, blue**

Application:

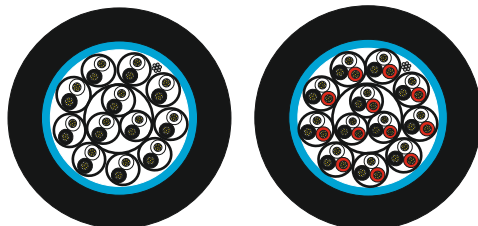
Cables designed for data transmission in numerical control systems ensuring optimum transmission of data up to 200 Kbit/s. Collective electrostatic screen protects against external interferences. Cables are suitable for application indoor and outdoor, in dry and damp rooms as well as for direct burial (Yv). Outer sheath is UV resistant. Cables classified according to **EN 50575 (CPR)**.

* Available also with XLPE insulation - **BiT RE-2X(St)Yv-FR**

** Cables with blue sheath have got extended catalogue numbers ending -06. E.g. Catalogue no. for **BiT RE-2Y(St)Yv-FR 1x2x0,5 with black outer sheath is ID5150**; Catalogue no. for **IB-BiT RE-2Y(St)Yv 1x2x0,5 with blue outer sheath is ID5150.06**. Cables are available also with oil resistant outer sheath (-OR ending). Catalogue no. for **BiT RE-2Y(St)Yv-OR 1x2x0,5 is ID5150.OR**

Electrical parameters:

	Capacitance [nF/km]	Conductor resistance [Ω/km]	Inductivity 1 mH/km L/R [μH/Ω]
For one pair/triple:			
0,5 mm ²	100	36,7	25
0,75 mm ²	100	25,0	25
1,0 mm ²	100	18,5	25
1,3 mm ²	100	14,2	40
1,5 mm ²	100	12,3	40
Up to four pairs/triples:			
0,5 mm ²	75		
0,75 mm ²	75		
1,0 mm ²	75		
1,3 mm ²	85		
1,5 mm ²	85		
Over four pairs/triples:			
0,5 mm ²	65		
0,75 mm ²	65		
1,0 mm ²	65		
1,3 mm ²	75		
1,5 mm ²	75		



BIT RE-2Y(St)Yv-FR

PVC sheathed instrumentation cables with collective electrostatic screen and reinforced outer sheath, rated 500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5150	1x2x0,5	8,2	82
ID5151	2x2x0,5	11,5	135
ID5152	4x2x0,5	12,8	168
ID5153	5x2x0,5	13,9	198
ID5154	6x2x0,5	14,7	216
ID5155	8x2x0,5	16,0	259
ID5156	10x2x0,5	17,7	306
ID5157	12x2x0,5	18,3	342
ID5158	16x2x0,5	20,5	424
ID5159	20x2x0,5	22,5	505
ID5160	24x2x0,5	24,7	587
ID5161	1x2x0,75	8,7	92
ID5162	2x2x0,75	12,3	159
ID5163	4x2x0,75	13,9	201
ID5164	5x2x0,75	15,0	241
ID5165	6x2x0,75	16,0	264
ID5166	8x2x0,75	17,4	320
ID5167	10x2x0,75	19,3	380
ID5168	12x2x0,75	20,0	429
ID5169	16x2x0,75	22,4	537
ID5170	20x2x0,75	24,7	644
ID5171	24x2x0,75	27,1	752
ID5172	1x2x1,0	9,0	101
ID5173	2x2x1,0	12,9	177
ID5174	4x2x1,0	14,5	230
ID5175	5x2x1,0	15,8	277
ID5176	6x2x1,0	16,8	305
ID5177	8x2x1,0	18,3	373
ID5178	10x2x1,0	20,3	446
ID5179	12x2x1,0	21,0	507
ID5180	16x2x1,0	23,6	639
ID5181	20x2x1,0	26,0	769
ID5182	24x2x1,0	28,6	901
ID5183	1x2x1,3	9,3	111
ID5184	2x2x1,3	13,4	198
ID5185	4x2x1,3	15,1	267
ID5186	5x2x1,3	16,5	322
ID5187	6x2x1,3	17,5	358
ID5188	8x2x1,3	19,1	442
ID5189	10x2x1,3	21,2	531
ID5190	12x2x1,3	22,0	608
ID5191	16x2x1,3	24,8	772
ID5192	20x2x1,3	27,3	934
ID5193	24x2x1,3	30,1	1098
ID5194	1x2x1,5	9,6	117
ID5195	2x2x1,5	13,9	210
ID5196	4x2x1,5	15,8	283
ID5197	5x2x1,5	17,2	343
ID5198	6x2x1,5	18,3	381
ID5199	8x2x1,5	20,0	471
ID5200	10x2x1,5	22,2	566
ID5201	12x2x1,5	23,0	648
ID5202	16x2x1,5	26,0	824
ID5203	20x2x1,5	28,6	997
ID5204	24x2x1,5	31,6	1173

triple cables

Cat. no.	n x 3 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5205	1x3x0,5	8,5	90
ID5206	2x3x0,5	12,9	174
ID5207	4x3x0,5	14,8	220
ID5208	5x3x0,5	16,1	261
ID5209	6x3x0,5	17,5	304
ID5210	8x3x0,5	19,4	360
ID5211	10x3x0,5	22,0	423
ID5212	12x3x0,5	22,7	476
ID5213	16x3x0,5	25,4	595
ID5214	20x3x0,5	27,9	741
ID5215	24x3x0,5	31,0	839
ID5216	1x3x0,75	9,0	103
ID5217	2x3x0,75	14,0	205
ID5218	4x3x0,75	16,1	269
ID5219	5x3x0,75	17,6	320
ID5220	6x3x0,75	19,1	377
ID5221	8x3x0,75	21,2	449
ID5222	10x3x0,75	24,1	532
ID5223	12x3x0,75	24,9	603
ID5224	16x3x0,75	27,9	769
ID5225	20x3x0,75	30,7	946
ID5226	24x3x0,75	34,3	1093
ID5227	1x3x1,0	9,3	114
ID5228	2x3x1,0	14,7	232
ID5229	4x3x1,0	16,9	311
ID5230	5x3x1,0	18,4	372
ID5231	6x3x1,0	20,1	439
ID5232	8x3x1,0	22,3	528
ID5233	10x3x1,0	25,4	629
ID5234	12x3x1,0	26,2	717
ID5235	16x3x1,0	29,5	920
ID5236	20x3x1,0	32,4	1136
ID5237	24x3x1,0	36,2	1317
ID5238	1x3x1,3	9,7	129
ID5239	2x3x1,3	15,3	264
ID5240	4x3x1,3	17,7	364
ID5241	5x3x1,3	19,3	439
ID5242	6x3x1,3	21,0	520
ID5243	8x3x1,3	23,4	631
ID5244	10x3x1,3	26,7	756
ID5245	12x3x1,3	27,6	868
ID5246	16x3x1,3	31,0	1119
ID5247	20x3x1,3	34,2	1386
ID5248	24x3x1,3	38,1	1613
ID5249	1x3x1,5	10,0	136
ID5250	2x3x1,5	16,0	280
ID5251	4x3x1,5	18,5	387
ID5252	5x3x1,5	20,2	468
ID5253	6x3x1,5	22,0	554
ID5254	8x3x1,5	24,5	672
ID5255	10x3x1,5	28,0	806
ID5256	12x3x1,5	28,9	926
ID5257	16x3x1,5	32,5	1196
ID5258	20x3x1,5	36,1	1500
ID5259	24x3x1,5	40,5	1765

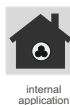
*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BITNER BiT RE-2Y(St)Y-FR PiMF

PVC sheathed instrumentation cables with collective electrostatic screen and individually screened pairs, rated 500 V



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
min. installation temperature: -5 °C

Electrical parameters:

Operating voltage (peak value): U = 500 V

Test voltage:

Core/core: 2000 V
Core/screen: 2000 V

Insulation resistance: > 5 GΩ x km

Mechanical parameters:

Min. bending radius: 7,5 x Ø

Design:

Conductors:

bare, stranded copper conductors class 2
acc. to EN 60228

Insulation:

polyethylene (PE)*

Core identification:

core A – black, core B – white
(black numbering on the white core)

Core arrangement:

screened pairs twisted together

Individual screen:

each pair screened with aluminum backed polyester tape and drain wire (0,6 mm) under each screen

Collective screen:

aluminum backed polyester tape with stranded tinned copper drain wire underneath (0,5 mm²)

Outer sheath:

PVC compound, self-extinguishing and flame retardant (as per EN 60332-1-2, EN 60332-3-24, IEC 60332-3 cat. C), UV resistant; colour: black, blue**

Application:

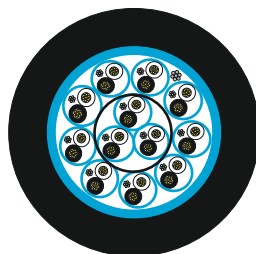
Cables designed for data transmission in numerical control systems ensuring optimum transmission of data up to 200 Kbit/s. Screened pairs twisted together ensure very good crosstalk attenuation and collective electrostatic screen protects against external interferences. Cables are suitable for application indoor and in dry and damp rooms. Outer sheath is UV resistant. Cables classified according to **EN 50575 (CPR)**.

* Available also with XLPE insulation – BIT RE-2X(Si)Y-FR PiMF

**Cables with blue sheath have got extended catalogue numbers ending -06. E.g. Catalogue no. for BiT RE-2Y(Si)Y-FR PiMF 2x2x0,5 with black outer sheath is ID5280. Catalogue no. for IB-BIT RE-2Y(Si)Y PiMF 2x2x0,5 with blue outer sheath is ID5280.06. Cables are available also with oil resistant outer sheath (-OR ending). Catalogue no. for BIT RE-2Y(Si)Y-OR PiMF 2x2x0,5 OR is ID5280.OR.

Electrical parameters:

	Capacitance [nF/km]	Conductor resistance [Ω/km]	Inductivity 1mH/km L/R [μH/Ω]
0,5 mm ²	100	36,7	25
0,75 mm ²	100	25,0	25
1,0 mm ²	100	18,5	25
1,3 mm ²	100	14,2	40
1,5 mm ²	100	12,3	40



BIT RE-2Y(St)Y-FR PiMF

PVC sheathed instrumentation cables with collective electrostatic screen and individually screened pairs, rated 500 V

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5280	2x2x0,5	10,0	100
ID5281	4x2x0,5	11,7	143
ID5282	5x2x0,5	12,8	175
ID5283	6x2x0,5	13,7	195
ID5284	8x2x0,5	15,2	251
ID5285	10x2x0,5	17,2	311
ID5286	12x2x0,5	17,8	356
ID5287	16x2x0,5	20,1	453
ID5288	20x2x0,5	22,4	559
ID5289	24x2x0,5	24,9	669
ID5290	2x2x0,75	11,1	126
ID5291	4x2x0,75	12,7	174
ID5292	5x2x0,75	14,2	221
ID5293	6x2x0,75	15,1	247
ID5294	8x2x0,75	16,6	309
ID5295	10x2x0,75	18,8	383
ID5296	12x2x0,75	19,5	441
ID5297	16x2x0,75	22,3	575
ID5298	20x2x0,75	24,8	711
ID5299	24x2x0,75	27,6	850
ID5300	2x2x1,0	11,6	145
ID5301	4x2x1,0	13,4	201
ID5302	5x2x1,0	14,9	256
ID5303	6x2x1,0	15,9	286
ID5304	8x2x1,0	17,7	369

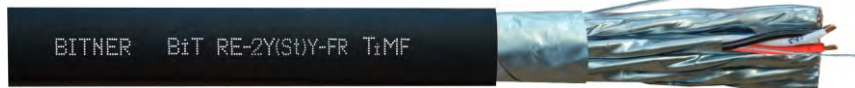
Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5305	10x2x1,0	19,8	448
ID5306	12x2x1,0	20,7	528
ID5307	16x2x1,0	23,4	676
ID5308	20x2x1,0	26,2	836
ID5309	24x2x1,0	29,1	1001
ID5310	2x2x1,3	12,2	162
ID5311	4x2x1,3	14,2	242
ID5312	5x2x1,3	15,6	299
ID5313	6x2x1,3	16,9	346
ID5314	8x2x1,3	18,7	446
ID5315	10x2x1,3	20,9	542
ID5316	12x2x1,3	22,0	639
ID5317	16x2x1,3	25,0	834
ID5318	20x2x1,3	27,9	1030
ID5319	24x2x1,3	30,9	1230
ID5320	2x2x1,5	12,7	173
ID5321	4x2x1,5	14,8	257
ID5322	5x2x1,5	16,5	326
ID5323	6x2x1,5	17,6	367
ID5324	8x2x1,5	19,6	474
ID5325	10x2x1,5	22,1	587
ID5326	12x2x1,5	23,0	679
ID5327	16x2x1,5	26,2	886
ID5328	20x2x1,5	29,2	1095
ID5329	24x2x1,5	32,4	1308

*Outer diameter tolerance: +/-5%
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

BIT RE-2Y(St)Y-FR TIMF



PVC sheathed instrumentation cables with collective electrostatic screen and individually screened triples, rated 500 V



Technical data:

Thermal parameters:

Temperature range:
operating temperature: -40 °C to 80 °C
installation temperature: -5 °C to 80 °C

Electrical parameters:

Operating voltage (peak value): U = 500 V
Test voltage:
Core/core: 2000 V
Core/screen: 2000 V
Insulation resistance: > 5 GΩ x km

Mechanical parameters:

Min. bending radius: 7,5 x Ø

Application:

Cables designed for data transmission in numerical control systems ensuring optimum transmission of data up to 200 Kbit/s. Screened triples twisted together ensure very good crosstalk attenuation and collective electrostatic screen protects against external interferences. Cables are suitable for application indoor and in dry and damp rooms. Outer sheath is UV resistant. Cables classified according to **EN 50575 (CPR)**.

* Available also with XLPE insulation - BIT RE-2X(St)Y-FR TIMF

** Cables with blue sheath have got extended catalogue numbers ending -06. E.g. Catalogue no. for BIT RE-2Y(St)Y-FR TIMF 2x3x0,5 with black outer sheath is ID5450. Catalogue no. for IB-BIT RE-2Y(St)Y TIMF 2x3x0,5 with blue outer sheath is ID5450.06. Cables are available also with oil resistant outer sheath (-OR ending). Catalogue no. for BIT RE-2Y(St)Y-OR TIMF OR 2x3x0,5 is ID5450.0R

Design:

Conductors: bare, stranded copper conductors class 2 acc. to EN 60228

Insulation: polyethylene (PE)*

Core identification: core A – black, core B – white, core C – red (black numbering on the white core)

Core arrangement: screened triples twisted together

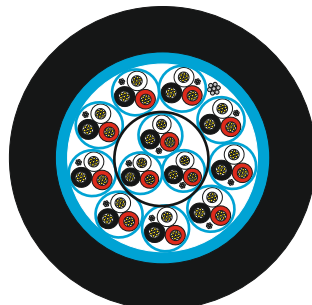
Individual screen: each triple screened with aluminum backed polyester tape and drain wire (0,6 mm) under each screen

Collective screen: aluminum backed polyester tape with stranded tinned copper drain wire underneath (0,5 mm²)

Outer sheath: PVC compound, self-extinguishing and flame retardant (as per EN 60332-1-2, EN 60332-3-24, IEC 60332-3 cat. C), UV resistant; colour: black, blue**

Electrical parameters:

	Capacitance [nF/km]	Conductor resistance [Ω/km]	Inductivity 1mH/km L/R [μH/Ω]
0,5 mm ²	100	36,7	25
0,75 mm ²	100	25,0	25
1,0 mm ²	100	18,5	25
1,3 mm ²	100	14,2	40
1,5 mm ²	100	12,3	40



BiT RE-2Y(St)Y-FR TiMF

PVC sheathed instrumentation cables with collective electrostatic screen and individually screened triples, rated 500 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5450	2x3x0,5	11,8	133
ID5451	4x3x0,5	13,7	192
ID5452	5x3x0,5	15,3	246
ID5453	6x3x0,5	16,7	300
ID5454	8x3x0,5	18,7	342
ID5455	10x3x0,5	21,7	418
ID5456	12x3x0,5	22,4	480
ID5457	16x3x0,5	25,4	640
ID5458	20x3x0,5	28,2	826
ID5459	24x3x0,5	31,7	999
ID5460	2x3x0,75	12,9	160
ID5461	4x3x0,75	15,2	245
ID5462	5x3x0,75	16,8	305
ID5463	6x3x0,75	18,3	373
ID5464	8x3x0,75	20,6	427
ID5465	10x3x0,75	23,8	524
ID5466	12x3x0,75	24,8	616
ID5467	16x3x0,75	28,2	823
ID5468	20x3x0,75	31,3	1060
ID5469	24x3x0,75	35,2	1282
ID5470	2x3x1,0	13,5	184
ID5471	4x3x1,0	16,0	285
ID5472	5x3x1,0	17,6	356
ID5473	6x3x1,0	19,5	446
ID5474	8x3x1,0	21,9	514

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5475	10x3x1,0	25,3	631
ID5476	12x3x1,0	26,1	729
ID5477	16x3x1,0	29,7	975
ID5478	20x3x1,0	33,0	1255
ID5479	24x3x1,0	37,1	1516
ID5480	2x3x1,3	14,1	214
ID5481	4x3x1,3	17,0	346
ID5482	5x3x1,3	18,7	431
ID5483	6x3x1,3	20,7	537
ID5484	8x3x1,3	23,2	627
ID5485	10x3x1,3	26,8	770
ID5486	12x3x1,3	27,9	906
ID5487	16x3x1,3	31,6	1207
ID5488	20x3x1,3	35,1	1546
ID5489	24x3x1,3	39,4	1864
ID5490	2x3x1,5	15,0	235
ID5491	4x3x1,5	17,8	368
ID5492	5x3x1,5	19,6	459
ID5493	6x3x1,5	21,6	574
ID5494	8x3x1,5	24,3	667
ID5495	10x3x1,5	28,1	819
ID5496	12x3x1,5	29,2	964
ID5497	16x3x1,5	33,2	1286
ID5498	20x3x1,5	36,8	1651
ID5499	24x3x1,5	41,4	1991

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiT RE-2Y(St)YSWAY-FR

Steel wire armoured and PVC sheathed instrumentation cables with collective electrostatic screen, rated 500 V



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
installation temperature: -5 °C to 80 °C

Electrical parameters:

Operating voltage (peak value): U = 500 V

Test voltage:

Core/core: 2000 V
Core/screen: 2000 V

Insulation resistance: > 5 GΩ x km

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

bare, stranded copper conductors class 2
acc. to EN 60228
polyethylene (PE)*

Insulation:

Core identification:

Pairs:

core A – black, core B – white
(black numbering on the white core)

Triples:

core A – black, core B – white, core C – red
(black numbering on the white core)

Core arrangement:

Pairs:

cores twisted in pairs, pairs twisted together and wrapped with polyester tape (PET)

Triples:

cores twisted in triples, triples twisted together and wrapped with polyester tape (PET)

Screen:

Inner sheath:

Armour:

Outer sheath:

aluminum backed polyester tape with stranded tinned copper drain wire underneath (0,5 mm²)
PVC compound
round galvanized steel wires
PVC compound, self-extinguishing and flame retardant (as per EN 60332-1-2, EN 60332-3-24, IEC 60332-3 cat. C), UV resistant; colour: black, blue**

Application:

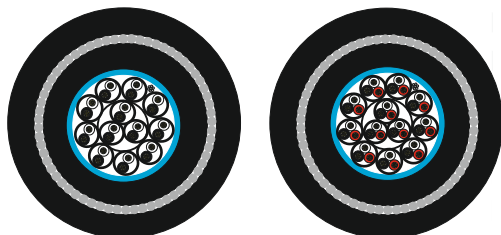
Cables designed for data transmission in numerical control systems ensuring optimum transmission of data up to 200 Kbit/s. Collective electrostatic screen protects against external interferences. Cables are suitable for application indoor and outdoor, in dry and damp rooms and also for direct burial as well as in conduits in places that are subject to mechanical stresses mainly from tensile forces. Outer sheath is UV resistant. Cables classified according to **EN 50575 (CPR)**.

* Available also with XLPE insulation – BIT RE-2X(St)YSWAY-FR

** Cables with blue sheath have got extended catalogue numbers ending -06. E.g. Catalogue no. for BiT RE-2Y(St)YSWAY-FR 1x2x0,5 with black outer sheath is ID5550. Catalogue no. for IB-BIT RE-2Y(St)YSWAY 1x2x0,5 with blue outer sheath is ID5550.06. Cables are available also with oil resistant outer sheath (-OR ending). Catalogue no. for BIT RE-2Y(St)YSWAY-OR 1x2x0,5 is ID5550.OR

Electrical parameters:

	Capacitance [nF/km]	Conductor resistance [Ω/km]	Inductivity 1mH/km L/R [μH/Ω]
For one pair/triple:			
0,5 mm ²	100	36,7	25
0,75 mm ²	100	25,0	25
1,0 mm ²	100	18,5	25
1,3 mm ²	100	14,2	40
1,5 mm ²	100	12,3	40
Up to four pairs/triples:			
0,5 mm ²	75		
0,75 mm ²	75		
1,0 mm ²	75		
1,3 mm ²	85		
1,5 mm ²	85		
Over four pairs/triples:			
0,5 mm ²	65		
0,75 mm ²	65		
1,0 mm ²	65		
1,3 mm ²	75		
1,5 mm ²	75		



BIT RE-2Y(St)YSWAY-FR

Steel wire armoured and PVC sheathed instrumentation cables with collective electrostatic screen, rated 500 V

paired cables

Cat. no.	n x 2 x mm ²	Inner diameter [mm]	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5550	1x2x0,5	6,1	10,7	269
ID5551	2x2x0,5	9,5	14,1	412
ID5552	4x2x0,5	10,9	15,7	491
ID5553	5x2x0,5	12,2	17,0	561
ID5554	6x2x0,5	13,0	17,8	598
ID5555	8x2x0,5	14,3	19,1	676
ID5556	10x2x0,5	16,2	21,2	793
ID5557	12x2x0,5	16,8	21,8	847
ID5558	16x2x0,5	19,0	24,0	989
ID5559	20x2x0,5	21,2	26,4	1254
ID5560	24x2x0,5	23,4	29,0	1409
ID5561	1x2x0,75	6,6	11,2	292
ID5562	2x2x0,75	10,3	15,1	466
ID5563	4x2x0,75	12,2	17,0	564
ID5564	5x2x0,75	13,3	18,1	633
ID5565	6x2x0,75	14,3	19,1	682
ID5566	8x2x0,75	15,9	20,9	801
ID5567	10x2x0,75	17,8	22,8	913
ID5568	12x2x0,75	18,5	23,5	981
ID5569	16x2x0,75	21,1	26,7	1286
ID5570	20x2x0,75	23,6	29,2	1488
ID5571	24x2x0,75	26,0	32,2	1814
ID5572	1x2x1,0	7,1	11,7	325
ID5573	2x2x1,0	10,9	15,7	509
ID5574	4x2x1,0	12,8	17,6	611
ID5575	5x2x1,0	14,1	18,9	690
ID5576	6x2x1,0	15,1	19,9	742
ID5577	8x2x1,0	16,8	21,8	877
ID5578	10x2x1,0	18,8	23,8	1005
ID5579	12x2x1,0	19,7	24,7	1102
ID5580	16x2x1,0	22,3	27,9	1426
ID5581	20x2x1,0	24,9	30,7	1671
ID5582	24x2x1,0	27,7	33,9	2040
ID5583	1x2x1,3	7,4	12,0	336
ID5584	2x2x1,3	11,6	16,4	544
ID5585	4x2x1,3	13,4	18,2	663
ID5586	5x2x1,3	15,0	20,0	778
ID5587	6x2x1,3	16,0	21,0	842
ID5588	8x2x1,3	17,8	22,8	985
ID5589	10x2x1,3	19,9	25,5	1241
ID5590	12x2x1,3	20,9	26,5	1362
ID5591	16x2x1,3	23,8	29,6	1637
ID5592	20x2x1,3	26,5	32,9	2049
ID5593	24x2x1,3	29,4	35,8	2342
ID5594	1x2x1,5	7,7	12,3	357
ID5595	2x2x1,5	12,1	16,9	582
ID5596	4x2x1,5	14,3	19,3	737
ID5597	5x2x1,5	15,7	20,7	834
ID5598	6x2x1,5	16,8	21,8	903
ID5599	8x2x1,5	18,7	23,9	1072
ID5600	10x2x1,5	21,1	26,7	1350
ID5601	12x2x1,5	21,9	27,7	1475
ID5602	16x2x1,5	25,1	30,9	1772
ID5603	20x2x1,5	27,9	34,3	2213
ID5604	24x2x1,5	30,9	37,7	2641

triple cables

Cat. no.	n x 3 x mm ²	Inner diameter [mm]	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5605	1x3x0,5	6,4	11,0	278
ID5606	2x3x0,5	11,1	15,9	494
ID5607	4x3x0,5	13,2	18,0	588
ID5608	5x3x0,5	14,5	19,3	662
ID5609	6x3x0,5	15,9	20,7	739
ID5610	8x3x0,5	18,0	23,0	868
ID5611	10x3x0,5	20,6	25,6	999
ID5612	12x3x0,5	21,3	26,7	1169
ID5613	16x3x0,5	24,2	29,8	1402
ID5614	20x3x0,5	26,7	32,7	1749
ID5615	24x3x0,5	30,0	36,6	2138
ID5616	1x3x0,75	7,2	11,8	314
ID5617	2x3x0,75	12,2	17,0	552
ID5618	4x3x0,75	14,5	19,3	670
ID5619	5x3x0,75	16,0	20,8	758
ID5620	6x3x0,75	17,7	22,7	877
ID5621	8x3x0,75	19,8	24,8	1005
ID5622	10x3x0,75	22,9	28,3	1287
ID5623	12x3x0,75	23,7	29,3	1396
ID5624	16x3x0,75	26,9	32,9	1800
ID5625	20x3x0,75	29,7	36,3	2233
ID5626	24x3x0,75	33,5	40,1	2546
ID5627	1x3x1,0	7,5	12,1	333
ID5628	2x3x1,0	13,1	17,9	609
ID5629	4x3x1,0	15,3	20,1	731
ID5630	5x3x1,0	16,8	21,8	842
ID5631	6x3x1,0	18,7	23,7	965
ID5632	8x3x1,0	20,9	25,9	1112
ID5633	10x3x1,0	24,2	29,8	1438
ID5634	12x3x1,0	25,0	30,6	1551
ID5635	16x3x1,0	28,5	34,7	2023
ID5636	20x3x1,0	31,6	38,2	2515
ID5638	1x3x1,3	7,8	12,4	356
ID5639	2x3x1,3	13,7	18,5	657
ID5640	4x3x1,3	16,3	21,3	829
ID5641	5x3x1,3	17,9	22,9	946
ID5642	6x3x1,3	19,8	24,8	1086
ID5643	8x3x1,3	22,2	27,8	1377
ID5644	10x3x1,3	25,7	31,9	1760
ID5645	12x3x1,3	26,6	32,8	1903
ID5646	16x3x1,3	30,2	37,0	2459
ID5647	20x3x1,3	33,6	40,4	2929
ID5649	1x3x1,5	8,1	12,7	370
ID5650	2x3x1,5	14,4	19,2	689
ID5651	4x3x1,5	17,1	22,1	871
ID5652	5x3x1,5	18,8	23,8	996
ID5653	6x3x1,5	20,8	26,0	1158
ID5654	8x3x1,5	23,5	29,1	1471
ID5655	10x3x1,5	27,0	33,2	1857
ID5656	12x3x1,5	28,1	34,3	2031
ID5657	16x3x1,5	31,9	38,7	2623

*Outer diameter tolerance: +/-5%

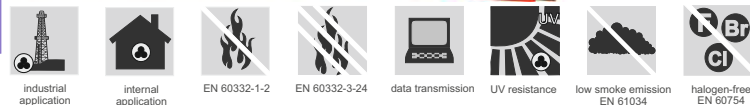
Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiT RE-2Y(St)H



Sheathed with LSOH compound instrumentation cables with collective electrostatic screen, rated 500 V



Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C
installation temperature: -5 °C to 80 °C

Electrical parameters:

Operating voltage (peak value): U = 500 V

Test voltage:

Core/core: 2000 V
Core/screen: 2000 V

Insulation resistance: > 5 GΩ x km

Mechanical parameters:

Min. bending radius: 7,5 x Ø

Design:

Conductors:

bare, stranded copper conductors class 2

acc. to EN 60228

Insulation:

polyethylene (PE)*

Core identification:

Pairs:

core A – black, core B – white (black numbering on the white core)

Triples:

core A – black, core B – white, core C – red (black numbering on the white core)

Core arrangement:

Pairs:

cores twisted in pairs, pairs twisted together and wrapped with polyester tape (PET)

Triples:

cores twisted in triples, triples twisted together and wrapped with polyester tape (PET)

Screen:

aluminum backed polyester tape with stranded tinned copper drain wire underneath (0.5 mm²)

Outer sheath:

special halogen-free polymer, self-extinguishing and flame retardant (as per EN 60332-1-2, EN 60332-3-24, IEC 60332-3 cat. C), UV resistant; colour: black, blue**

Application:

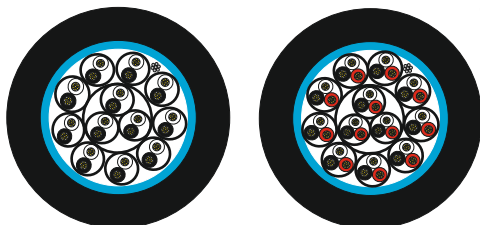
Cables designed for data transmission in numerical control systems ensuring optimum transmission of data up to 200 Kbit/s. Collective electrostatic screen protects against external interferences. Cables are suitable for application indoor and in dry and damp rooms. Outer sheath is UV resistant. Cables classified according to **EN 50575 (CPR)**.

* Available also with XLPE insulation – BiT RE-2Y(St)H

** Cables with blue sheath have got extended catalogue numbers ending -06. E.g. Catalogue no. for BiT RE-2Y(St)H 1x2x0,5 with black outer sheath is ID5850
Catalogue no. 1B-BiT RE-2Y(St)H 1x2x0,5 with blue outer sheath is ID5850.06

Electrical parameters:

	Capacitance [nF/km]	Conductor resistance [Ω/km]	Inductivity 1mH/km L/R [μH/Ω]
For one pair/triple:			
0,5 mm ²	100	36,7	25
0,75 mm ²	100	25,0	25
1,0 mm ²	100	18,5	25
1,3 mm ²	100	14,2	40
1,5 mm ²	100	12,3	40
Up to four pairs/triples:			
0,5 mm ²	75		
0,75 mm ²	75		
1,0 mm ²	75		
1,3 mm ²	85		
1,5 mm ²	85		
Over four pairs/triples:			
0,5 mm ²	65		
0,75 mm ²	65		
1,0 mm ²	65		
1,3 mm ²	75		
1,5 mm ²	75		



BIT RE-2Y(St)H

Sheathed with LSOH compound instrumentation cables with collective electrostatic screen, rated 500 V

paired cables

Cat. no.	n x 2 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5850	1x2x0,5	6,2	44
ID5851	2x2x0,5	9,7	88
ID5852	4x2x0,5	11,0	69
ID5853	5x2x0,5	12,3	146
ID5854	6x2x0,5	13,1	161
ID5855	8x2x0,5	14,4	199
ID5856	10x2x0,5	16,3	247
ID5857	12x2x0,5	16,9	282
ID5858	16x2x0,5	19,1	356
ID5859	20x2x0,5	21,3	445
ID5860	24x2x0,5	23,5	521
ID5861	1x2x0,75	6,7	52
ID5862	2x2x0,75	10,5	108
ID5863	4x2x0,75	12,3	149
ID5864	5x2x0,75	13,4	184
ID5865	6x2x0,75	14,4	204
ID5866	8x2x0,75	16,0	262
ID5867	10x2x0,75	17,9	316
ID5868	12x2x0,75	18,6	363
ID5869	16x2x0,75	21,2	473
ID5870	20x2x0,75	23,7	584
ID5871	24x2x0,75	26,0	685
ID5872	1x2x1,0	7,2	66
ID5873	2x2x1,0	11,1	124
ID5874	4x2x1,0	12,9	176
ID5875	5x2x1,0	14,2	218
ID5876	6x2x1,0	15,2	242
ID5877	8x2x1,0	16,9	312
ID5878	10x2x1,0	18,9	378
ID5879	12x2x1,0	19,8	446
ID5880	16x2x1,0	22,4	570
ID5881	20x2x1,0	25,0	706
ID5882	24x2x1,0	27,8	845
ID5883	1x2x1,3	7,5	72
ID5884	2x2x1,3	11,8	148
ID5885	4x2x1,3	13,5	210
ID5886	5x2x1,3	15,1	268
ID5887	6x2x1,3	16,1	300
ID5888	8x2x1,3	17,9	388
ID5889	10x2x1,3	20,0	470
ID5890	12x2x1,3	21,0	555
ID5891	16x2x1,3	23,8	712
ID5892	20x2x1,3	26,5	881
ID5893	24x2x1,3	29,5	1054
ID5894	1x2x1,5	7,8	76
ID5895	2x2x1,5	12,3	158
ID5896	4x2x1,5	14,4	231
ID5897	5x2x1,5	15,8	286
ID5898	6x2x1,5	16,9	320
ID5899	8x2x1,5	18,8	413
ID5900	10x2x1,5	21,2	512
ID5901	12x2x1,5	22,0	592
ID5902	16x2x1,5	25,2	773
ID5903	20x2x1,5	28,0	955
ID5904	24x2x1,5	31,0	1127

triple cables

Cat. no.	n x 3 x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID5905	1x3x0,5	6,5	52
ID5906	2x3x0,5	11,1	117
ID5907	4x3x0,5	13,2	164
ID5908	5x3x0,5	14,5	200
ID5909	6x3x0,5	15,9	238
ID5910	8x3x0,5	18,0	288
ID5911	10x3x0,5	20,6	350
ID5912	12x3x0,5	21,3	400
ID5913	16x3x0,5	24,2	535
ID5914	20x3x0,5	26,7	660
ID5915	24x3x0,5	30,0	763
ID5916	1x3x0,75	7,2	67
ID5917	2x3x0,75	12,2	144
ID5918	4x3x0,75	14,5	208
ID5919	5x3x0,75	16,0	254
ID5920	6x3x0,75	17,7	313
ID5921	8x3x0,75	19,8	370
ID5922	10x3x0,75	22,9	462
ID5923	12x3x0,75	23,7	531
ID5924	16x3x0,75	26,9	701
ID5925	20x3x0,75	29,7	871
ID5926	24x3x0,75	33,5	1026
ID5927	1x3x1,0	7,5	77
ID5928	2x3x1,0	13,1	175
ID5929	4x3x1,0	15,3	247
ID5930	5x3x1,0	16,8	303
ID5931	6x3x1,0	18,7	372
ID5932	8x3x1,0	20,9	444
ID5933	10x3x1,0	24,0	543
ID5934	12x3x1,0	25,0	641
ID5935	16x3x1,0	28,5	849
ID5936	20x3x1,0	31,6	1072
ID5937	24x3x1,0	35,4	1246
ID5938	1x3x1,3	7,8	90
ID5939	2x3x1,3	13,7	204
ID5940	4x3x1,3	16,3	306
ID5941	5x3x1,3	17,9	375
ID5942	6x3x1,3	19,8	459
ID5943	8x3x1,3	22,2	554
ID5944	10x3x1,3	25,5	678
ID5945	12x3x1,3	26,6	801
ID5946	16x3x1,3	30,2	1059
ID5947	20x3x1,3	33,6	1336
ID5948	24x3x1,3	37,7	1576
ID5949	1x3x1,5	8,2	96
ID5950	2x3x1,5	14,4	218
ID5951	4x3x1,5	17,1	326
ID5952	5x3x1,5	18,8	400
ID5953	6x3x1,5	20,8	491
ID5954	8x3x1,5	23,9	591
ID5955	10x3x1,5	27,0	738
ID5956	12x3x1,5	28,1	869
ID5957	16x3x1,5	31,9	1148
ID5958	20x3x1,5	35,5	1447
ID5959	24x3x1,5	39,9	1705

*Outer diameter tolerance: +/-5%
Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

BiT RE-2Y(St)HSWAH

RoHS 2015/863/EU



LVD 2014/35/EU

CPR

CPR 305/2011

24 months warranty

Steel wire armoured halogen-free instrumentation cables with collective electrostatic screen, rated 500 V



industrial application



internal application



external application



underground installation



EN 60332-1-2



EN 60332-3-24



data transmission



UV resistance

low smoke emission
EN 61034halogen-free
EN 60754

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -40 °C to 80 °C

installation temperature: -5 °C to 80 °C

Electrical parameters:

Operating voltage (peak value): U = 500 V

Test voltage:

Core/core: 2000 V

Core/screen: 2000 V

Insulation resistance: > 5 GΩ x km

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

bare, stranded copper conductors class 2

as per EN 60228

Insulation:

polyethylene (PE)*

Core identification:

Pairs:

core A – black, core B – white (black numbering on the white core)

Triples:

core A – black, core B – white, core C – red (black numbering on the white core)

Core arrangement:

Pairs:

cores twisted in pairs, pairs twisted together and wrapped with polyester tape (PET)

Triples:

cores twisted in triples, triples twisted together and wrapped with polyester tape (PET)

Screen:

aluminum backed polyester tape with stranded tinned copper drain wire underneath (0,5 mm²)

Inner sheath:

special, halogen-free polymer

Armour:

round galvanized steel wires

Outer sheath:

special, halogen-free polymer, self-extinguishing and flame retardant (as per EN 60332-1-2, EN 60332-3-24, IEC 60332-3 cat. C), UV resistant; colour: black, blue**

Application:

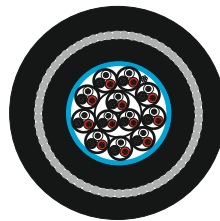
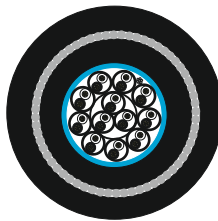
Cables designed for data transmission in numerical control systems ensuring optimum transmission of data up to 200 Kbit/s. Collective electrostatic screen protects against external interferences. Cables are suitable for application indoor and outdoor, in dry and damp rooms and also for direct burial as well as in conduits in places that are subject to mechanical stresses mainly from tensile forces. Outer sheath is UV resistant. Cables classified according to **EN 50575 (CPR)**.

* Available also with XLPE insulation - BiT RE-2X(S)HSWAH

** Cables with blue sheath have got extended catalogue numbers ending -06. E.g. Catalogue no. for BiT RE-2Y(S)HSWAH 1x2x0,5 with black outer sheath is ID6420. Catalogue no. for IB-BIT RE-2Y(S)HSWAH 1x2x0,5 with blue outer sheath is ID6420.06

Electrical parameters:

	Capacitance [nF/km]	Conductor resistance [Ω/km]	Inductivity 1mH/km L/R [μH/Ω]
For one pair/triple:			
0,5 mm ²	100	36,7	25
0,75 mm ²	100	25,0	25
1,0 mm ²	100	18,5	25
1,3 mm ²	100	14,2	40
1,5 mm ²	100	12,3	40
Up to four pairs/triples:			
0,5 mm ²	75		
0,75 mm ²	75		
1,0 mm ²	75		
1,3 mm ²	85		
1,5 mm ²	85		
Over four pairs/triples:			
0,5 mm ²	65		
0,75 mm ²	65		
1,0 mm ²	65		
1,3 mm ²	75		
1,5 mm ²	75		



BIT RE-2Y(St)HSWAH

Steel wire armoured halogen-free instrumentation cables with collective electrostatic screen, rated 500 V

paired cables

Cat. no.	n x 2 x mm ²	Inner diameter [mm]	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID6420	1x2x0,5	6,1	10,7	267
ID6421	2x2x0,5	9,5	14,1	408
ID6422	4x2x0,5	10,9	15,7	486
ID6423	5x2x0,5	12,2	17,0	555
ID6424	6x2x0,5	13,0	17,8	594
ID6425	8x2x0,5	14,3	19,1	671
ID6426	10x2x0,5	16,2	21,2	787
ID6427	12x2x0,5	16,8	21,8	840
ID6428	16x2x0,5	19,0	24,0	981
ID6429	20x2x0,5	21,2	26,4	1243
ID6430	24x2x0,5	23,4	29,0	1398
ID6431	1x2x0,75	6,6	11,2	290
ID6432	2x2x0,75	10,3	15,1	461
ID6433	4x2x0,75	12,2	17,0	558
ID6434	5x2x0,75	13,3	18,1	627
ID6435	6x2x0,75	14,3	19,1	676
ID6436	8x2x0,75	15,9	20,9	794
ID6437	10x2x0,75	17,8	22,8	905
ID6438	12x2x0,75	18,5	23,5	973
ID6439	16x2x0,75	21,1	26,7	1278
ID6440	20x2x0,75	23,6	29,2	1475
ID6441	24x2x0,75	26,0	32,2	1802
ID6442	1x2x1,0	7,1	11,7	315
ID6443	2x2x1,0	10,9	15,7	493
ID6444	4x2x1,0	12,8	17,6	604
ID6445	5x2x1,0	14,1	18,9	683
ID6446	6x2x1,0	15,1	19,9	737
ID6447	8x2x1,0	16,8	21,8	870
ID6448	10x2x1,0	18,8	23,8	996
ID6449	12x2x1,0	19,7	24,7	1093
ID6450	16x2x1,0	22,3	27,9	1417
ID6451	20x2x1,0	24,9	30,7	1660
ID6452	24x2x1,0	27,7	33,9	2028
ID6453	1x2x1,3	7,4	12,0	333
ID6454	2x2x1,3	11,6	16,4	539
ID6455	4x2x1,3	13,4	18,2	657
ID6456	5x2x1,3	15,0	20,0	771
ID6457	6x2x1,3	16,0	21,0	836
ID6458	8x2x1,3	17,8	22,8	977
ID6459	10x2x1,3	19,9	25,5	1233
ID6460	12x2x1,3	20,9	26,5	1353
ID6461	16x2x1,3	23,8	29,6	1627
ID6462	20x2x1,3	26,5	32,9	2036
ID6463	24x2x1,3	29,4	35,8	2324
ID6464	1x2x1,5	7,7	12,3	345
ID6465	2x2x1,5	12,1	16,9	564
ID6466	4x2x1,5	14,3	19,3	713
ID6467	5x2x1,5	15,7	20,7	810
ID6468	6x2x1,5	16,8	21,8	878
ID6469	8x2x1,5	18,7	23,9	1042
ID6470	10x2x1,5	21,1	26,7	1316
ID6471	12x2x1,5	21,9	27,7	1441
ID6472	16x2x1,5	25,1	30,9	1733
ID6473	20x2x1,5	27,9	34,3	2167
ID6474	24x2x1,5	30,9	37,7	2599

triple cables

Cat. no.	n x 3 x mm ²	Inner diameter [mm]	Outer diameter* [mm]	Approximate cable weight [kg/km]
ID6475	1x3x0,5	6,4	11,0	278
ID6476	2x3x0,5	11,1	15,9	496
ID6477	4x3x0,5	13,2	18,0	588
ID6478	5x3x0,5	14,5	19,3	662
ID6479	6x3x0,5	15,9	20,7	739
ID6480	8x3x0,5	18,0	23,0	860
ID6481	10x3x0,5	20,6	25,6	999
ID6482	12x3x0,5	21,3	26,7	1169
ID6483	16x3x0,5	24,2	29,8	1402
ID6484	20x3x0,5	26,7	32,7	1749
ID6485	24x3x0,5	30,0	36,6	2138
ID6486	1x3x0,75	7,2	11,8	314
ID6487	2x3x0,75	12,2	17,0	554
ID6488	4x3x0,75	14,5	19,3	670
ID6489	5x3x0,75	16,0	20,8	758
ID6490	6x3x0,75	17,7	22,7	877
ID6491	8x3x0,75	19,8	24,8	996
ID6492	10x3x0,75	22,9	28,3	1287
ID6493	12x3x0,75	23,7	29,3	1396
ID6494	16x3x0,75	26,9	32,9	1800
ID6495	20x3x0,75	29,7	36,3	2233
ID6496	24x3x0,75	33,5	40,1	2546
ID6497	1x3x1,0	7,5	12,1	333
ID6498	2x3x1,0	13,1	17,9	611
ID6499	4x3x1,0	15,3	20,1	731
ID6500	5x3x1,0	16,8	21,8	842
ID6501	6x3x1,0	18,7	23,7	965
ID6502	8x3x1,0	20,9	25,9	1103
ID6503	10x3x1,0	24,2	29,8	1438
ID6504	12x3x1,0	25,0	30,6	1551
ID6505	16x3x1,0	28,5	34,7	2023
ID6506	20x3x1,0	31,6	38,2	2515
ID6508	1x3x1,3	7,8	12,4	356
ID6509	2x3x1,3	13,7	18,5	660
ID6510	4x3x1,3	16,3	21,3	829
ID6511	5x3x1,3	17,9	22,9	946
ID6512	6x3x1,3	19,8	24,8	1086
ID6513	8x3x1,3	22,2	27,8	1368
ID6514	10x3x1,3	25,7	31,9	1760
ID6515	12x3x1,3	26,6	32,8	1903
ID6516	16x3x1,3	30,2	37,0	2459
ID6517	20x3x1,3	33,6	40,4	2929
ID6519	1x3x1,5	8,1	12,7	370
ID6520	2x3x1,5	14,4	19,2	693
ID6521	4x3x1,5	17,1	22,1	871
ID6522	5x3x1,5	18,8	23,8	996
ID6523	6x3x1,5	20,8	26,0	1158
ID6524	8x3x1,5	23,5	29,1	1461
ID6525	10x3x1,5	27,0	33,2	1857
ID6526	12x3x1,5	28,1	34,3	2031
ID6527	16x3x1,5	31,9	38,7	2623

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced



Chapter XI

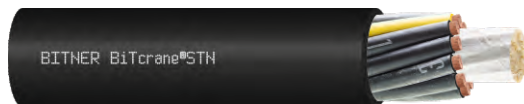
Crane cables

BiTcrane®STN	358
BiTcrane®STCN (EMV)	360
BiTcrane®(N)GFLGOEU-J	361
BiTcrane®(N)GFLCGOEU-J	363
BiTcrane®M(StD)HOEU	365
BiTcrane®NSHTOEU-J	367
BiTcrane®(N)SHTOEU-J	369
BiTcrane®(N)SHTOEU-J FO	371
BiTcrane®(N)SHTOEU-J SPREADER	373
BiTcrane®(N)12YRD11Y-J/O	375
BiTcrane®(N)12YRDC11Y-J/O	377
BiTfiber®CRANE FO 2 x 12 .../125	379
BiTfiber®FESTOON FO 2 x 12 .../125	380
BiTfiber®CRANE PUR FO 2 x 12 .../125	381
BiTfiber®FESTOON PUR FO 2 x 12 .../125	382
BiTcrane®(N)TSFLCGEWOEU	383
BiTcrane®(N)TSCGEWOEU-SR	385
BiTcrane®(N)TSCGEWOEU-SR FO	387
BiTcrane®(N)TSCGEWOEU-SR PLUS	391

BiTcrane[®]STN



Highly flexible rubber cable with supporting element, rated 450/750 V



Crane cables



Technical data:

Thermal parameters:

Ambient temperature:

fixed installation: -40 °C to 80 °C
flexible operation: -30 °C to 80 °C

Max. operating temp. on conductor:

during operation: 90 °C
during short-circuit: 250 °C

Mechanical parameters:

Insulation resistance: 20 MΩxkm

Min. bending radius: 10 x Ø

Design:

Conductors:

Insulation:

plain copper wires, class 6 acc. to DIN EN/IEC 60228

EPR compound type 3G13 acc. to DIN VDE 0207-20;

core identification:

≤ 6 cores: colour-coded with GN/YE protective conductor;
≥ 6 cores: black, numbered, with GN/YE protective conductor;

cores stranded around center element

textile or aramid-based strain relief element

rubber compound acc. to DIN VDE 0207-21, type 5GM3,

resistant to oil, ozone and UV radiation, flame retardant;

colour: black with white imprint

Core arrangement:

Carrier element:

Outer sheath:

Application:

Highly flexible cable with strain relief element for use in lifting equipment, transportation, construction equipment and shipyard machinery. It is highly resistant to weather conditions, UV, moisture, water, polluted water and sea water. BiTcrane[®]STN can be used indoors and outdoors without any additional restrictions. Its central element increases the mechanical strength of the cable so that free hanging lengths of up to 80 m. can be used.

Chemical parameters:

Resistance to oil:

DIN EN / IEC 60811-404

Behaviour in case of fire:

DIN EN / IEC 60332-1-2

Weather resistance:

unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U ₀ /U [kV]	450/750 V
AC. test voltage:	3 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Tensile strength [N]
IP5260	3G1,0	9,8	140	300
IP5261	4G1,0	9,8	150	300
IP5262	5G1,0	10,5	175	300
IP5263	7G1,0	12,4	240	2500
IP5264	9G1,0	14,5	320	2500
IP5265	12G1,0	18,4	485	2500
IP5266	18G1,0	18,7	540	1550
IP5267	24G1,0	22,4	750	2500
IP5268	3G1,5	10,0	165	300
IP5269	4G1,5	10,7	180	300

BiTcrane[®] STN

Highly flexible rubber cable with supporting element, rated 450/750 V

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Tensile strength [N]
IP5270	5G1,5	11,2	210	1000
IP5271	7G1,5	13,1	290	2500
IP5272	8G1,5	14,9	350	2500
IP5273	9G1,5	15,9	400	2500
IP5274	12G1,5	19,5	570	2500
IP5275	18G1,5	20,5	690	2000
IP5276	24G1,5	23,7	900	2500
IP5277	3G2,5	12,6	250	300
IP5278	4G2,5	12,6	272	350
IP5279	5G2,5	13,2	320	1200
IP5280	7G2,5	16,4	450	2500
IP5281	9G2,5	18,9	600	2500

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

*Outer diameter tolerance: ±5%

BiTcrane[®] STCN (EMV)



Highly flexible, screened rubber cable with supporting element, rated 450/750 V



Crane cables



Technical data:

Thermal parameters:

Ambient temperature:

fixed installation: -40 °C to 80 °C
flexible operation: -30 °C to 80 °C

Max. operating temp. on conductor:

during operation: 90 °C
during short-circuit: 250 °C

Mechanical parameters:

Insulation resistance: 20 MΩxkm

Min. bending radius: 10 x Ø

Design:

Conductors:

Insulation:

plain copper wires, class 6 acc. to DIN EN/IEC 60228
EPR compound type 3GI3 acc. to DIN VDE 0207-20;
core identification:

≤ 5 cores: colour-coded with GN/YE protective conductor;
≥ 6 cores: black, numbered, with GN/YE protective conductor;

Core arrangement:

Carrier element:

Screen:

Outer sheath:

cores stranded around center element
textile or aramid-based strain relief element
tinned copper wire braid, covering approx.: 80 %
rubber compound acc. to DIN VDE 0207-21, type 5GM3,
resistant to oil, ozone and UV radiation, flame retardant;
colour: black with white imprint

Application:

Highly flexible cable with strain relief element for use in lifting equipment, transportation, construction equipment and shipyard machinery. It is highly resistant to weather conditions, UV, moisture, water, polluted water and sea water. BiTcrane[®] STCN can be used indoors and outdoors without any additional restrictions. Its central element increases the mechanical strength of the cable so that free hanging lengths of up to 80 m. can be used.

Chemical parameters:

Resistance to oil:

DIN EN / IEC 60811-404

Behaviour in case of fire:

DIN EN / IEC 60332-1-2

Weather resistance:

unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]	450/750 V
AC. test voltage:	3 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Tensile strength [N]
IP5300	6x0,75	12,0	240	1500
IP5301	4x1,0	11,0	205	300
IP5302	7x1,0	13,8	320	2500
IP5303	12x1,0	20,0	614	2500
IP5304	18x1,0	20,2	650	1550
IP5305	24x1,0	24,1	860	2500
IP5306	6x1,5	15,0	400	2100
IP5307	7x1,5	15,1	405	2500
IP5308	12x1,5	21,1	700	2500
IP5309	18x1,5	21,5	785	2000
IP5310	24x1,5	25,2	1030	2500

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

*Outer diameter tolerance: ±5%

BiTcrane[®] (N)GFLGOEU-J

Flexible, low voltage flat rubber cables based on DIN VDE 0250-809



Crane cables



Technical data:

Thermal parameters:

Ambient temperature:
fixed installation: -40 °C to 80 °C
festoon operation: -30 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Max. tensile load on conductor: 15 N/mm²
Trolley travel speed: up to 180 m/min

Design:

Conductors: plain copper acc. to DIN EN/IEC 60228:
- ≤ 25 mm², class 6 – finest stranded wires
- ≥ 35 mm², class 5 – fine stranded wires

Insulation: EPR compound type 3GI3 acc. to DIN VDE 0207-20,
core identification acc. to DIN VDE 0293-308

Outer sheath: heavy duty rubber compound type 5GM3
acc. to DIN VDE 0207-21; colour: black, inkjet marking

Application:

These cables are designed for connection of moving parts of machine tools, conveyors and large equipment, when the cables are subjected to bending in only one plane e.g. festoon systems. Suitable for use in dry, damp and wet rooms as well as outdoors. In case of high mechanical stresses, e.g. in high dynamic tensile forces, permissible loads are to be determined on a case-by-case basis. On the basis of the insulation compound used **BiTcrane[®] (N)GFLGOEU-J** can be used with a rated voltage of 1000 V and applied as directed in DIN VDE 0298-3.

Chemical parameters:

Resistance to oil: DIN EN/IEC 60811-404
Behaviour in case of fire: DIN EN/IEC 60332-1-2
Weather resistance: unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]	0.6/1 kV
Max. permissible operating voltage $U_{0,max}$ in AC systems [kV]:	0.7/1.2 kV
Max. permissible operating voltage $U_{0,max}$ in DC systems [kV]:	0.9/1.8 kV
AC test voltage:	3.5 kV/5 min
Current-carrying capacities in amperes:	acc. to DIN VDE 0298-4

Bending radius	Height of cable (mm)	
	up to 12	over 12
Fixed installation	3xH	4xH
Flexible applications (incl. festoon)	4xH	5xH

Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

BiTcrane[®] (N)GFLGOEU-J

Flexible, low voltage flat rubber cables based on DIN VDE 0250-809

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
IP5200	4x1,5	6 x 17	177
IP5201	5x1,5	6 x 21	223
IP5202	7x1,5	6 x 27	297
IP5203	8x1,5	6 x 32	343
IP5204	10x1,5	6 x 40	466
IP5205	12x1,5	6 x 47	555
IP5206	4x2,5	7 x 20	273
IP5207	5x2,5	7 x 25	341
IP5208	6x2,5	7 x 29	399
IP5209	7x2,5	7 x 33	457
IP5210	8x2,5	7 x 38	525
IP5211	12x2,5	8 x 57	834
IP5212	4x4	8 x 24	421
IP5213	5x4	8 x 30	524
IP5214	7x4	8 x 40	706
IP5215	4x6	9 x 28	520
IP5216	5x6	9 x 33	631
IP5217	7x6	9 x 44	855
IP5218	4x10	10 x 32	751
IP5219	5x10	10 x 40	948
IP5220	4x16	12 x 37	1059
IP5221	5x16	12 x 44	1295
IP5222	4x25	13 x 44	1587
IP5223	4x35	15 x 49	2009
IP5224	3x50	18 x 45	2124
IP5225	4x50	18 x 57	2768
IP5226	4x70	20 x 65	3813
IP5227	4x95	23 x 74	4968
IP5228	4x120	25 x 80	5987
IP5229	4x150	28 x 90	7467

* thickness $\pm 1,5$ mm; width $\pm 2,5$ mm

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiTcrane[®] (N)GFLCGOEU-J



Screened, flexible, low voltage flat rubber cables based on DIN VDE 0250-809



Technical data:

Thermal parameters:

Ambient temperature:
 fixed installation: -40 °C to 80 °C
 festoon operation: -30 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Max. tensile load on conductor: 15 N/mm²
Trolley travel speed: up to 180 m/min

Design:

Conductors: plain copper acc. to DIN EN/IEC 60228:
 - ≤ 25 mm², class 6 – finest stranded wires
 - ≥ 35 mm², class 5 – fine stranded wires

Insulation: EPR compound type 3GI3 acc. to DIN VDE 0207-20, core identification acc. to DIN VDE 0293-308
 tinned copper wire braid, braiding coverage 85%
Screen: heavy duty rubber compound type 5GM3
Outer sheath: acc. to DIN VDE 0207-21; colour: black, inkjet marking

Application:

These cables are designed for connection of moving parts of machine tools, conveyors and large equipment, when the cables are subjected to bending in only one plane e.g. festoon systems. Suitable for use in dry, damp and wet rooms as well as outdoors. Individual screening ensures protection against external electromagnetic interferences. In case of high mechanical stresses, e.g. high dynamic tensile forces, permissible loads are to be determined on a case-by-case basis. On the basis of the insulation compound used **BiTcrane[®](N)GFLCGOEU-J** can be used with a rated voltage of 1000 V and applied as directed in DIN VDE 0298-3.

Chemical parameters:

Resistance to oil: DIN EN/IEC 60811-404
 Behaviour in case of fire: DIN EN/IEC 60332-1-2
 Weather resistance: unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]	0.6/1 kV
Max. permissible operating voltage $U_{0,max}$ in AC systems [kV]:	0.7/1.2 kV
Max. permissible operating voltage $U_{0,max}$ in DC systems [kV]:	0.9/1.8 kV
AC test voltage:	3.5 kV/5 min
Current-carrying capacities in amperes:	acc. to DIN VDE 0298-4

Bending radius	Height of cable (mm)	
	up to 12	over 12
Fixed installation	3xH	4xH
Flexible applications (incl. festoon)	4xH	5xH

BiTcrane[®](N)GFLCGOEU-J

Screened, flexible, low voltage flat rubber cables based on DIN VDE 0250-809

BiTcrane[®](N)GFLCGOEU-J 0.6/1 kV

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
IP4170	4x1,5	8 x 19	287
IP4171	8x1,5	7 x 37	527
IP4172	10x1,5	8 x 47	739
IP4173	12x1,5	8 x 56	882
IP4174	4x2,5	9 x 23	395
IP4175	6x2,5	9 x 32	563
IP4176	12x2,5	9 x 62	1149
IP4177	4x4	9 x 27	515
IP4178	4x6	10 x 30	641
IP4179	4x10	11 x 35	884
IP4180	4x16	13 x 40	1205
IP4181	4x25	14 x 47	1819
IP4182	4x35	17 x 54	2375
IP4183	4x50	19 x 62	3179

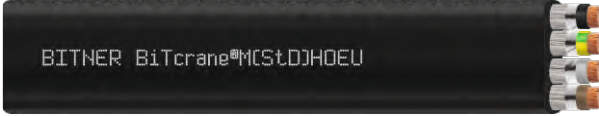
* thickness $\pm 1,5$ mm; width $\pm 2,5$ mm

Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

BiTcrane[®] M(StD)HOEU



Screened, flexible, flat rubber cables for festoon systems, based on DIN VDE 0250-809



Technical data:

Thermal parameters:

Ambient temperature:

fixed installation: -40 °C to 80 °C

festoon operation: -30 °C to 80 °C

Max. permissible conductor temp.: 90 °C

Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Max. tensile load on conductor: 15 N/mm²

Trolley travel speed: up to 180 m/min

Design:

Conductors:

plain copper acc. to DIN EN/IEC 60228:
- ≤ 25 mm², class 6 – finest stranded wires

- ≥ 35 mm², class 5 – fine stranded wires
EPR compound type 3GI3 acc. to DIN VDE 0207-20,
core identification acc. to DIN VDE 0293-308

Insulation:

Core arrangement:

Individual screen:

Outer sheath:

cores/pairs arranged in parallel; pairs twisted with fillers
aluminium backed polyester foil and spinning of tinned
copper wires, coverage >85%

heavy duty rubber compound type 5GM3
acc. to DIN VDE 0207-21; colour: black, inkjet marking

Application:

Flexible, flat rubber cables designed for festoon applications, especially for hoisting gears transportation systems as well as for machine tools at medium mechanical stresses and for strong bends in one plane. Cables are suitable for both indoor and outdoor applications where resistance to oils, fats and chemicals is required.

Chemical parameters:

Resistance to oil:

DIN EN/IEC 60811-404

Behaviour in case of fire:

DIN EN/IEC 60332-1-2

Weather resistance:

unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U_n/U [kV]	0.6/1 kV
Max. permissible operating voltage $U_{0,max}$ in AC systems [kV]:	0.7/1.2 kV
Max. permissible operating voltage $U_{0,max}$ in DC systems [kV]:	0.9/1.8 kV
AC test voltage:	3.5 kV/5 min
Current-carrying capacities in amperes:	acc. to DIN VDE 0298-4

Bending radius	Height of cable (mm)	
	up to 12	over 12
Fixed installation	3xH	4xH
Flexible applications (incl. festoon)	4xH	5xH

BiTcrane[®] M(StD)HOEU

Screened, flexible, flat rubber cables for festoon systems, based on DIN VDE 0250-809

Cat. no.	n x mm ²	Nominal outer dimensions* [mm]	Approximate cable weight [kg/km]
IP5330	4x2x1	11 x 33	640
IP5331	7x2x1	12 x 56	1114
IP5332	12x2x1	12 x 88	1788
IP5333	4x4x1,5	15 x 41	1100
IP5334	5x1,5	8 x 25	368
IP5335	8x1,5	8 x 38	562
IP5336	12x1,5	8 x 56	829
IP5337	6x2,5	8 x 33	615
IP5338	12x2,5	8 x 63	1199
IP5339	4x1,5	8 x 20	295
IP5340	4x2,5	8 x 24	431
IP5341	4x4	9 x 26	505
IP5342	4x6	10 x 29	608
IP5343	4x10	12 x 35	910
IP5344	4x16	13 x 40	1225
IP5345	4x25	15 x 46	1763
IP5346	4x35	16 x 53	2210
IP5347	4x50	19 x 61	3054
IP5348	4x70	22 x 74	4429
IP5349	4x95	24 x 79	5367

*outer dimension tolerance: ±5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] NSHTOEU-J



Crane cables

Low voltage, reeling power / control cable acc. to DIN VDE 0250-814



Technical data:

Thermal parameters:

Ambient temperature:
 fixed installation: -40 °C to 80 °C
 reeling operation: -30 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 200 °C

Mechanical parameters:

Tensile load static/dynamic: 15 / 20 N/mm²
Torsional stresses: ± 25 °/m
Bending radius acc. to DIN VDE 0298-3:
 - fixed installation: ≥ 4 x cable - Ø
 - reeling application: ≥ 6 x cable - Ø
 - on deflection pulleys: ≥ 7.5 x cable - Ø
 - min. distance with S-type directional changes:
 20 x cable - Ø
Reeling speed: ≤ 120 m/min

Design:

Main cores:
Conductors: tinned copper wires, finely stranded, acc. to IEC 60228 class 5

Insulation:
 EPR compound, type 3GI3 acc. to DIN VDE 0207-20, core colours: acc. to DIN VDE 0293-308

Ground conductor:
Conductor: tinned copper wires, finely stranded, acc. to IEC 60228 class 5

Insulation:
 EPR compound, type 3GI3 acc. to DIN VDE 0207-20, core colours: green-yellow

Inner sheath:
 heavy duty rubber compound, quality 5GM3 acc. to DIN VDE 0207-21, filling the interstices

Reinforcement:
 braid made of synthetic threads in a vulcanized bond between inner and outer sheath

Outer sheath:
 heavy duty rubber compound, quality 5GM3 acc. to DIN VDE 0207-21, colour: black, inkjet marking

Application:

Heavy duty rubber reeling cable for power supply or control applications. For use with high mechanical stress, especially for simultaneous tensile and torsional stress. Suitable for all types of mobile equipment such as stackers/reclaimers, on container handling equipment of any kind in ports or stockyard areas with motor-driven mono spiral / cylindrical reels or spring-operated reels.

Chemical parameters:

Resistance to oil:	DIN EN / IEC 60811-404
Behaviour in case of fire:	DIN EN / IEC 60332-1-2
Weather resistance:	unrestricted use indoors, outdoors, resistance to ozone UV and moisture

Electrical parameters:

Rated voltage U _{0/U} [kV]	0.6/1 kV
Maximum permissible operating voltage U _{0,max} in AC systems [kV]:	0.7/1.2 kV
Maximum permissible operating voltage U _{0,max} in DC systems [kV]:	0.9/1.8 kV
AC test voltage:	2.5 kV
Current-carrying capacities in amperes:	acc. to DIN VDE 0298-4 table 15
De-rating factors (thermal/reeling):	acc. to DIN VDE 0298-4

Bitcrane® NSHTOEU-J

Low voltage, reeling power / control cable acc. to DIN VDE 0250-814

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP5370	3x1,5	12-15	205
IP5371	3x2,5	14-17	275
IP5372	3x4	17-20	400
IP5373	3x6	18-21	485
IP5374	3x10	21-25	740
IP5375	3x16	23-27	960
IP5376	3x25	28-32	1475
IP5377	3x35	32-35	1895
IP5378	3x50	38-41	2640
IP5379	3x70	41-44	3445
IP5380	3x95	48-51	4550
IP5381	3x120	51-54	5425
IP5382	3x150	56-59	6580
IP5383	3x185	63-66	8265
IP5384	3x240	70-73	10535
IP5385	4x1,5	13-17	235
IP5386	4x2,5	16-19	365
IP5387	4x4	18-21	475
IP5388	4x6	19-22	580
IP5389	4x10	23-26	900
IP5390	4x16	26-29	1240
IP5391	4x25	32-35	1920
IP5392	4x35	35-38	2335
IP5393	4x50	41-44	3250
IP5394	4x70	45-48	4285
IP5395	4x95	52-55	5660
IP5396	4x120	57-60	7010

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP5397	4x150	63-66	8505
IP5398	4x185	71-74	10640
IP5399	4x240	78-81	13545
IP5400	5x1,5	14-17	270
IP5401	5x2,5	17-20	415
IP5402	5x4	19-22	545
IP5403	5x6	21-24	725
IP5404	5x10	25-28	1070
IP5405	5x16	28-31	1475
IP5406	5x25	35-38	2295
IP5407	5x35	39-42	2930
IP5408	5x50	44-48	3915
IP5409	5x70	51-54	5395
IP5410	5x95	58-61	6955
IP5411	5x150	68-71	10320
IP5412	5x185	77-81	12900
IP5413	5x240	83-86	16100
IP5414	7x1,5	16,2-19	395
IP5415	7x2,5	19,5-22,5	545
IP5416	12x1,5	20,5-23,0	580
IP5417	12x2,5	24-27	815
IP5418	18x1,5	23-26	765
IP5419	18x2,5	27-30	1095
IP5420	24x1,5	27-30	1010
IP5421	24x2,5	32,5-35	1545
IP5422	30x1,5	29-32	1160
IP5423	30x2,5	34-37	1680

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP5430	3x25+3x16/3	31-34	1810
IP5431	3x35+3x16/3	31-34	1970
IP5432	3x35+3x25/3	39-42	2715
IP5433	3x50+3x25/3	39-42	2985
IP5434	3x70+3x35/3	44-47	3995
IP5435	3x95+3x50/3	53-57	5655
IP5436	3x120+3x70/3	55-58	6535
IP5437	3x150+3x70/3	56-59	7155
IP5438	3x185+3x95/3	62-65	8765
IP5439	3x240+3x120/3	69-72	11395

Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

BiTcrane[®](N)SHTOEU-J

Low voltage, reeling cable based on DIN VDE 0250-814



Crane cables



Technical data:

Thermal parameters:

Ambient temperature:

fixed installation: -40 °C to 80 °C

reeling operation: -30 °C to 80 °C

Max. permissible conductor temp.: 90 °C

Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Tensile load static/dynamic: 15 / 30 N/mm²

Torsional stresses: ± 25 °/m

Bending radius acc. to DIN VDE 0298-3:

- fixed installation: ≥ 4 x cable - Ø

- reeling application: ≥ 6 x cable - Ø

- on deflection pulleys: ≥ 7,5 x cable - Ø

- min. distance with S-type directional changes:

20 x cable - Ø

Reeling speed: ≤ 180 m/min

Design:

Main cores:

Conductors:

plain copper wires, finely stranded, acc. to IEC 60228 class 5

Insulation: HEPR compound acc. to IEC 60502-1, core colours: acc. to DIN VDE 0293-308

Ground conductor:

Conductor:

plain copper wires, finely stranded, acc. to IEC 60228 class 5

Insulation:

HEPR compound acc. to IEC 60502-1, core colours: green-yellow

Inner sheath:

heavy duty rubber compound, quality 5GM5 acc. to DIN VDE 0207-21, filling the interstices

Reinforcement:

braid made of synthetic threads in a vulcanized bond between inner and outer sheath

Outer sheath:

heavy duty rubber compound, quality 5GM5 acc. to DIN VDE 0207-21, colour: black, inkjet marking

*other designs, e.g. with cradle separator available on request

Application:

Heavy duty rubber reeling cable for power supply. For applications with high mechanical stress, especially for simultaneous tensile and torsional stress. Suitable for all types of mobile equipment such as stackers/reclaimers, on container handling equipment of any kind in ports or stockyard areas with motor-driven mono spiral / cylindrical reels or spring-operated reels.

Chemical parameters:

Resistance to oil:

DIN EN / IEC 60811-404

Behaviour in case of fire:

DIN EN / IEC 60332-1-2

Weather resistance:

unrestricted use indoors, outdoors, resistance to ozone UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]	0.6/1 kV
Maximum permissible operating voltage $U_{p,max}$ in AC systems [kV]:	0.7/1.2 kV
Maximum permissible operating voltage $U_{p,max}$ in DC systems [kV]:	0.9/1.8 kV
AC test voltage:	3.5 kV
Current-carrying capacities in amperes:	acc. to DIN VDE 0298-4 table 15
De-rating factors (thermal/reeling):	acc. to DIN VDE 0298-4

BiTcrane[®] (N)SHTOEU-J

Low voltage, reeling cable based on DIN VDE 0250-814

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP5450	3x16+3x16/3	30-33	1445
IP5451	3x25+3x16/3	30-33	1665
IP5452	3x35+3x16/3	31-34	1880
IP5453	3x35+3x25/3	35-38	2310
IP5454	3x50+3x25/3	36-39	2740
IP5455	3x70+3x35/3	42-45	3710
IP5456	3x95+3x50/3	46-49	4725
IP5457	3x120+3x70/3	50-53	5735
IP5458	3x150+3x70/3	54-57	6860
IP5459	3x185+3x95/3	60-63	8365
IP5460	3x240+3x120/3	69-72	10960
IP5461	3x300+3x150/3	73-76	13385

Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

BiTcrane[®] (N)SHTOEU-J FO



Crane cables

Low voltage, reeling cable based on DIN VDE 0250-814



Technical data:

Thermal parameters:

Ambient temperature:
 fixed installation: -40 °C to 80 °C
 reeling operation: -30 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Tensile load static/dynamic: 15 / 30 N/mm²
Torsional stresses: ± 25 °/m
Bending radius acc. to DIN VDE 0298-3:
 - fixed installation: ≥ 4 x cable - Ø
 - reeling application: ≥ 6 x cable - Ø
 - on deflection pulleys: ≥ 7.5 x cable - Ø
 - min. distance with S-type directional changes:
 20 x cable - Ø
Reeling speed: ≤ 180 m/min

Design:

Main cores:
Conductors: plain copper wires, finely stranded, acc. to IEC 60228 class 5
Insulation: HEPR compound acc. to IEC 60502-1, core colours: acc. to DIN VDE 0293-308

Ground conductor:
Conductor: plain copper wires, finely stranded, acc. to IEC 60228 class 5
Insulation: HEPR compound acc. to IEC 60502-1, core colours: green-yellow

Optical fiber element: 12 / 2x12 fibers in G62.5/125, G50/125 or E9/125 various fiber combinations on request
Inner sheath: heavy duty rubber compound, quality 5GM5 acc. to DIN VDE 0207-21, filling the interstices
Reinforcement: braid made of synthetic threads, in a vulcanized bond between inner and outer sheath
Outer sheath: heavy duty rubber compound, quality 5GM5 acc. to DIN VDE 0207-21, colour: black, inkjet marking

optional version with a cradle separator (K) available on request

Application:

Heavy duty rubber reeling cable for power supply including optional optical data transfer. For applications with high mechanical stress, especially for simultaneous tensile and torsional stress. Suitable for all types of mobile equipment such as stackers/reclaimers, on container handling equipment of any kind in ports or stockyard areas with motor-driven mono spiral / cylindrical reels or spring-operated reels.

Chemical parameters:

Resistance to oil: DIN EN / IEC 60811-404
 Behaviour in case of fire: DIN EN / IEC 60332-1-2
 Weather resistance: unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]	0.6/1 kV
Maximum permissible operating voltage $U_{0,max}$ in AC systems [kV]:	0.7/1.2 kV
Maximum permissible operating voltage $U_{0,max}$ in DC systems [kV]:	0.9/1.8 kV
AC test voltage:	3.5 kV
Current-carrying capacities in amperes:	acc. to DIN VDE 0298-4 table 15
De-rating factors (thermal/reeling):	acc. to DIN VDE 0298-4

BiTcrane[®] (N)SHTOEU-J FO

Low voltage, reeling cable based on DIN VDE 0250-814

Protective conductor cross-section split into two parts, optical fiber element in the third interstice

n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
3x16+2x16/2+12FO	36-39	1930
3x25+2x16/2+12FO	36-39	2145
3x35+2x16/2+12FO	36-39	2300
3x50+2x25/2+12FO	43-46	3265
3x70+2x35/2+12FO	48-51	4320
3x95+2x50/2+12FO	53-56	5485
3x120+2x70/2+12FO	60-63	7040
3x150+2x70/2+12FO	60-63	7660
3x185+2x95/2+12FO	70-73	9810
3x240+2x120/2+12FO	76-79	12310
3x300+2x150/2+12FO	81-84	14885
3x25+2x16/2+2x12FO	44-47	2890
3x35+2x16/2+2x12FO	45-48	3090
3x50+2x25/2+2x12FO	43-46	3255
3x70+2x35/2+2x12FO	48-51	4285
3x95+2x50/2+2x12FO	53-56	5460
3x120+2x70/2+2x12FO	60-63	7015
3x150+2x70/2+2x12FO	60-63	7635
3x185+2x95/2+2x12FO	70-73	9785
3x240+2x120/2+2x12FO	76-79	12285
3x300+2x150/2+2x12FO	81-84	14860

Regulations of the individual fibre types:

Fiber optic type	Standard	Colour code
Single-mode optical fiber E9/125	ITU-T G.652 D	acc. to ANSI/TIA/EIA 598-A
Multimode fiber G50/125 (OM2-OM4)	ITU-T G.651	
Multimode fiber G62,5/125		

Typical attenuation values:

Fiber optic type	Description	Value (max.)	Unit
Single-mode optical fiber E9/125	attenuation at 1310 nm	0,5	dB/km
Single-mode optical fiber E9/125	attenuation at 1550 nm	0,3	dB/km
Multimode fiber G50/125	attenuation at 850 nm	3,0	dB/km
Multimode fiber G50/125	attenuation at 1300 nm	1,0	dB/km
Multimode fiber G62,5/125	attenuation at 850 nm	3,5	dB/km
Multimode fiber G62,5/125	attenuation at 1300 nm	1,5	dB/km

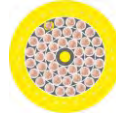
Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

BiTcrane[®] (N)SHTOEU-J SPREADER



Crane cables

Low voltage, reeling cable based on DIN VDE 0250-814



Technical data:

Thermal parameters:

Ambient temperature:
 fixed installation: -50 °C to 80 °C
 reeling operation: -35 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Tensile load static/dynamic: 15 / 30 N/mm²
Torsional stresses: ± 50 °/m
Bending radius acc. to DIN VDE 0298-3:
 - fixed installation: ≥ 4 x cable - Ø
 - reeling application: ≥ 6 x cable - Ø
 - on deflection pulleys: ≥ 7,5 x cable - Ø
 - min. distance with S-type directional changes:
 20 x cable - Ø
Reeling speed: ≤ 240 m/min

Design:

Main cores:
Conductors: plain copper wires, finely stranded, acc. to IEC 60228 class 5
Insulation: HEPR compound acc. to IEC 60502-1, core colours: acc. to DIN VDE 0293-308

Ground conductor:
Conductor: plain copper wires, finely stranded, acc. to IEC 60228 class 5
Insulation: HEPR compound acc. to IEC 60502-1, core colours: green-yellow

Core arrangement: multi cores stranded in layers

Inner sheath: extra heavy duty rubber compound type 5GM5 acc. to DIN VDE 0207-21, filling the interstices braid made of synthetic threads, in a vulcanized bond between inner and outer sheath

Reinforcement: extra heavy duty rubber compound type 5GM5 acc. to DIN VDE 0207-21, colour: yellow, inkjet marking

Outer sheath:

*other customized designs available on request

Application:

Heavy duty rubber cable for reeling applications with high mechanical stress, especially for high tensile load on vertical drum-spreader systems on e.g. ship-to-shore cranes or other hoisting systems.

Chemical parameters:

Resistance to oil:	DIN EN / IEC 60811-404
Behaviour in case of fire:	DIN EN / IEC 60332-1-2
Weather resistance:	unrestricted use indoors, outdoors, resistance to ozone UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]	0.6/1 kV
Maximum permissible operating voltage $U_{0,max}$ in AC systems [kV]:	0.7/1.2 kV
Maximum permissible operating voltage $U_{0,max}$ in DC systems [kV]:	0.9/1.8 kV
AC test voltage:	3.5 kV
Current-carrying capacities in amperes:	acc. to DIN VDE 0298-4 table 15
De-rating factors (thermal/reeling):	acc. to DIN VDE 0298-4

BiTcrane[®] (N)SHTOEU-J SPREADER

Low voltage, reeling cable based on DIN VDE 0250-814

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
BC00123	36x1,5	29-32	1255
BC00124	44x1,5	32-35	1535
BC00125	30x2,5	32-35	1650
BC00126	36x2,5	32-35	1725
BC00127	25x2,5	29-32	1360
BC00128	44x2,5	38-41	2230
BC00129	56x2,5	43-46	2885

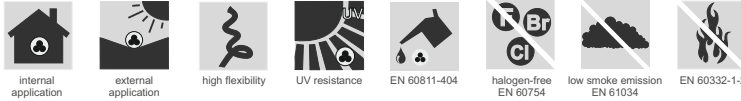
Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

BiTcrane® (N)12YRD11Y-J/O



Crane cables

Halogen free power and control cable for very high mechanical requirements, rated 0,6/1 kV



Technical data:

Thermal parameters:

Ambient temperature:
 fixed installation: -50 °C to 90 °C
 flexible operation: -40 °C to 90 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Max. tensile load per conductor: 15 N/mm²
Bending radius:
 - fixed installation: ≥ 6 x outer - Ø
 - free moving: ≥ 7,5 x outer - Ø

Design:

Conductor: bare copper wires, finely stranded, class 5 acc. to DIN EN/IEC 60228
Insulation: based on polyester, core identification: acc. to DIN 0293-308 up to 5 wires colored, from 6 wires white, numbered (with or without green/yellow protective conductor)
Core arrangement: cores stranded in layers around central element (central supporting element - aramid yarns)
Outer sheath: halogen-free PUR compound; colour: black, matt, inkjet marking

Application:

Halogen-free power and control cable for very high mechanical requirements, frequent bendings, especially for use in festoon, trolley systems, drag chains on moving parts of machines and conveyor facilities. Suitable for dry and wet rooms as well as for outdoor use. Version suitable for permanent use in water (no drinking water) up to 50m depth available on customer's request.

Chemical parameters:

Resistance to oil: DIN EN/IEC 60811-404
 Behaviour in case of fire: DIN EN/IEC 60332-1-2
 Weather resistance: unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U _{J/U} [kV]	0,6/1 kV
Max. permissible operating voltage U _{b,max} in AC systems [kV]:	0,7/1,2 kV
Max. permissible operating voltage U _{s,max} in DC systems [kV]:	0,9/1,8 kV
AC, test voltage:	2,5 kV
Current-carrying capacities in amperes:	acc. to DIN VDE 0298-4

BiTcrane®(N)12YRD11Y-O

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight* [kg/km]
BC00135	1x25	9,9-11,1	290
BC00136	1x35	11,7-12,9	380
BC00137	1x50	13,9-15,1	530
BC00138	1x70	16,2-17,4	740
BC00139	1x95	17,9-19,1	965
BC00140	1x120	20,2-21,5	1210
BC00141	1x150	21,8-23,2	1485
BC00142	1x185	24,3-25,7	1790

BiTcrane[®](N)12YRD11Y-J/O

Halogen free power and control cable for very high mechanical requirements, rated 0,6/1 kV

BiTcrane[®](N)12YRD11Y-J

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight* [kg/km]
BC00143	4x1,5	8,6-10,1	110
BC00144	4x2,5	10,0-11,5	155
BC00145	4x4	11,7-13,2	235
BC00146	4x6	13,2-14,7	320
BC00147	4x10	15,6-17,1	495
BC00148	4x16	18,2-19,7	725
BC00149	4x25	22,3-24,3	1140
BC00150	4x35	24,9-26,9	1545
BC00151	4x50	29,8-31,8	2205
BC00152	5x2,5	10,8-12,3	190
BC00153	5x4	12,7-14,2	285
BC00154	5x6	14,5-16,0	395
BC00155	5x10	17,1-18,6	620
BC00156	5x16	19,9-21,4	910
BC00157	7x2,5	12,6-14,1	255
BC00158	12x1,5	14,8-16,3	330
BC00159	12x2,5	17,7-19,2	495
BC00160	18x1,5	15,1-16,6	390
BC00161	18x2,5	18,1-19,6	585
BC00162	24x1,5	18,0-19,5	535
BC00163	24x2,5	21,6-23,6	800

Cable Factory BITNER reserves the right to modify specifications without prior notification.
*Cable weight may differ from the one shown in the table.

Bitcrane® (N)12YRDC11Y-J/O



Halogen-free power and control cable for very high mechanical requirements, screened, rated 0,6/1 kV



Technical data:

Thermal parameters:

Ambient temperature:
 fixed installation: -50 °C to 90 °C
 flexible operation: -40 °C to 90 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Max. tensile load per conductor: 15 N/mm²
Bending radius:
 - fixed installation: ≥ 6 x outer - Ø
 - free moving: ≥ 7,5 x outer - Ø

Design:

Conductor: bare copper wires, finely stranded, class 5 acc. to DIN EN/IEC 60228
Insulation: based on polyester, core identification: acc. to DIN 0293-308 up to 5 wires colored, from 6 wires white, numbered (with or without green/yellow protective conductor)
Core arrangement: cores stranded in layers around central element (central supporting element - aramid yarns)
Inner sheath: halogen-free PUR compound; colour; black (only cables with 2 up to 5 cores are manufactured with inner sheath) tinned copper wire braid, coverage ca. 85%
Screen: halogen-free PUR compound; colour: black, matt, inkjet marking
Outer sheath:

Application:

Halogen-free power and control cable for very high mechanical requirements, frequent bendings, especially for use in festoon, trolley systems, drag chains on moving parts of machines and conveyor facilities. Suitable for dry and wet rooms as well as for outdoor use. Version suitable for permanent use in water (no drinking water) up to 50m depth available on customer's request.

Chemical parameters:

Resistance to oil: DIN EN/IEC 60811-404
 Behaviour in case of fire: DIN EN/IEC 60332-1-2
 Weather resistance: unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]	0,6/1 kV
Max. permissible operating voltage $U_{0,max}$ in AC systems [kV]:	0,7/1,2 kV
Max. permissible operating voltage $U_{s,max}$ in DC systems [kV]:	0,9/1,8 kV
AC test voltage:	2,5 kV
Current-carrying capacities in amperes:	acc. to DIN VDE 0298-4

Bitcrane®(N)12YRDC11Y-O

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight* [kg/km]
BC00170	1x25	11,5-13,0	330
BC00171	1x35	12,8-14,3	425
BC00172	1x50	14,9-16,4	590
BC00173	1x70	16,7-18,2	810
BC00174	1x95	18,9-20,4	1055
BC00175	1x120	20,4-22,4	1305
BC00176	1x150	23,1-25,1	1620
BC00177	1x185	25,8-27,8	1950

Crane cables

BiTcrane[®](N)12YRDC11Y-J/O

Halogen-free power and control cable for very high mechanical requirements, screened, rated 0,6/1 kV

BiTcrane[®](N)12YRDC11Y-J

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight* [kg/km]
BC00178	4x2,5	13,0-14,5	250
BC00179	4x4	14,8-16,3	350
BC00180	4x6	16,6-18,1	450
BC00181	4x10	19,3-20,8	685
BC00182	4x16	22,4-24,4	985
BC00183	4x25	26,9-28,9	1465
BC00184	4x35	30,4-32,4	1965
BC00185	4x50	35,2-37,2	2690
BC00186	5x2,5	13,9-15,4	295
BC00187	7x1,5	11,5-13,0	205
BC00188	12x1,5	15,5-17,0	385
BC00189	12x2,5	18,6-20,1	585
BC00190	18x1,5	16,1-17,6	440
BC00191	18x2,5	19,2-20,7	675

Cable Factory BITNER reserves the right to modify specifications without prior notification.

*Cable weight may differ from the one shown in the table.

BITfiber® CRANE FO 2 x 12 .../125

RoHS 2015/863/EU

CPR

CPR 305/2011

24 months warranty

Crane cables

Heavy duty rubber sheathed cable for optical signal and data transmission



industrial application



external application



UV resistance



telecommunication cable



high flexibility



EN 60332-1-2



oil resistant
EN 60811-404

Technical data:

Thermal parameters:

Permissible ambient temperature:
 - transportation / storage: -40 °C / 80 °C
 - free moving / festoon application: -30 °C / 80 °C

Mechanical parameters:

Bending radius: ≥250 mm
Max. continuous load in operation: 2000 N
Reeling speed: ≤120 m/min

Chemical parameters:

Resistance to oil: IEC 60811-404
Behaviour in case of fire: IEC 60332-1-2
Weather resistance:
 unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Regulations of the individual fiber types:

single-mode optical fiber E9/125 acc. to
 - ITU-T G.652 D - OS2¹⁾
 - DIN EN IEC 60793-2-50 / VDE 0888-325

graded-index 62.5/125 µm multimode fiber acc. to
 - DIN EN IEC 60793-2-10 A1-OM1¹⁾
 - IEEE 802.3 Gigabit Ethernet Standard
 - VDE 0888-321

graded-index 50/125 µm multimode fiber acc. to
 - DIN EN IEC 60793-2-10 A1-OM2 - OM4¹⁾
 - ITU-T G.651 / VDE 0888-321

fiber colour codes acc. to ANSI/TIA/EIA 598-A

Design:

Optical fiber element:

E9 design: tube 1 - yellow: 12 fiber E9/125
 tube 2 - red: 12 fiber E9/125
G62,5 design: tube 1 - blue: 12 fiber G62,5/125
 tube 2 - red: 12 fiber G62,5/125
G50 design: tube 1 - green: 12 fiber G50/125
 tube 2 - red: 12 fiber G50/125

combination of fiber types (e.g.: 12G50 + 12G62,5) on request

Synthetic strain relief elements

Jacket: thermoplastic elastomer TPE

Separating tapes

Reinforcement: braid made of high tec multifilament threads, non-hygroscopic and low shrinkage

Outer sheath: heavy duty rubber compound, type 5GM5 acc. to DIN VDE 0207-21, colour: black, inkjet marking

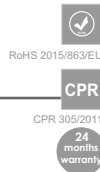
Application:

On reeling systems for long distance communication network (LDN) e.g. optical PROFIBUS networks with special application requirements on mobile material handling equipment, small motor driven reels and spring driven reels.

Fiber type	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]
2x12 E9/125	14 - 16	220
2x12 G50/125		
2x12 G62,5/125		

¹⁾ contain standard values or values at delivery. Attenuation values in the finished cable deviate
 Cable Factory BITNER reserves the right to modify specifications without prior notification.

Bitfiber® FESTOON FO 2 x 12 .../125



Heavy duty rubber cable for optical signal and data transmission



Crane cables



Technical data:

Thermal parameters:

Permissible ambient temperature:
- transportation / storage: -40 °C / 80 °C
- free moving / festoon application: -30 °C / 80 °C

Mechanical parameters:

Bending radius: ≥ 125 mm
Max. continuous load in operation: 2000 N
Travelling speed of motor driven festoon cable trolleys: ≤ 300 m/min

Chemical parameters:

Resistance to oil: IEC 60811-404
Behaviour in case of fire: IEC 60332-1-2
Weather resistance:
unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Regulations of the individual fiber types:

single-mode optical fiber E9/125 acc. to
- ITU-T G.652 D - OS2¹⁾
- DIN EN IEC 60793-2-50 / VDE 0888-325

graded-index 62,5/125 μ m multimode fiber acc. to
- DIN EN IEC 60793-2-10 A1-OM1¹⁾
- IEEE 802.3 Gigabit Ethernet Standard
- VDE 0888-321

graded-index 50/125 μ m multimode fiber acc. to
- DIN EN IEC 60793-2-10 A1-OM2 - OM4¹⁾
- ITU-T G.651 / VDE 0888-321

fiber colour codes acc. to ANSI/TIA/EIA 598-A

Design:

Optical fiber element:

E9 design: tube 1 - yellow: 12 fiber E9/125
tube 2 - red: 12 fiber E9/125
G62,5 design: tube 1 - blue: 12 fiber G62,5/125
tube 2 - red: 12 fiber G62,5/125
G50 design: tube 1 - green: 12 fiber G50/125
tube 2 - red: 12 fiber G50/125

combination of fiber types (e.g.: 12G50 + 12G62,5) on request

Synthetic strain relief elements

Jacket: thermoplastic elastomer TPE

Separating tapes

Reinforcement: braid made of high tec multifilament threads, non-hygroscopic and low shrinkage

Outer sheath: heavy duty rubber compound, quality 5GM5 acc. to DIN VDE 0207-21, colour: orange / black, inkjet marking,

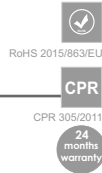
Application:

On festoon systems with e.g. heavy duty trolleys carry flat and round cables for transmission of electrical energy and optic signals. Travelling speed of motor driven festoon cable trolleys: ≤ 300 m/min.

Fiber type	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]
2x12 E9/125	10 - 12	120
2x12 G50/125		
2x12 G62,5/125		

¹⁾ contain standard values or values at delivery. Attenuation values in the finished cable deviate
Cable Factory BITNER reserves the right to modify specifications without prior notification.

BITfiber® CRANE PUR FO 2 x 12 .../125



Crane cables

Heavy duty PUR sheathed cable for optical signal and data transmission



Technical data:

Thermal parameters:

Permissible ambient temperature:
 - transportation / storage: -40 °C / 80 °C
 - free moving / festoon application: -30 °C / 80 °C

Mechanical parameters:

Bending radius: $\geq 15 \times \text{cable } \varnothing \text{ mm}^1$
Max. continous load in operation: 1000 N
Reeling speed: $\leq 120 \text{ m/min}$

Chemical parameters:

Resistance to oil: IEC 60811-404
Behaviour in case of fire: IEC 60332-1-2
Weather resistance:
 unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Regulations of the individual fiber types:

single-mode optical fiber E9/125 acc. to
 - ITU-T G.652 D - OS2^{*)}
 - DIN EN IEC 60793-2-50 / VDE 0888-325

graded-index 62.5/125 μm multimode fiber acc. to
 - DIN EN IEC 60793-2-10 A1-OM1^{*)}
 - IEEE 802.3 Gigabit Ethernet Standard
 - VDE 0888-321

graded-index 50/125 μm multimode fiber acc. to
 - DIN EN IEC 60793-2-10 A1-OM2 - OM4^{*)}
 - ITU-T G.651 / VDE 0888-321

fiber colour codes acc. to ANSI/TIA/EIA 598-A

Design:

Optical fiber element:

E9 design: tube 1 - yellow: 12 fiber E9/125
 tube 2 - red: 12 fiber E9/125
G62,5 design: tube 1 - blue: 12 fiber G62,5/125
 tube 2 - red: 12 fiber G62,5/125
G50 design: tube 1 - green: 12 fiber G50/125
 tube 2 - red: 12 fiber G50/125

combination of fiber types (e.g.: 12G50 + 12G62,5) on request

Synthetic strain relief elements

Jacket: thermoplastic elastomer TPE

Separating tapes

Inner sheath: thermoplastic elastomer PUR

Reinforcement: braid made of high tec multifilament threads, non-hygroscopic and low shrinkage

Outer sheath: thermoplastic elastomer PUR reinforced with dielectric yarns, halogen-free; colour: black matt, inkjet marking

Application:

On reeling systems for long distance communication network (LDN) e.g. optical PROFIBUS networks with special application requirements on mobile material handling equipment, small motor driven reels and spring driven reels.

Fiber type	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]
2x12 E9/125	14 - 16	200
2x12 G50/125		
2x12 G62,5/125		
12G50 (OM4) + 12 E9(OS2)		

^{*)} for spring operated cable reels $\geq 10 \times \text{cable-}\varnothing$ possible (not tested)
^{**)} contain standard values or values at delivery, Attenuation values in the finished cable deviate
 Cable Factory BITNER reserves the right to modify specifications without prior notification.

Bitfiber® FESTOON PUR FO 2 x 12 .../125

RoHS 2015/863/EU

CPR

CPR 305/2011

24 months warranty

Heavy duty PUR sheathed cable for optical signal and data transmission



Industrial application



external application



UV resistance



telecommunication cable



high flexibility



EN 60332-1-2

oil resistant
EN 60811-404

Technical data:

Thermal parameters:

Permissible ambient temperature:

- transportation / storage: -40 °C / 80 °C
- free moving / festoon application: -30 °C / 80 °C

Mechanical parameters:

Bending radius: $\geq 10 \times \text{cable-}\varnothing$

Max. continuous load in operation: 1000 N

Travelling speed of motor driven festoon cable trolleys: ≤ 240 m/min

Chemical parameters:

Resistance to oil: IEC 60811-404

Behaviour in case of fire: IEC 60332-1-2

Weather resistance:

unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Regulations of the individual fiber types:

single-mode optical fiber E9/125 acc. to

- ITU-T G.652 D - OS2¹⁾
- DIN EN IEC 60793-2-50 / VDE 0888-325

graded-index 62,5/125 μm multimode fiber acc. to

- DIN EN IEC 60793-2-10 A1-OM1¹⁾
- IEEE 802.3 Gigabit Ethernet Standard
- VDE 0888-321

graded-index 50/125 μm multimode fiber acc. to

- DIN EN IEC 60793-2-10 A1-OM2 - OM4¹⁾
- ITU-T G.651 / VDE 0888-321

fiber colour codes acc. to ANSI/TIA/EIA 598-A

Design:

Optical fiber element:

- E9 design: tube 1 - yellow: 12 fiber E9/125
tube 2 - red: 12 fiber E9/125
- G62,5 design: tube 1 - blue: 12 fiber G62,5/125
tube 2 - red: 12 fiber G62,5/125
- G50 design: tube 1 - green: 12 fiber G50/125
tube 2 - red: 12 fiber G50/125

combination of fiber types (e.g.: 12G50 + 12G62,5) on request

Synthetic strain relief elements

Jacket: thermoplastic elastomer TPE

Separating tapes

Reinforcement: braid made of high tec multifilament threads, non-hygroscopic and low shrinkage

Outer sheath: thermoplastic elastomer PUR reinforced with dielectric yarns, halogen-free; colour: black matt, inkjet marking

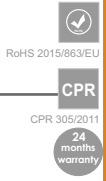
Application:

On festoon systems with e.g. heavy duty trolleys carry flat and round cables for transmission of electrical energy and optical signals. Travelling speed of motor driven festoon cable trolleys: ≤ 240 m/min.

Fiber type	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]
2x12 E9/125	13 - 15	190
2x12 G50/125		
2x12 G62,5/125		

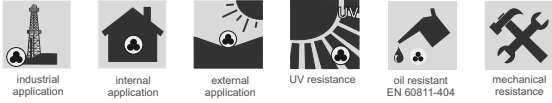
¹⁾ contain standard values or values at delivery. Attenuation values in the finished cable deviate
Cable Factory BITNER reserves the right to modify specifications without prior notification.

BiTcrane[®] (N)TSFLCGEWOEU



Crane cables

Medium voltage, flexible rubber flat power supply cable based on DIN VDE 0250-813



Technical data:

Thermal parameters:

Ambient temperature:
for fixed installation: -40 °C to 80 °C
reeling operation: -35 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C
De-rating factors: acc. to DIN VDE 0298-4

Mechanical parameters:

Max. tensile load on conductor: 15 N/mm²
Bending radius: acc. to DIN VDE 0298-3/IEC 60204-32
Min. distance with S-type directional changes: 20 x cable thickness
Reeling speed: up to 120 m/min

Design:

Conductor: tinned copper wires, finely stranded, class 5 acc. to DIN EN/IEC 60228
Insulation: - inner semi-conductive stress control layer
- EPR compound with improved electrical and mechanical characteristics based on DIN VDE 0207-20
- outer semi-conductive insulation shield layer
Screen: plaited covering of the cores, consisting of fine tinned copper wires and synthetic threads
Outer sheath: heavy duty rubber compound, type 5GM5 acc. to DIN VDE 0207-21; colour: red, inkjet marking

Application:

Reeling cable for power supply with guidance in one level, e.g. monospiral reel on stockyard systems for bulk material handling like stacker/reclaimer.

Chemical parameters:

Resistance to oil: DIN EN / IEC 60811-404
Behaviour in case of fire: DIN EN / IEC 60332-1-2
Weather resistance: unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U ₀ /U [kV]	3.6/6	6/10	8.7/15
Max. permissible operating voltage U _{max} in AC systems [kV]:	4.2/7.2	6.9/12	10.4/18
Max. permissible operating voltage U _{max} in DC systems [kV]:	5.4/10.8	9/18	13.5/27
AC test voltage acc. to DIN VDE 0250-813 [kV]	11	17	24
Current-carrying capacities in amperes	acc. to DIN VDE 0298-4		

BiTcrane[®] (N)TSFLCGEWOEU

Medium voltage, flexible power supply cable for reeling applications based on DIN VDE 0250-813

BiTcrane[®] (N)TSFLCGEWOEU 3.6/6 kV

Cat. no.	n x mm ²	Nom. outer dimensions*) [mm]	Approximate cable weight [kg/km]	Max. tensile load [N]
BC00200	3x25 + 3x25/3E	24 x 55	2515	1125
BC00201	3x35 + 3x25/3E	25 x 58	2835	1575
BC00202	3x50 + 3x25/3E	27 x 63	3385	2250
BC00203	3x50 + 3x50/3E	27 x 64	3785	2250
BC00204	3x70 + 3x35/3E	30 x 70	4430	3150
BC00205	3x95 + 3x50/3E	32 x 76	5550	4275
BC00206	3x120 + 3x70/3E	33 x 80	6645	5400

BiTcrane[®] (N)TSFLCGEWOEU 6/10 kV

Cat. no.	n x mm ²	Nom. outer dimensions*) [mm]	Approximate cable weight [kg/km]	Max. tensile load [N]
BC00210	3x25 + 3x25/3E	25 x 58	2645	1125
BC00211	3x35 + 3x25/3E	26 x 61	2970	1575
BC00212	3x50 + 3x25/3E	28 x 66	3530	2250
BC00213	3x50 + 3x50/3E	28 x 67	3930	2250
BC00214	3x70 + 3x35/3E	31 x 72	4590	3150
BC00215	3x95 + 3x50/3E	33 x 78	5725	4275
BC00216	3x120 + 3x70/3E	34 x 82	6825	5400

BiTcrane[®] (N)TSFLCGEWOEU 8.7/15 kV

Cat. no.	n x mm ²	Nom. outer dimensions*) [mm]	Approximate cable weight [kg/km]	Max. tensile load [N]
BC00220	3x25 + 3x25/3E	27 x 63	2920	1125
BC00221	3x35 + 3x25/3E	28 x 66	3260	1575
BC00222	3x50 + 3x25/3E	29 x 70	3840	2250
BC00223	3x50 + 3x50/3E	30 x 72	4240	2250
BC00224	3x70 + 3x35/3E	32 x 77	4930	3150
BC00225	3x95 + 3x50/3E	34 x 83	6085	4275
BC00226	3x120 + 3x70/3E	36 x 87	7200	5400

*) thickness ±2mm; width ±4mm

Cable Factory BITNER reserves the right to modify specifications without prior notification.

*) please contact us if higher loads are required.

Note: on customer's request other cross sections or number of cores can be produced

BiTcrane®(N)TSCGEW0EU-SR

RoHS 2015/863/EU

CPR

CPR 305/2011

24 months warranty

Crane cables

Medium voltage, flexible power supply cable for reeling applications based on DIN VDE 0250-813



Industrial application



EN 60332-1-2



high flexibility



UV resistance



oil resistant
EN 60811-404



mechanical resistance



explosion hazardous areas



reeling cable

Technical data:

Thermal parameters:

Ambient temperature:

for fixed installation: -50 °C to 80 °C

reeling operation: -30 °C to 80 °C

Max. permissible conductor temp.: 90 °C

Max. short-circuit temp. at conductor: 250 °C

De-rating factors: acc. to DIN VDE 0298-4

Mechanical parameters:

Max. tensile load on conductor: 20 N/mm²

Torsional stresses: ±25 °/m

Bending radius: acc. to DIN VDE 0298-3

Min. distance with S-type directional changes: 20 x O.D.

Reeling speed: up to 180 m/min

Design:

Main cores

Conductors:

plain copper wires, finely stranded, class 5
acc. to IEC 60228

Insulation:

- inner semi-conductive stress control layer
- EPR compound with improved electrical and mechanical characteristics based on DIN VDE 0207-20
- outer semi-conductive insulation shield layer

Ground conductor

Conductor:

plain copper wires, finely stranded, class 5
acc. to IEC 60228, semi-conductive layer

Core arrangement:

three main cores laid-up with optimised lay length, ground conductor cross-section split into 3 parts in the outer interstices

Inner sheath:

heavy duty rubber compound, quality 5GM5 based on DIN VDE 0207-21, filling the interstices, colour: red

Reinforcement:

red braid made of synthetic threads, placed between inseparably bonded inner and outer sheath, acting as an anti-twist protection

Outer sheath:

heavy duty rubber compound, quality 5GM5

acc. to DIN VDE 0207-21; colour: red; inkjet marking

*other designs, e.g. with cradle separator or according to application available on request

Application:

Flexible reeling cable for power supply with cable guidance in different levels, e.g. reel axis in travel direction. Especially for high and extreme mechanical stress. For connection of large material handling machines in open pit mines, different crane types in harbours, shipyards, stacker/reclaimers in stockyards and other industrial areas.

Chemical parameters:

Resistance to oil: DIN EN / IEC 60811-404

Behaviour in case of fire: DIN EN / IEC 60332-1-2

Weather resistance: unrestricted use indoors, outdoors, resistance to ozone UV and moisture

Electrical parameters:

Rated voltage U ₀ /U [kV]		3.6/6	6/10	8.7/15	12/20
Maximum permissible operating voltage in AC systems U ₀ /U [kV]		4.2/7.2	6.9/12	10.4/18	13.9/24
Maximum permissible operating voltage in DC systems U ₀ /U [kV]		5.4/10.8	9/18	13.5/27	18/36
AC test voltage acc. to DIN VDE 0250-813 [kV]		11	17	24	29
Current-carrying capacities in amperes		acc. to DIN VDE 0298-4 table 15			
De-rating factors		acc. to DIN VDE 0298-4			

BiTcrane[®](N)TSCGEWOEU-SR

Medium voltage, flexible power supply cable for reeling applications based on DIN VDE 0250-813

BiTcrane[®](N)TSCGEWOEU-SR 3.6/6 kV

Cat. no.	n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force *) static/dynamic [N]
BC00020	3x25+3x25/3	39-42	2420	1125 / 1500
BC00021	3x35+3x25/3	43-46	2950	1575 / 2100
BC00022	3x50+3x25/3	46-49	3610	2250 / 3000
BC00023	3x70+3x35/3	50-53	4475	3150 / 4200
BC00024	3x95+3x50/3	55-58	5630	4275 / 5700
BC00025	3x120+3x70/3	58-61	6675	5400 / 7200
BC00026	3x150+3x70/3	61-64	7710	6750 / 9000
BC00027	3x185+3x95/3	68-71	9400	8325 / 11100
BC00028	3x240+3x120/3	72-75	11640	10800 / 14400

BiTcrane[®](N)TSCGEWOEU-SR 6/10 kV

Cat. no.	n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force *) static/dynamic [N]
BC00001	3x25+3x25/3	40-43	2495	1125 / 1500
BC00003	3x35+3x25/3	44-47	3030	1575 / 2100
BC00005	3x50+3x25/3	47-50	3695	2250 / 3000
BC00007	3x70+3x35/3	51-54	4565	3150 / 4200
BC00009	3x95+3x50/3	56-59	5730	4275 / 5700
BC00010	3x120+3x70/3	59-62	6800	5400 / 7200
BC00011	3x150+3x70/3	62-65	7830	6750 / 9000
BC00012	3x185+3x95/3	69-72	9525	8325 / 11100
BC00013	3x240+3x120/3	73-76	11785	10800 / 14400

BiTcrane[®](N)TSCGEWOEU-SR 8.7/15 kV

Cat. no.	n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force *) static/dynamic [N]
BC00035	3x25+3x25/3	40-43	2495	1125 / 1500
BC00036	3x35+3x25/3	44-47	3030	1575 / 2100
BC00037	3x50+3x25/3	47-50	3695	2250 / 3000
BC00038	3x70+3x35/3	51-54	4565	3150 / 4200
BC00039	3x95+3x50/3	56-59	5730	4275 / 5700
BC00040	3x120+3x70/3	59-62	6800	5400 / 7200
BC00041	3x150+3x70/3	62-65	7830	6750 / 9000
BC00042	3x185+3x95/3	69-72	9525	8325 / 11100
BC00043	3x240+3x120/3	73-76	11785	10800 / 14400

BiTcrane[®](N)TSCGEWOEU-SR 12/20 kV

Cat. no.	n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force *) static/dynamic [N]
BC00050	3x25+3x25/3	48-51	3280	1125 / 1500
BC00051	3x35+3x25/3	53-56	3935	1575 / 2100
BC00052	3x50+3x25/3	56-59	4665	2250 / 3000
BC00053	3x70+3x35/3	59-62	5595	3150 / 4200
BC00054	3x95+3x50/3	65-68	6880	4275 / 5700
BC00055	3x120+3x70/3	68-71	8015	5400 / 7200
BC00056	3x150+3x70/3	71-74	9100	6750 / 9000
BC00057	3x185+3x95/3	78-81	10925	8325 / 11100
BC00058	3x240+3x120/3	82-85	13260	10800 / 14400

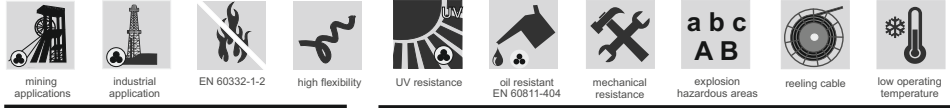
Cable Factory BITNER reserves the right to modify specifications without prior notification.

*) please contact us if higher loads are required.

Note: on customer's request other cross sections or number of cores can be produced

BiTcrane®(N)TSCGEWOEU-SR FO

Medium voltage, flexible power supply cable with fiber optic suitable for reeling applications and based on DIN VDE 0250-813



Technical data:

Thermal parameters:

Ambient temperature:
for fixed installation: -50 °C to 80 °C
reeling operation: -30 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C
De-rating factors: acc. to DIN VDE 0298-4

Mechanical parameters:

Max. tensile load on conductor: 20 N/mm²
Torsional stresses: ± 25 °/m
Bending radius: acc. to DIN VDE 0298-3
Min. distance with S-type directional changes: 20 x O.D.
Reeling speed: up to 180 m/min

Design:

Main cores

Conductor: plain copper wires, finely stranded, class 5 acc. to IEC 60228
Insulation:
- inner semi-conductive stress control layer
- EPR compound with improved electrical and mechanical characteristics based on DIN VDE 0207-20
- outer semi-conductive insulation shield layer

Ground conductor

Conductor: plain copper wires, finely stranded, class 5 acc. to IEC 60228, semi-conductive layer

Optical fiber element:

12 / 2x12 fibers in G62.5/125, G50/125 or E9/125

Core arrangement:

three main cores laid-up with optimised lay length, optical fiber element and ground conductor cross-section split into two parts in the outer interstices

Inner sheath:

heavy duty rubber compound, quality 5GM5 based on DIN VDE 0207-21, filling the interstices, colour: red braid made of synthetic threads, placed between inseparably bonded inner and outer sheath, acting as an anti-twist protection

Reinforcement:

heavy duty rubber compound, quality 5GM5 acc. to DIN VDE 0207-21; colour: red; inkjet marking

Outer sheath:

*other designs, e.g. with cradle separator or according to application available on request

Application:

Flexible reeling cable for power supply with cable guidance in different levels, e.g. reel axis in travel direction. Especially for high and extreme mechanical stress. For connection of large material handling machines in open pit mines, different crane types in harbours, shipyards, stacker/reclaimers in stockyards and other industrial areas.

Chemical parameters:

Resistance to oil: DIN EN / IEC 60811-404
Behaviour in case of fire: DIN EN / IEC 60332-1-2
Weather resistance: unrestricted use indoors, outdoors, resistance to ozone UV and moisture

Electrical parameters:

Rated voltage U ₀ /U [kV]		3.6/6	6/10	8.7/15	12/20	14/25	18/30
Maximum permissible operating voltage in AC systems U ₀ /U [kV]		4.2/7.2	6.9/12	10.4/18	13.9/24	17.3/30	20.8/36
Maximum permissible operating voltage in DC systems U ₀ /U [kV]		5.4/10.8	9/18	13.5/27	18/36	22.5/45	27/54
AC test voltage acc. to DIN VDE 0250-813 [kV]		11	17	24	29	36	43
Current-carrying capacity		acc. to DIN VDE 0298-4					
De-rating factors		acc. to DIN VDE 0298-4					

BiTcrane® (N)TSCGEWOEU-SR FO

Medium voltage, flexible power supply cable with fiber optic suitable for reeling applications and based on DIN VDE 0250-813

BiTcrane® (N)TSCGEWOEU-SR 12FO 3.6/6 kV

n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ¹ static/dynamic [N]
3x50+2x25/2+12FO	47-50	3595	2250 / 3000
3x70+2x35/2+12FO	50-53	4475	3150 / 4200
3x95+2x50/2+12FO	55-58	5620	4275 / 5700
3x120+2x70/2+12FO	60-63	6825	5400 / 7200
3x150+2x70/2+12FO	61-64	7685	6750 / 9000
3x185+2x95/2+12FO	68-71	9415	8325 / 11100
3x240+2x120/2+12FO	78-80	12415	10800 / 14400

BiTcrane® (N)TSCGEWOEU-SR 12FO 6/10 kV

n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ¹ static/dynamic [N]
3x35+2x25/2+12FO	44-47	3050	1575 / 2100
3x50+2x25/2+12FO	47-50	3710	2250 / 3000
3x70+2x35/2+12FO	51-54	4610	3150 / 4200
3x95+2x50/2+12FO	56-59	5755	4275 / 5700
3x120+2x70/2+12FO	59-62	6815	5400 / 7200
3x150+2x70/2+12FO	62-65	7840	6750 / 9000
3x185+2x95/2+12FO	71-74	9910	8325 / 11100
3x240+2x120/2+12FO	77-80	12480	10800 / 14400

BiTcrane® (N)TSCGEWOEU-SR 12FO 8.7/15 kV

n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ¹ static/dynamic [N]
3x35+2x25/2+12FO	44-47	3050	1575 / 2100
3x50+2x25/2+12FO	47-50	3710	2250 / 3000
3x70+2x35/2+12FO	51-54	4610	3150 / 4200
3x95+2x50/2+12FO	56-59	5755	4275 / 5700
3x120+2x70/2+12FO	59-62	6815	5400 / 7200
3x150+2x70/2+12FO	62-65	7840	6750 / 9000
3x185+2x95/2+12FO	71-74	9910	8325 / 11100
3x240+2x120/2+12FO	77-80	12480	10800 / 14400

BiTcrane® (N)TSCGEWOEU-SR 12FO 12/20 kV

n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ¹ static/dynamic [N]
3x25+2x25/2+12FO	48-51	3295	1125 / 1500
3x35+2x25/2+12FO	53-56	3950	1575 / 2100
3x50+2x25/2+12FO	56-59	4685	2250 / 3000
3x70+2x35/2+12FO	60-63	5635	3150 / 4200
3x95+2x50/2+12FO	65-68	6915	4275 / 5700
3x120+2x70/2+12FO	68-71	8035	5400 / 7200
3x150+2x70/2+12FO	71-74	9125	6750 / 9000
3x185+2x95/2+12FO	78-81	10995	8325 / 11100
3x240+2x120/2+12FO	82-85	13360	10800 / 14400

BiTcrane[®](N)TSCGEWOU-SR FO

Medium voltage, flexible power supply cable with fiber optic suitable for reeling applications and based on DIN VDE 0250-813

BiTcrane[®](N)TSCGEWOU-SR 12FO 14/25 kV

n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ¹⁾ static/dynamic [N]
3x25+2x25/2+12FO	54-57	3925	1125 / 1500
3x35+2x25/2+12FO	57-60	4455	1575 / 2100
3x50+2x25/2+12FO	60-63	5220	2250 / 3000
3x70+2x35/2+12FO	65-68	6440	3150 / 4200
3x95+2x50/2+12FO	69-72	7525	4275 / 5700

BiTcrane[®](N)TSCGEWOU-SR 12FO 18/30 kV

n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ¹⁾ static/dynamic [N]
3x25+2x25/2+12FO	57-60	4340	1125 / 1500
3x35+2x25/2+12FO	60-63	4895	1575 / 2100
3x50+2x25/2+12FO	66-69	5915	2250 / 3000
3x70+2x35/2+12FO	69-72	6930	3150 / 4200

BiTcrane[®](N)TSCGEWOU-SR 2x12FO 3.6/6 kV

n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ¹⁾ static/dynamic [N]
3x50+2x25/2+2x12FO	49-52	3790	2250 / 3000
3x70+2x35/2+2x12FO	50-53	4455	3150 / 4200
3x95+2x50/2+2x12FO	55-58	5595	4275 / 5700
3x120+2x70/2+12x12FO	59-62	6805	5400 / 7200
3x150+2x70/2+2x12FO	61-64	7660	6750 / 9000
3x185+2x95/2+2x12FO	68-71	9385	8325 / 11100
3x240+2x120/2+2x12FO	77-80	12395	10800 / 14400

BiTcrane[®](N)TSCGEWOU-SR 2x12FO 6/10 kV

n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ¹⁾ static/dynamic [N]
3x50+2x25/2+2x12FO	47-50	3660	2250 / 3000
3x70+2x35/2+2x12FO	51-54	4545	3150 / 4200
3x95+2x50/2+2x12FO	56-59	5695	4275 / 5700
3x120+2x70/2+2x12FO	59-62	6750	5400 / 7200
3x150+2x70/2+2x12FO	62-65	7775	6750 / 9000
3x185+2x95/2+2x12FO	71-74	9830	8325 / 11100
3x240+2x120/2+2x12FO	77-80	12395	10800 / 14400

BiTcrane[®](N)TSCGEWOU-SR 2x12FO 8.7/15 kV

n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ¹⁾ static/dynamic [N]
3x50+2x25/2+2x12FO	47-50	3660	2250 / 3000
3x70+2x35/2+2x12FO	51-54	4545	3150 / 4200
3x95+2x50/2+2x12FO	56-59	5695	4275 / 5700
3x120+2x70/2+2x12FO	59-62	6750	5400 / 7200
3x150+2x70/2+2x12FO	62-65	7775	6750 / 9000
3x185+2x95/2+2x12FO	71-74	9830	8325 / 11100
3x240+2x120/2+2x12FO	77-80	12395	10800 / 14400

BiTcrane[®] (N)TSCGEWOEU-SR FO

Medium voltage, flexible power supply cable with fiber optic suitable for reeling applications and based on DIN VDE 0250-813

BiTcrane[®] (N)TSCGEWOEU-SR 2x12FO 12/20 kV

n x mm ²	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ^{*)} static/dynamic [N]
3x25+2x25/2+2x12FO	48-51	3245	1125 / 1500
3x35+2x25/2+2x12FO	53-56	3895	1575 / 2100
3x50+2x25/2+2x12FO	56-59	4630	2250 / 3000
3x70+2x35/2+2x12FO	59-62	5580	3150 / 4200
3x95+2x50/2+2x12FO	65-68	6850	4275 / 5700
3x120+2x70/2+2x12FO	68-71	7960	5400 / 7200
3x150+2x70/2+2x12FO	71-74	9045	6750 / 9000
3x185+2x95/2+2x12FO	78-81	10915	8325 / 11100
3x240+2x120/2+2x12FO	82-84	13275	10800 / 14400

Cable Factory BITNER reserves the right to modify specifications without prior notification.

*) please contact us if higher loads are required.

Note: on customer's request other cross sections or number of cores can be produced

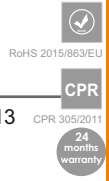
Regulations of the individual fibre types:

Fiber optic type	Standard	Colour code
Single-mode optical fiber E9/125	ITU-T G.652 D	acc. to ANSI/TIA/EIA 598-A
Multimode fiber G50/125 (OM2-OM4)	ITU-T G.651	
Multimode fiber G62,5/125		

Typical attenuation values:

Fiber optic type	Description	Value (max.)	Unit
Single-mode optical fiber E9/125	attenuation at 1310 nm	0,5	dB/km
Single-mode optical fiber E9/125	attenuation at 1550 nm	0,3	dB/km
Multimode fiber G50/125	attenuation at 850 nm	3,0	dB/km
Multimode fiber G50/125	attenuation at 1300 nm	1,0	dB/km
Multimode fiber G62,5/125	attenuation at 850 nm	3,5	dB/km
Multimode fiber G62,5/125	attenuation at 1300 nm	1,5	dB/km

BITcrane® (N)TSCGEW0EU-SR PLUS



Medium voltage, flexible power supply cable for reeling applications based on DIN VDE 0250-813



Technical data:

Thermal parameters:

Ambient temperature:
for fixed installation: -50 °C to 80 °C
reeling operation: -35 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C
De-rating factors: acc. to DIN VDE 0298-4

Mechanical parameters:

Max. tensile load on conductor: 20 N/mm²
Torsional stresses: ± 25 °/m
Bending radius: acc. to DIN VDE 0298-3
Min. distance with S-type directional changes: 20 x O.D.
Reeling speed: up to 240 m/min

Design:

Main cores Conductors: plain copper wires, finely stranded, class 5 acc. to IEC 60228

Insulation: - inner semi-conductive stress control layer
- EPR compound with improved electrical and mechanical characteristics based on DIN VDE 0207-20
- outer semi-conductive insulation shield layer

Ground conductor Conductor: plain copper wires, finely stranded, class 5 acc. to IEC 60228, semi-conductive layer

Core arrangement: three main cores laid up with optimised lay length, ground conductor crss-section split into 3 parts in the outer interstices

Inner sheath: heavy duty rubber compound, quality 5GM5 acc. to DIN VDE 0207-21, filling the interstices, colour: red

Reinforcement: braid made of synthetic threads, placed between inseparably bonded inner and outer sheath, acting as an anti-twist protection

Outer sheath: heavy duty rubber compound, quality 5GM5 acc. to DIN VDE 0207-21; colour: red; inkjet marking

*other designs, e.g. with cradle separator or according to application available on request

Application:

Flexible reeling cable for power supply with cable guidance in different levels, e.g. reel axis in travel direction. Especially for high and extreme mechanical stress. For connection of large material handling machines in open pit mines, different crane types in harbours, shipyards, stacker/reclaimers in stockyards and other industrial areas.

Chemical parameters:

Resistance to oil: DIN EN / IEC 60811-404
Behaviour in case of fire: DIN EN / IEC 60332-1-2
Weather resistance: unrestricted use indoors, outdoors, resistance to ozone UV and moisture

Electrical parameters:

Rated voltage U ₀ /U [kV]		3.6/6	6/10	8.7/15	12/20
Maximum permissible operating voltage in AC systems U ₀ /U [kV]		4.2/7.2	6.9/12	10.4/18	13.9/24
Maximum permissible operating voltage in DC systems U ₀ /U [kV]		5.4/10.8	9/18	13.5/27	18/36
AC. test voltage acc. to DIN VDE 0250-813 [kV]		11	17	24	29
Current-carrying capacities in amperes	acc. to DIN VDE 0298-4 table 15				
De-rating factors	acc. to DIN VDE 0298-4				

BiTcrane® (N)TSCGEWOEU-SR PLUS

Medium voltage, flexible power supply cable for reeling applications based on DIN VDE 0250-813

BiTcrane® (N)TSCGEWOEU-SR PLUS 3.6/6 kV

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ^{*)} static/dynamic [N]
BC00065	3x25+3x25/3	39-42	2420	1125 / 1500
BC00066	3x35+3x25/3	43-46	2950	1575 / 2100
BC00067	3x50+3x25/3	46-49	3610	2250 / 3000
BC00068	3x70+3x35/3	50-53	4475	3150 / 4200
BC00069	3x95+3x50/3	55-58	5630	4275 / 5700
BC00070	3x120+3x70/3	58-61	6675	5400 / 7200
BC00071	3x150+3x70/3	61-64	7710	6750 / 9000
BC00072	3x185+3x95/3	68-71	9400	8325 / 11100
BC00073	3x240+3x120/3	72-75	11640	10800 / 14400

BiTcrane® (N)TSCGEWOEU-SR PLUS 6/10 kV

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ^{*)} static/dynamic [N]
BC00080	3x25+3x25/3	40-43	2495	1125 / 1500
BC00081	3x35+3x25/3	44-47	3030	1575 / 2100
BC00082	3x50+3x25/3	47-50	3695	2250 / 3000
BC00083	3x70+3x35/3	51-54	4565	3150 / 4200
BC00084	3x95+3x50/3	56-59	5730	4275 / 5700
BC00085	3x120+3x70/3	59-62	6800	5400 / 7200
BC00086	3x150+3x70/3	62-65	7830	6750 / 9000
BC00087	3x185+3x95/3	69-72	9525	8325 / 11100
BC00088	3x240+3x120/3	73-76	11780	10800 / 14400

BiTcrane® (N)TSCGEWOEU-SR PLUS 8.7/15 kV

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ^{*)} static/dynamic [N]
BC00095	3x25+3x25/3	40-43	2495	1125 / 1500
BC00096	3x35+3x25/3	44-47	3030	1575 / 2100
BC00097	3x50+3x25/3	47-50	3695	2250 / 3000
BC00098	3x70+3x35/3	51-54	4565	3150 / 4200
BC00099	3x95+3x50/3	56-59	5730	4275 / 5700
BC00100	3x120+3x70/3	59-62	6800	5400 / 7200
BC00101	3x150+3x70/3	62-65	7830	6750 / 9000
BC00102	3x185+3x95/3	69-72	9525	8325 / 11100
BC00103	3x240+3x120/3	73-76	11780	10800 / 14400

BiTcrane® (N)TSCGEWOEU-SR PLUS 12/20 kV

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]	Permissible tensile force ^{*)} static/dynamic [N]
BC00110	3x25+3x25/3	48-51	3280	1125 / 1500
BC00111	3x35+3x25/3	53-56	3935	1575 / 2100
BC00112	3x50+3x25/3	56-59	4665	2250 / 3000
BC00113	3x70+3x35/3	59-62	5595	3150 / 4200
BC00114	3x95+3x50/3	65-68	6880	4275 / 5700
BC00115	3x120+3x70/3	68-71	8015	5400 / 7200
BC00116	3x150+3x70/3	71-74	9100	6750 / 9000
BC00117	3x185+3x95/3	78-81	10925	8325 / 11100
BC00118	3x240+3x120/3	82-85	13260	10800 / 14400

Cable Factory BITNER reserves the right to modify specifications without prior notification.
*) please contact us if higher loads are required.

Note: on customer's request other cross sections or number of cores can be produced

Chapter XII

Mining cables

BiTmining®NSSHOEU	394
BiTmining®NSSHCOEU	398
BiTmining®REELPUR HF	400
BiTmining®(N)3GHSSYCY	401
BiTmining®(N)3GHSSHCH	403
BiTfiber®MINING FO 2 x 12 .../125	405
BiTmining®(N)TSCGEWOEU-F	406
BiTmining®NTSCGEWOEU-W .../3	409
BiTmining®NTSCGEWOEU-W .../3E	412
BiTmining®(N)TSCGEWOEU-TR	415
BiTmining®(N)TSKCGECWOEU-CH	418
BiTmining®(N)TSKCGECWOEU-FN	420
BiTmining®NTMCGCWOEU	422
BiTflex®(N)TMCGC11Y	425

BiTmining[®] NSSHOEU



Mining cables

Heavy duty rubber cable acc. to DIN VDE 0250-812



Technical data:

Thermal parameters:

Ambient temperature:
 fixed installation: -40 °C to 80 °C
 free movement: -30 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 200 °C

Mechanical parameters:

Max. tensile load on conductor: 15 N/mm²
Bending radius:
 fixed installation: 4 x outer - Ø
 free movement: 5 x outer - Ø

Design:

Main cores:
Conductors: tinned copper wires, finely stranded, acc. to IEC 60228 class 5

Insulation: EPR compound, type 3GI3 acc. to DIN VDE 0207-20, core colours: acc. to DIN VDE 0293-308

Ground conductor:
Conductor: tinned copper wires, finely stranded, acc. to IEC 60228 class 5

Insulation: EPR compound, type 3GI3 acc. to DIN VDE 0207-20, core colours: green-yellow

Inner sheath: synthetic rubber compound, type GM1b acc. to DIN VDE 0207-21, filling the interstices

Outer sheath: heavy duty rubber compound, type 5GM5 acc. to DIN VDE 0207-21, colour: yellow, inkjet marking

Application:

For the connection of mobile equipment and machines under very high mechanical loads in dry and damp areas, outdoors and in explosion hazard areas. Cables meet the requirements of DIN EN 50628: Erection of electrical installations in underground mines, DIN VDE 0168: Erection of electrical installation in open-cast mines, quarries and similar works and DIN VDE 0298-3: Application of cables and cords in power installations – Guide to use of non-harmonized low voltage cables.

Chemical parameters:

Resistance to oil: DIN EN / IEC 60811-404
 Behaviour in case of fire: DIN EN / IEC 60332-1-2
 Weather resistance: unrestricted use indoors, outdoors, resistance to ozone UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]	0.6/1 kV
Maximum permissible operating voltage $U_{0,max}$ in AC systems [kV]:	0.7/1.2 kV
Maximum permissible operating voltage $U_{s,max}$ in DC systems [kV]:	0.9/1.8 kV
AC. test voltage acc. to DIN VDE 0250-812:	
- main cores:	3 kV
- control cores:	2 kV
Current-carrying capacities in amperes acc to:	DIN VDE 0298-4 table 15 DIN EN 50628
De-rating factors acc. to:	DIN VDE 0298-4

BiTmining[®]NSSHOEU

Heavy duty rubber cable acc. to DIN VDE 0250-812

BiTmining[®]NSSHOEU-O

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP1400	1x1,5	6-9	55
IP1401	1x2,5	7-10	75
IP1402	1x4,0	8-11	95
IP1403	1x6,0	8-11	119
IP1404	1x10	10-13	175
IP1405	1x16	11-14	235
IP1406	1x25	13-16	375
IP1407	1x35	14-17	462
IP1408	1x50	16-19	627
IP1409	1x70	18-21	857
IP1410	1x95	21-24	1095
IP1411	1x120	22-25	1370
IP1412	1x150	25-28	1665
IP1413	1x185	29-32	2095
IP1414	1x240	31-34	2647

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP1415	1x300	34-37	3352
IP1487	1x400	38-41	4170
IP1416	2x1,5	12-15	172
IP1417	2x2,5	13-16	232
IP1418	2x4,0	15-18	309
IP1419	2x6,0	16-19	374
IP1420	2x10	19-22	560
IP1421	2x16	21-24	692
IP1422	2x25	26-29	1130
IP1423	2x35	28-31	1370
IP1424	2x50	32-35	1873
IP1425	2x70	36-39	2509
IP1426	2x95	41-44	3255
IP1427	2x120	48-51	4261

BiTmining[®]NSSHOEU-J

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP1428	3x1,5	12-15	195
IP1429	3x2,5	14-17	269
IP1430	3x4	16-19	390
IP1431	3x6	18-21	475
IP1432	3x10	21-24	739
IP1433	3x16	23-26	948
IP1434	3x25	28-31	1456
IP1435	3x35	32-35	1873
IP1436	3x50	38-41	2621
IP1437	3x70	41-44	3405
IP1438	3x95	48-51	4505
IP1439	3x120	50-53	5370
IP1440	3x150	56-59	6513
IP1441	3x185	63-66	8187
IP1445	4x1,5	13-16	229
IP1446	4x2,5	16-19	363
IP1447	4x4	18-21	464
IP1448	4x6	19-22	572
IP1449	4x10	23-26	884
IP1450	4x16	26-29	1221
IP1451	4x25	32-35	1895
IP1452	4x35	35-38	2308
IP1453	4x50	41-44	3235
IP1454	4x70	45-48	4240
IP1455	4x95	52-55	5602
IP1456	4x120	57-60	6949
IP1457	4x150	62-65	8423
IP1458	4x185	71-74	10537
IP1459	5x1,5	14-17	266
IP1460	5x2,5	17-20	423
IP1461	5x4	19-22	545
IP1462	5x6	21-24	715
IP1463	5x10	25-28	1053
IP1464	5x16	28-31	1459
IP1465	5x25	35-38	2271
IP1466	5x35	39-42	2901
IP1467	5x50	44-47	3901
IP1468	5x70	51-54	5345

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP3989	5x95	57-60	6787
IP1469	6x1,5	16-19	352
IP1470	6x2,5	18-21	493
IP1471	6x4,0	21-24	681
IP1472	6x6,0	23-26	845
IP1473	6x10	27-30	1255
IP1474	6x16	31-34	1741
IP1475	6x25	38-41	2716
IP1476	6x35	42-45	3466
IP1477	6x50	50-53	4884
IP1478	7x1,5	17-20	396
IP1479	7x2,5	19-22	558
IP1480	7x4	23-26	772
IP1481	7x6	24-27	962
IP1482	7x10	30-33	1503
IP1483	7x16	34-37	2101
IP1484	7x25	42-45	3246
IP1485	7x35	45-48	3975
IP1486	7x50	53-56	5604
IP1489	10x1,5	20-23	538
IP1490	10x2,5	23-26	763
IP1491	12x1,5	21-24	592
IP1492	12x2,5	24-27	850
IP1493	12x4,0	28-31	1151
IP3990	14x1,5	21-24	617
IP1494	14x2,5	25-28	947
IP3991	14x4,0	28-31	1259
IP3992	16x1,5	22-25	684
IP4000	18x1,5	24-27	778
IP4001	18x2,5	28-31	1277
IP3993	19x1,5	25-28	860
IP4003	19x2,5	30-33	1318
IP3994	21x1,5	27-30	961
IP3995	24x1,5	29-32	1136
IP4004	24x2,5	35-38	1758
IP3996	27x1,5	30-33	1222
IP3997	37x1,5	32-35	1433
IP3998	50x1,5	36-39	1898
IP3999	50x2,5	44-47	2980

BiTmining[®]NSSHOEU

Heavy duty rubber cable acc. to DIN VDE 0250-812

BiTmining[®]NSSHOEU.../3 protective conductor symmetrically split in the interstices

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP3980	3x25+3x16/3	29-32	1661
IP3981	3x35+3x16/3	31-34	1922
IP3982	3x50+3x25/3	36-39	2744
IP3983	3x70+3x35/3	41-44	3774
IP3984	3x120+3x70/3	49-52	5754
IP3985	3x150+3x70/3	56-59	7114
IP3986	3x185+3x95/3	62-65	8717
IP3987	3x240+3x120/3	68-71	11279

BiTmining[®]NSSHOEU.../3E protective conductor symmetrically split over the insulated conductors, design acc. to DIN VDE 0250-1

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP4030	3x2,5+3x2,5/3E	15-18	342
IP4031	3x4+3x4/3E	18-21	475
IP4032	3x6+3x6/3E	19-22	584
IP4033	3x10+3x10/3E	23-26	922
IP4034	3x16+3x16/3E	25-28	1199
IP4035	3x25+3x16/3E	31-34	1725
IP4036	3x35+3x16/3E	33-36	2051
IP4037	3x50+3x25/3E	38-41	2925
IP4038	3x70+3x35/3E	44-47	3928
IP4039	3x95+3x50/3E	49-52	5067
IP4040	3x120+3x70/3E	54-57	6377
IP4041	3x150+3x70/3E	59-62	7549
IP4060	3x185+3x95/3E	67-70	9560

BiTmining[®]NSSHOEU.../3E+ST protective conductor symmetrically split over the insulated conductors and ST conductors

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP4042	3x2,5+3x2,5/3E+3x1,5ST	20-23	572
IP4043	3x4+3x4/3E+3x1,5ST	20-23	589
IP4044	3x6+3x6/3E+3x1,5ST	20-23	642
IP4045	3x10+3x10/3E+3x2,5ST	23-26	975
IP4046	3x16+3x16/3E+3x2,5ST	25-28	1252
IP4047	3x25+3x16/3E+3x2,5ST	31-34	1791
IP4048	3x35+3x16/3E+3x2,5ST	33-36	2100
IP4049	3x50+3x25/3E+3x2,5ST	38-41	2948
IP4050	3x70+3x35/3E+3x2,5ST	44-47	3976
IP4051	3x95+3x50/3E+3x2,5ST	49-52	5135
IP4052	3x120+3x70/3E+3x2,5ST	54-57	6376
IP4053	3x150+3x70/3E+3x2,5ST	59-62	7538
IP4058	3x150+3x95/3E+3x2,5ST	60-63	7816
IP4059	3x185+3x95/3E+3x2,5ST	66-69	9543

BiTmining[®]NSSHOEU

Heavy duty rubber cable acc. to DIN VDE 0250-812

BiTmining[®]NSSHOEU.../KON concentric protective conductor between inner and outer sheath

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP3963	3x1,5/1,5 KON	14-17	239
IP3964	3x1,5/2,5 KON	14-17	249
IP3965	3x2,5/2,5 KON	15-18	325
IP3966	3x4/4 KON	19-22	473
IP3967	3x6/6 KON	20-23	583
IP3968	3x10/10 KON	24-27	899
IP3969	3x16/16 KON	26-29	1194
IP3970	4x4/4 KON	19-22	525
IP3971	4x6/6 KON	21-24	667
IP3972	4x10/10 KON	24-27	1027
IP3973	4x16/16 KON	27-30	1427
IP3974	5x2,5/2,5 KON	17-20	441
IP3975	5x4/4 KON	18-21	574
IP3976	5x6/6 KON	20-23	764
IP3977	7x1,5/1,5 KON	16-19	406
IP3978	12x1,5/1,5 KON	17-20	559

Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

BiTmining[®] NSSHCOEU



Mining cables

Heavy duty, screened rubber cable for frequency converters, acc. to DIN VDE 0250-812



Technical data:

Thermal parameters:

Ambient temperature:

fixed installation: -40 °C to 80 °C
free movement: -30 °C to 80 °C

Max. permissible conductor temp.: 90 °C

Max. short-circuit temp. at conductor: 200 °C

Mechanical parameters:

Max. tensile load on conductor: 15 N/mm²

Bending radius:

fixed installation: 4 x outer - Ø
free movement: 5 x outer - Ø

Design:

Main cores:

Conductors:

tinned copper wires, finely stranded, acc. to IEC 60228 class 5

Insulation:

EPR compound, type 3GI3 acc. to DIN VDE 0207-20, core colours: natural with black digits

Ground conductor:

Conductor:

tinned copper wires, finely stranded, acc. to IEC 60228 class 5

Insulation:

EPR compound, type 3GI3 acc. to DIN VDE 0207-20, core colours: green-yellow

Screen:

Inner sheath:

tinned copper wire braid
synthetic rubber compound, type GM1b acc. to DIN VDE 0207-21, filling the interstices

Outer sheath:

heavy duty rubber compound, type 5GM5 acc. to DIN VDE 0207-21, colour: yellow, inkjet marking

Application:

Motor power supply cables for frequency converter controlled drives on mobile equipment and machines under very high mechanical loads in dry and damp areas, outdoors and in explosion hazard areas. They meet the requirements of DIN EN 50628: Erection of electrical installations in underground mines, DIN VDE 0168: Erection of electrical installation in open-cast mines, quarries and similar works and DIN VDE 0298-3: Application of cables and cords in power installations – Guide to use of non-harmonized low voltage cables.

Chemical parameters:

Resistance to oil:	DIN EN / IEC 60811-404
Behaviour in case of fire:	DIN EN / IEC 60332-1-2
Weather resistance:	unrestricted use indoors, outdoors, resistance to ozone UV and moisture

Electrical parameters:

Rated voltage U_r/U [kV]	0.6/1 kV
Maximum permissible operating voltage $U_{0,max}$ in AC systems [kV]:	0.7/1.2 kV
Maximum permissible operating voltage $U_{0,max}$ in DC systems [kV]:	0.9/1.8 kV
AC test voltage acc. to DIN VDE 0250-812: - main cores:	3 kV
Current-carrying capacities in amperes acc to:	DIN VDE 0298-4 table 15 DIN EN 50628
De-rating factors acc. to:	DIN VDE 0298-4

BiTmining[®] NSSHCOEU

Heavy duty, screened rubber cable for frequency converters, acc. to DIN VDE 0250-812

Various constructions as defined in DIN VDE 0250-812: protective conductor cross-section symmetrically split in three parts in the outer interstices or defined cross-section in the outer interstices

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
IP4200	3x16+3x2,5	25-28	1329
IP4201	3x25+3x4	30-33	1961
IP4202	3x35+3x6	32-35	2336
IP4209	3x35+3x16/3	32-35	2336
IP4203	3x50+3x25/3	39-42	3226
IP4204	3x70+3x35/3	44-47	4383
IP4210	3x95+3x35/3	48-51	5469
IP4205	3x95+3x50/3	49-52	5322
IP4206	3x120+3x70/3	54-57	6935
IP4207	3x150+3x70/3	59-62	8346
IP4208	3x185+3x95/3	66-69	10253

Cable Factory BITNER reserves the right to modify the specifications without prior notice
Note: on customer's request other cross sections or number of cores can be produced

BiTmining® REELPUR HF

RoHS 2015/863/EU



LVD 2014/35/EU

CPR

CPR 305/2011

24 months warranty

Power and control cable with increased mechanical resistance, halogen-free, rated voltage 0.6/1 kV



industrial application



internal application



external application



halogen-free EN 60754



low smoke emission EN 61034



EN 60332-1-2



high flexibility



UV resistance



oil resistant EN 60811-404



mechanical resistance

Technical data:

Thermal parameters:

Ambient temperature:

fixed installation: -40 °C to 80 °C

flexible operation: -30 °C to 80 °C

Max. permissible conductor temp.: 90 °C

Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Max. tensile load per conductor: 20 N/mm²

Bending radius:

fixed installation: ≥ 6 x outer - Ø

reeling application: ≥ 8 x outer - Ø

Design:

Conductors:

bare, annealed copper conductors, multi-stranded class 5 acc. to EN 60228

Insulation:

XLPE acc. to IEC 60502-1

Core identification:

black, brown, grey, 3 x green-yellow; pilot cores: white and blue

Core arrangement:

three main conductors laid up with protective-earth conductors around strain-relief element with aramide, pilot cores in the outer interstices
special PUR compound
PUR, colour: yellow (dull)

Inner sheath:

Outer sheath:

Application:

Halogen-free cable used to supply power to mobile and portable devices in conditions of mechanical stress and in places where cable is often reeled and unreel. Recommended for devices such as cable reels, hoisting devices, conveyor facilities, mobile motors. Suitable for installations in places exposed to high mechanical stress in dry, humid and wet rooms as well as for outdoor use.

Chemical parameters:

Resistance to oil:

DIN EN / IEC 60811-404

Behaviour in case of fire:

DIN EN / IEC 60332-1-2

Weather resistance:

unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]

0.6/1 kV

Maximum permissible operating voltage $U_{0,max}$ in AC systems [kV]:

0.7/1.2

Maximum permissible operating voltage $U_{0,max}$ in DC systems [kV]:

0.9/1.8

AC. test voltage acc. to DIN VDE 0250-813 [kV]:

2.5

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
BM1345	3x25+3G6+2x1x1	23,0-24,5	1210
BM1346	3x35+3G6+2x1x1,5	27,0-28,5	1570
BM1347	3x50+3G10+2x1x1,5	31,5-33,0	2270
BM1348	3x70+3G16+2x1x1,5	35,5-37,5	3110
BM1349	3x95+3G16+2x1x1,5	40,0-42,5	3910
BM1350	3x120+3G25+2x1x1,5	44,0-46,5	4940
BM1351	3x150+3G25+2x1x1,5	48,5-52,0	5960

Cable Factory BITNER reserves the right to modify specifications without prior notification.

Note: on customer's request other cross sections or number of cores can be produced

BiTmining®(N)3GHSSYCY

Rubber insulated and PVC sheathed feeder cable



Technical data:

Thermal parameters:

Permissible temperature on cable surface:

fixed installation: -40 °C to 80 °C
flexible operation: -25 °C to 80 °C
Max. conductor temperature: 90 °C
Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Max. tensile load per conductor: 15 N/mm²
Bending radius: acc. to DIN VDE 0298-3
(during installation 5 x D)

Design:

Main cores:

Conductors: plain copper wires, finely stranded, class 5 acc. to IEC 60228

Insulation:

- inner semi-conductive stress control layer
- EPR compound, lead free with improved electrical and mechanical characteristics based on DIN VDE 0207-20
- outer semi-conductive insulation shield layer cross-section symmetrically split and distributed over insulation of three power cores, plain copper wires acc. to DIN VDE 0250-1

Protective conductor:

Pilot cores

Conductor: plain copper wires, finely stranded, class 5 acc. to IEC 60228

Insulation:

special EPR compound, lead free, with improved electrical and mechanical characteristics based on DIN VDE 0207-20
three screened main cores laid-up with the control cores in the interstices

Stranding:

Bedding:

Inner sheath 1: PVC compound type DMV6 acc. to DIN VDE 0276-603
UL: concentrical monitoring conductor: plain copper wires, DC resistance $\leq 3.30 \Omega/\text{km}$ at 20 °C

Inner sheath 2:

Armour: PVC compound type DMV6 acc. to DIN VDE 0276-603
Outer sheath: PVC compound type DMV6 acc. to DIN VDE 0276-603, colour: red

Application:

In all mining workings e.g. tunneling, stationary and non-stationary, on gratings, planks and trays but not in mining operations and local operations.

Chemical parameters:

Behaviour in case of fire: DIN EN / IEC 60332-1-2
Weather resistance: unrestricted use indoors and mines

Electrical parameters:

Rated voltage U_0/U [kV]	6/10	12/20
Max. permissible operating voltage $U_{0,max}$ in AC systems [kV]:	6.9/12	13.9/24
Max. permissible operating voltage $U_{0,max}$ in DC systems [kV]:	9/18	18/36
Tests: - General requirements	DIN VDE 0250-1 / DIN EN 50628	
- Electrical tests:	DIN VDE 0250-605	
Current-carrying capacities [A]	DIN EN 50628	
De-rating factors		

BiTmining[®] (N)3GHSSYCY

Rubber insulated and PVC sheathed feeder cable

BiTmining[®] (N)3GHSSYCY 6/10 kV

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
BM1315	3x25 + 3x16/3E + 3x2.5ST + ÜL	51-54	3935
BM1316	3x35 + 3x16/3E + 3x2.5ST + ÜL	53-56	4370
BM1317	3x50 + 3x25/3E + 3x2.5ST + ÜL	57-60	5265
BM1318	3x70 + 3x35/3E + 3x2.5ST + ÜL	60-64	6355
BM1319	3x95 + 3x50/3E + 3x2.5ST + ÜL	65-69	7640
BM1320	3x120 + 3x70/3E + 3x2.5ST + ÜL	68-72	8840

BiTmining[®] (N)3GHSSYCY 12/20 kV

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
BM1330	3x35 + 3x16/3E + 3x2.5ST + ÜL	57-60	4917
BM1331	3x50 + 3x25/3E + 3x2.5ST + ÜL	61-64	5763
BM1332	3x70 + 3x35/3E + 3x2.5ST + ÜL	65-68	6972
BM1333	3x95 + 3x50/3E + 3x2.5ST + ÜL	69-71	8238
BM1334	3x120 + 3x70/3E + 3x2.5ST + ÜL	72-75	9538

Cable Factory BITNER reserves the right to modify specifications without prior notification.

Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] (N)3GHSSHCH

Rubber insulated and halogen-free sheathed feeder cable



Technical data:

Thermal parameters:

Permissible temperature on cable surface:

fixed installation: -40 °C to 80 °C

flexible operation: -5 °C to 80 °C

Max. conductor temperature: 90 °C

Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Max. tensile load per conductor: 15 N/mm²

Bending radius: acc. to DIN VDE 0298-3
(during installation 5 x D)

Design:

Main cores:

Conductors: plain copper wires, finely stranded, class 5
acc. to IEC 60228

Insulation:

- inner semi-conductive stress control layer
- EPR compound, lead free with improved electrical and mechanical characteristics based on DIN VDE 0207-20
- outer semi-conductive insulation shield layer
cross-section symmetrically split and distributed over insulation of three power cores, plain copper wires
acc. to DIN VDE 0250-1

Protective conductor:

Pilot cores

Conductor:

plain copper wires, finely stranded, class 5
acc. to IEC 60228

Insulation:

special EPR compound, lead free, with improved electrical and mechanical characteristics based on DIN VDE 0207-20
three screened main cores laid-up with the control cores in the interstices

Stranding:

Inner sheath 1:

special halogen-free compound HM4
acc. to DIN VDE 0207-24

ÜL:

concentric monitoring conductor: plain copper wires,
DC resistance ≤ 3.30 Ω/km at 20 °C

Inner sheath 2:

special halogen-free compound HM4
acc. to DIN VDE 0207-24

Armour:

Outer sheath:

galvanized steel wire braid, covering min. 75%
special halogen-free compound HM4
acc. to DIN VDE 0207-24, colour: red

Application:

In all mining workings e.g. tunneling, stationary and non-stationary, on gratings, planks and trays but not in mining operations and local operations.

Chemical parameters:

Behaviour in case of fire:

DIN EN / IEC 60332-1-2

Weather resistance:

unrestricted use indoors and mines

Electrical parameters:

Rated voltage U_0/U [kV]	6/10
Max. permissible operating voltage $U_{b,max}$ in AC systems [kV]:	6.9/12
Max. permissible operating voltage $U_{b,max}$ in DC systems [kV]:	9/18
Tests: - General requirements	DIN VDE 0250-1 / DIN EN 50628
- Electrical tests:	DIN VDE 0250-605
Current-carrying capacities [A]	DIN EN 50628
De-rating factors	DIN EN 50628

BiTmining[®] (N)3GHSSHCH

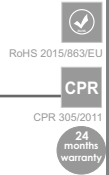
Rubber insulated and halogen-free sheathed feeder cable

BiTmining[®] (N)3GHSSHCH 6/10 kV

Cat. no.	n x mm ²	Outer diameter min. – max. [mm]	Approximate cable weight [kg/km]
BM1300	3x25 + 3x16/3E + 3x2.5ST + ÜL	51-54	3947
BM1301	3x35 + 3x16/3E + 3x2.5ST + ÜL	54-57	4385
BM1302	3x50 + 3x25/3E + 3x2.5ST + ÜL	57-60	5269
BM1303	3x70 + 3x35/3E + 3x2.5ST + ÜL	62-65	6607
BM1304	3x95 + 3x50/3E + 3x2.5ST + ÜL	67-70	7850

Cable Factory BITNER reserves the right to modify specifications without prior notification.
Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] MINING FO 2 x 12 .../125



Mining cables

Heavy duty rubber cable for optical signal and data transmission



Technical data:

Thermal parameters:

Permissible ambient temperature:
 - transportation / storage: -40 °C / 80 °C
 - free moving / festoon application: -30 °C / 80 °C

Mechanical parameters:

Bending radius: ≥ 125 mm
Max. continuous load in operation: 2000 N
Travelling speed of motor driven festoon cable trolleys: ≤ 300 m/min

Chemical parameters:

Resistance to oil: IEC 60811-404
Behaviour in case of fire: IEC 60332-1-2
Weather resistance:
 unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Regulations of the individual fiber types:

single-mode optical fiber E9/125 acc. to
 - ITU-T G.652 D - OS2 *)
 - DIN EN IEC 60793-2-50 / VDE 0888-325

graded-index 62.5/125 µm multimode fiber acc. to
 - DIN EN IEC 60793-2-10 A1-OM1 *)
 - IEEE 802.3 Gigabit Ethernet Standard
 - VDE 0888-321

graded-index 50/125 µm multimode fiber acc. to
 - DIN EN IEC 60793-2-10 A1-OM2 - OM4 *)
 - ITU-T G.651 / VDE 0888-321

fiber colour codes acc. to ANSI/TIA/EIA 598-A

Design:

Optical fiber element:

E9 design: tube 1 - yellow: 12 fiber E9/125
 tube 2 - red: 12 fiber E9/125
G62,5 design: tube 1 - blue: 12 fiber G62,5/125
 tube 2 - red: 12 fiber G62,5/125
G50 design: tube 1 - green: 12 fiber G50/125
 tube 2 - red: 12 fiber G50/125

combination of fiber types (e.g.: 12G50 + 12G62,5) on request

Synthetic strain relief elements

Jacket: thermoplastic elastomer TPE

Separating tapes

Reinforcement: braid made of high tec multifilament threads, non-hygroscopic and low shrinkage

Outer sheath: heavy duty rubber compound, quality 5GM5 acc. to DIN VDE 0207-21, colour: orange / black, inkjet marking

Application:

This rubber sheathed flexible cable BITflex[®]MINING with optical fiber elements has been developed for long distance communication network (LDN) e.g. optical PROFIBUS networks with special application requirements on mobile materials handling equipment (Spreader or Bucket Wheel Excavators) or shiftable conveyer belts in surface mining.

Fiber type	Outer diameter min. - max. [mm]	Approximate cable weight [kg/km]
2x12 E9/125	10 - 12	120
2x12 G50/125		
2x12 G62,5/125		

*) contain standard values or values at delivery. Attenuation values in the finished cable deviate
 Cable Factory BITNER reserves the right to modify specifications without prior notification.

BiTmining®(N)TSCGEWOU-F

RoHS 2015/863/EU

CPR

CPR 305/2011

24 months warranty

Mining cables

Medium voltage, flexible power supply cable for fixed installations



open-pit mining



industrial application



EN 60332-1-2



high flexibility



UV resistance



oil resistant
EN 60811-404



mechanical resistance



low operating temperature

Technical data:

Thermal parameters:

Ambient temperature:

fixed installation: -40 °C to 80 °C
flexible operation: -25 °C to 80 °C

Max. permissible conductor temp.: 90 °C

Max. short-circuit temp. at conductor: 250 °C

De-rating factors: acc. to DIN VDE 0298-4

Mechanical parameters:

Max. tensile load per conductor: 15 N/mm²

Torsional stresses: +/-100 %/m

Bending radius: acc. to DIN VDE 0298-3

Design:

Conductors:

plain copper wires, finely stranded, class 5
acc. to DIN EN/IEC 60228

Insulation:

- inner semi-conductive stress control layer
- EPR compound with improved electrical and mechanical characteristics based on DIN VDE 0207-20
- outer semi-conductive insulation shield layer

Protective conductor:

plain copper wires, finely stranded, class 5 acc. to DIN EN/IEC 60228, semi-conductive layer

Core arrangement:

three main cores laid-up with the protective conductors, symmetrically split in the interstices
synthetic rubber compound, based on type GM1b acc. to DIN VDE 0207-21, filling the interstices
heavy duty rubber compound, type 5GM5 acc. to DIN VDE 0207-21, colour: red, inkjet marking

Inner sheath:

Outer sheath:

Application:

Flexible power supply cable for fixed and semi-fixed installations used in the area of opencast technology. Typical operations are: alongside conveyor systems, connection cables for transformers, on spreaders or bucket wheel excavators with continuous slight movements like free overhang or twisting.

Chemical parameters:

Resistance to oil: DIN EN / IEC 60811-404
Behaviour in case of fire: DIN EN / IEC 60332-1-2
Weather resistance: unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]	3.6/6	6/10	8.7/15	12/20	14/25	18/30
Max. permissible operating voltage $U_{0,max}$ in AC systems [kV]:	4.2/7.2	6.9/12	10.4/18	13.9/25	17.3/30	20.8/36
Max. permissible operating voltage $U_{0,max}$ in DC systems [kV]:	5.4/10.8	9/18	13.5/27	18/36	22.5/45	27/54
AC test voltage acc. to DIN VDE 0250-813 [kV]:	11	17	24	29	36	43
Current-carrying capacities [A]:	acc. to DIN VDE 0298-4					

BiTmining[®](N)TSCGEWOU-F

Medium voltage, flexible power supply cable for fixed installations

BiTmining[®](N)TSCGEWOU-F 3.6/6 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0150	3x25+3x25/3	39-42	0,780	0,33	0,45	3,6	2488	1125
BM0151	3x25+3x50/3	47-50	0,780	0,36	0,45	3,6	3329	1125
BM0152	3x35+3x25/3	43-46	0,554	0,31	0,50	5,0	2938	1575
BM0153	3x35+3x50/3	47-50	0,554	0,33	0,50	5,0	3492	1575
BM0154	3x50+3x25/3	46-49	0,386	0,30	0,58	7,2	3548	2250
BM0155	3x50+3x50/3	47-50	0,386	0,30	0,58	7,2	3859	2250
BM0156	3x70+3x35/3	50-53	0,272	0,29	0,64	10,0	4497	3150
BM0157	3x70+3x50/3	50-53	0,272	0,29	0,64	10,0	4603	3150
BM0158	3x95+3x50/3	55-58	0,206	0,27	0,73	13,6	5540	4275
BM0159	3x120+3x70/3	58-61	0,161	0,26	0,80	17,2	6698	5400
BM0160	3x150+3x70/3	62-65	0,129	0,26	0,88	21,5	7786	6750
BM0161	3x185+3x95/3	69-72	0,106	0,25	0,94	26,5	9557	8325

BiTmining[®](N)TSCGEWOU-F 6/10 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0170	3x25+3x25/3	41-44	0,780	0,34	0,40	3,6	2658	1125
BM0171	3x25+3x50/3	46-49	0,780	0,36	0,40	3,6	3287	1125
BM0172	3x35+3x25/3	44-47	0,554	0,32	0,45	5,0	3018	1575
BM0173	3x35+3x50/3	47-50	0,554	0,34	0,45	5,0	3492	1575
BM0174	3x50+3x25/3	47-50	0,386	0,30	0,51	7,2	3635	2250
BM0175	3x50+3x50/3	47-50	0,386	0,30	0,51	7,2	3815	2250
BM0176	3x70+3x35/3	51-54	0,272	0,29	0,57	10,0	4590	3150
BM0177	3x70+3x50/3	51-54	0,272	0,29	0,57	10,0	4697	3150
BM0178	3x95+3x50/3	56-59	0,206	0,28	0,65	13,6	5790	4275
BM0179	3x120+3x70/3	59-62	0,161	0,27	0,71	17,2	6806	5400
BM0180	3x150+3x70/3	64-67	0,129	0,26	0,78	21,5	8139	6750

BiTmining[®](N)TSCGEWOU-F 8.7/15 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0185	3x25+3x25/3	41-44	0,780	0,36	0,32	3,6	2658	1125
BM0186	3x25+3x50/3	46-49	0,780	0,38	0,32	3,6	3287	1125
BM0187	3x35+3x25/3	44-47	0,554	0,34	0,36	5,0	3018	1575
BM0188	3x35+3x50/3	47-50	0,554	0,34	0,36	5,0	3492	1575
BM0189	3x50+3x25/3	47-50	0,386	0,32	0,41	7,2	3635	2250
BM0190	3x50+3x50/3	47-50	0,386	0,32	0,41	7,2	3815	2250
BM0191	3x70+3x35/3	51-54	0,272	0,31	0,45	10,0	4643	3150
BM0192	3x70+3x50/3	51-54	0,272	0,31	0,45	10,0	4743	3150
BM0193	3x95+3x50/3	56-59	0,206	0,29	0,51	13,6	5790	4275
BM0194	3x120+3x70/3	59-62	0,161	0,28	0,56	17,2	6806	5400
BM0195	3x150+3x70/3	64-67	0,129	0,28	0,60	21,5	8139	6750

BiTmining[®](N)TSCGEWOEU-F

Medium voltage, flexible power supply cable for fixed installations

BiTmining[®](N)TSCGEWOEU-F 12/20 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0200	3x25+3x25/3	49-52	0,780	0,38	0,28	3,6	3372	1125
BM0201	3x25+3x50/3	49-52	0,780	0,38	0,28	3,6	3552	1125
BM0202	3x35+3x25/3	51-54	0,554	0,36	0,31	5,0	3766	1575
BM0203	3x35+3x50/3	51-54	0,554	0,36	0,31	5,0	3946	1575
BM0204	3x50+3x25/3	56-59	0,386	0,34	0,35	7,2	4619	2250
BM0205	3x50+3x50/3	56-59	0,386	0,34	0,35	7,2	4799	2250
BM0206	3x70+3x35/3	59-62	0,272	0,32	0,38	10,0	5644	3150
BM0207	3x70+3x50/3	59-62	0,272	0,32	0,38	10,0	5750	3150
BM0208	3x95+3x50/3	65-68	0,206	0,31	0,43	13,6	6973	4275
BM0209	3x120+3x70/3	67-70	0,161	0,30	0,47	17,2	8038	5400

BiTmining[®](N)TSCGEWOEU-F 14/25 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0220	3x25+3x25/3	54-57	0,780	0,40	0,24	3,6	4023	1125
BM0221	3x25+3x50/3	54-57	0,780	0,40	0,24	3,6	4204	1125
BM0222	3x35+3x25/3	57-60	0,554	0,37	0,26	5,0	4445	1575
BM0223	3x35+3x50/3	57-60	0,554	0,37	0,26	5,0	4625	1575
BM0224	3x50+3x25/3	60-63	0,386	0,35	0,30	7,2	5158	2250
BM0225	3x50+3x50/3	60-63	0,386	0,35	0,30	7,2	5339	2250
BM0226	3x70+3x35/3	65-68	0,272	0,34	0,33	10,0	6457	3150
BM0227	3x70+3x50/3	65-68	0,272	0,34	0,33	10,0	6563	3150

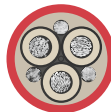
BiTmining[®](N)TSCGEWOEU-F 18/30 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0240	3x25+3x25/3	58-61	0,780	0,41	0,21	3,6	4442	1125
BM0241	3x25+3x50/3	58-61	0,780	0,41	0,21	3,6	4622	1125
BM0242	3x35+3x25/3	60-63	0,554	0,39	0,24	5,0	4879	1575
BM0243	3x35+3x50/3	60-63	0,554	0,39	0,24	5,0	5059	1575
BM0244	3x50+3x25/3	65-68	0,386	0,37	0,26	7,2	5858	2250
BM0245	3x50+3x50/3	65-68	0,386	0,37	0,26	7,2	6038	2250
BM0246	3x70+3x35/3	69-72	0,272	0,35	0,29	10,0	6956	3150
BM0247	3x70+3x50/3	69-72	0,272	0,35	0,29	10,0	7063	3150

Cable Factory BITNER reserves the right to modify specifications without prior notification.
Note: on customer's request other cross sections or number of cores can be produced

BiTmining® NTSCGEWOU-W .../3

Medium voltage, flexible power supply cable for use in water based on DIN VDE 0250-813



open-pit mining



industrial application



EN 60332-1-2



high flexibility



UV resistance



oil resistant
EN 60811-404



mechanical resistance



explosion hazardous areas

Technical data:

Thermal parameters:

Ambient temperature:

fixed installation: -40 °C to 80 °C

flexible operation: -25 °C to 80 °C

Max. permissible conductor temp.: 90 °C

Max. short-circuit temp. at conductor: 250 °C

De-rating factors: acc. to DIN VDE 0298-4

Mechanical parameters:

Max. tensile load per conductor: 15 N/mm²

Torsional stresses: +/-25 °/m

Bending radius: acc. to DIN VDE 0298-3

Design:

Main cores

Conductors: tinned copper wires, finely stranded class 5 acc. to DIN EN/IEC 60228

Insulation: - inner semi-conductive stress control layer
- EPR compound based on DIN VDE 0207-20
- outer semi-conductive insulation shield

Protective conductor:

tinned copper, finely stranded class 5 acc. to IEC 60228, semi-conductive layer power cores laid-up over a semi-conductive centre element with protective conductor split into three in the outer interstices; high performance water blocking element synthetic rubber compound based on GM1b

acc. to DIN VDE 0207-21, optimized for water application heavy duty rubber compound, type 5GM3

acc. to DIN VDE 0207-21; colour: red; inkjet marking

Inner sheath:

Outer sheath:

Application:

Power supply cable for use in open-pit mining facilities designed for operation in water and exposed to high mechanical stresses, e.g. or connection to dredgers, floating docks, submersible pumps, etc. Cables are suitable to work in sewage, salt and brackish water.

Chemical parameters:

Resistance to oil:

DIN EN/IEC 60811-404

Behaviour in case of fire:

DIN EN/IEC 60332-1-2

Water resistance:

EN-50525-2-21

Weather resistance:

unrestricted use outdoors and indoors, resistant to ozone, UV and moisture

Electrical parameters:

Rated voltage U ₀ /U [kV]		3.6/6	6/10	8.7/15	12/20	14/25	18/30
Maximum permissible operating voltage in AC systems U ₀ /U [kV]		4.2/7.2	6.9/12	10.4/18	13.9/24	17.3/30	20.8/36
Maximum permissible operating voltage in DC systems U ₀ /U [kV]		5.4/10.8	9/18	13.5/27	18/36	22.5/45	27/54
AC test voltage acc. to DIN VDE 0250-813 [kV]		11	17	24	29	36	43
Current-carrying capacity		acc. to DIN VDE 0298-4					

BiTmining® NTSCGEWOEU-W .../3

Medium voltage, flexible power supply cable for use in water based on DIN VDE 0250-813

BiTmining® NTSCGEWOEU-W .../3 3.6/6 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0001	3x25+3x25/3	45-48	0,795	0,36	0,34	131	3,0	2940	1125
BM0002	3x35+3x25/3	47-50	0,565	0,34	0,38	162	4,3	3670	1575
BM0010	3x50+3x35/3	50-53	0,393	0,32	0,44	202	6,1	4021	2250
BM0003	3x50+3x25/3	50-53	0,393	0,32	0,44	202	6,1	3948	2250
BM0011	3x50+3x50/3	50-53	0,393	0,32	0,44	202	6,1	4127	2250
BM0004	3x70+3x35/3	56-59	0,277	0,31	0,48	250	8,5	5157	3150
BM0005	3x95+3x50/3	60-63	0,210	0,29	0,54	301	11,6	6210	4275
BM0012	3x95+3x70/3	60-63	0,210	0,29	0,54	301	11,6	6383	4275
BM0006	3x120+3x70/3	62-65	0,164	0,28	0,59	352	14,6	7240	5400
BM0013	3x150+3x25/3	69-72	0,164	0,28	0,59	352	14,6	8299	5400
BM0007	3x150+3x70/3	69-72	0,132	0,28	0,64	404	18,3	8651	6750

BiTmining® NTSCGEWOEU-W .../3 6/10 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0015	3x25+3x25/3	46-49	0,795	0,37	0,31	131	3,0	3087	1125
BM0025	3x35+3x16/3	48-51	0,565	0,35	0,35	162	4,3	3378	1575
BM0016	3x35+3x25/3	48-51	0,565	0,35	0,35	162	4,3	3467	1575
BM0026	3x35+3x35/3	48-51	0,565	0,35	0,35	162	4,3	3540	1575
BM0017	3x50+3x25/3	53-56	0,393	0,33	0,39	202	6,1	4339	2250
BM0027	3x50+3x50/3	53-56	0,393	0,33	0,39	202	6,1	4518	2250
BM0018	3x70+3x35/3	57-60	0,277	0,31	0,43	250	8,5	5362	3150
BM0028	3x95+3x35/3	61-64	0,210	0,30	0,49	301	11,6	6303	4275
BM0019	3x95+3x50/3	61-64	0,210	0,30	0,49	301	11,6	6409	4275
BM0020	3x120+3x70/3	65-68	0,164	0,29	0,53	352	14,6	7723	5400

BiTmining® NTSCGEWOEU-W .../3 8.7/15 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0030	3x25+3x25/3	53-56	0,795	0,39	0,25	139	3,0	3825	1125
BM0029	3x25+3x16/3	53-56	0,795	0,39	0,25	139	3,0	3736	1125
BM0031	3x35+3x25/3	55-58	0,565	0,37	0,28	172	4,3	4236	1575
BM0032	3x50+3x25/3	59-62	0,393	0,35	0,31	215	6,1	4934	2250
BM0033	3x70+3x35/3	62-65	0,277	0,33	0,34	265	8,5	5974	3150
BM0034	3x95+3x50/3	68-71	0,210	0,32	0,39	319	11,6	7367	4275

BiTmining® NTSCGEWOEU-W .../3

Medium voltage, flexible power supply cable for use in water based on DIN VDE 0250-813

BiTmining® NTSCGEWOEU-W .../3 12/20 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0040	3x25+3x25/3	57-60	0,795	0,41	0,22	139	3,0	4334	1125
BM0039	3x25+3x16/3	57-60	0,795	0,41	0,22	139	3,0	4245	1125
BM0041	3x35+3x25/3	60-63	0,565	0,39	0,24	172	4,3	4765	1575
BM0042	3x50+3x25/3	65-68	0,393	0,37	0,27	215	6,1	5768	2250
BM0048	3x50+3x35/3	65-68	0,393	0,37	0,27	215	6,1	5841	2250
BM0043	3x70+3x35/3	69-72	0,277	0,35	0,30	265	8,5	6857	3150

BiTmining® NTSCGEWOEU-W .../3 14/25 kV

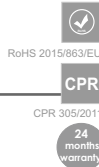
Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0050	3x25+3x25/3	65-68	0,795	0,43	0,19	139	3,0	5329	1125
BM0051	3x35+3x25/3	67-70	0,565	0,41	0,21	172	4,3	5794	1575

BiTmining® NTSCGEWOEU-W .../3 18/30 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0060	3x25+3x25/3	70-73	0,795	0,45	0,17	139	3,0	6075	1125

Cable Factory BITNER reserves the right to modify specifications without prior notification.
Note: On customer's request other cross sections or number of cores can be produced

BiTmining® NTSCGEWOEU-W .../3E



Medium voltage, flexible power supply cable for use in water based on DIN VDE 0250-813



Mining cables



open-pit mining



industrial application



EN 60332-1-2



high flexibility



UV resistance



oil resistant
EN 60811-404



mechanical resistance



explosion hazardous areas

Technical data:

Thermal parameters:

Ambient temperature:

fixed installation: -40 °C to 80 °C

flexible operation: -25 °C to 80 °C

Max. permissible conductor temp.: 90 °C

Max. short-circuit temp. at conductor: 250 °C

De-rating factors: acc. to DIN VDE 0298-4

Mechanical parameters:

Max. tensile load per conductor: 15 N/mm²

Torsional stresses: +/-25 %/m

Bending radius: acc. to DIN VDE 0298-3

Design:

Main cores

Conductors:

tinned copper wires, finely stranded, class 5
acc. to DIN EN/IEC 60228

Insulation:

- inner semi-conductive stress control layer
- EPR compound type 3G13 acc. to DIN VDE 0207-20
- outer semi-conductive insulation shield layer

Protective conductor:

tinned copper wire spinning, design acc. to DIN VDE 0250-1, cross-section symmetrically split over the triple extruded core three screened cores laid-up together
synthetic rubber compound based on type GM1b
acc. to DIN VDE 0207-21, filling the interstices, optimized for water applications

Stranding:

Inner sheath:

heavy duty rubber compound, type 5GM3
acc. to DIN VDE 0207-21; colour: red; inkjet marking

Outer sheath:

Application:

Power supply cable for use in open-pit mining facilities designed for operation in water and exposed to high mechanical stresses, e.g. for connection to dredgers, floating docks, submersible pumps, etc. Cables are suitable to work in sewage, salt and brackish water.

Chemical parameters:

Resistance to oil:

DIN EN/IEC 60811-404

Behaviour in case of fire:

DIN EN/IEC 60332-1-2

Water resistance:

EN-50525-2-21

Weather resistance:

unrestricted use outdoors and indoors, resistant to ozone, UV and moisture

Electrical parameters:

Rated voltage U ₀ /U [kV]	3.6/6	6/10	8.7/15	12/20	14/25	18/30
Max. permissible operating voltage U _{0,max} in AC systems [kV]:	4.2/7.2	6.9/12	10.4/18	13.9/24	17.3/30	20.8/36
Max. permissible operating voltage U _{0,max} in DC systems [kV]:	5.4/10.8	9/18	13.5/27	18/36	22.5/45	27/54
AC test voltage acc. to DIN VDE 0250-813 [kV]:	11	17	24	29	36	43
Current-carrying capacities [A]:	acc. to DIN VDE 0298-4					

BiTmining[®] NTSCGEWOEU-W .../3E

Medium voltage, flexible power supply cable for use in water based on DIN VDE 0250-813

BiTmining[®] NTSCGEWOEU-W .../3E 3.6/6 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0070	3x25+3x16/3E	47-50	0,795	0,36	0,34	131	3,0	3045	1125
BM0071	3x35+3x16/3E	49-52	0,565	0,34	0,38	162	4,3	3425	1575
BM0072	3x50+3x25/3E	55-58	0,393	0,32	0,44	202	6,1	4425	2250
BM0078	3x50+3x50/3E	55-58	0,393	0,32	0,44	202	6,1	4695	2250
BM0073	3x70+3x35/3E	59-62	0,277	0,31	0,48	250	8,5	5445	3150
BM0079	3x70+3x50/3E	59-62	0,277	0,31	0,48	250	8,5	5620	3150
BM0074	3x95+3x50/3E	63-66	0,210	0,29	0,54	301	11,6	6580	4275
BM0075	3x120+3x70/3E	67-70	0,164	0,28	0,59	352	14,6	8240	5400

BiTmining[®] NTSCGEWOEU-W .../3E 6/10 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0080	3x25+3x16/3E	49-52	0,795	0,37	0,31	131	3,0	3215	1125
BM1200	3x25+3x25/3E	49-52	0,795	0,37	0,31	131	3,0	3345	1125
BM0081	3x35+3x16/3E	51-54	0,565	0,35	0,34	162	4,3	3605	1575
BM0089	3x35+3x25/3E	51-54	0,565	0,35	0,34	162	4,3	3730	1575
BM0082	3x50+3x25/3E	57-60	0,393	0,33	0,38	202	6,1	4625	2250
BM1201	3x50+3x50/3E	57-60	0,393	0,33	0,38	202	6,1	4895	2250
BM0083	3x70+3x35/3E	60-63	0,277	0,31	0,43	250	8,5	5660	3150
BM1202	3x70+3x50/3E	60-63	0,277	0,31	0,43	250	8,5	5835	3150
BM0084	3x95+3x50/3E	66-69	0,210	0,30	0,48	301	11,6	7085	4275
BM0085	3x120+3x70/3E	69-72	0,164	0,29	0,54	352	14,6	8225	5400

BiTmining[®] NTSCGEWOEU-W .../3E 8.7/15 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0090	3x25+3x16/3E	55-58	0,795	0,39	0,25	139	3,0	3955	1125
BM0091	3x35+3x16/3E	57-60	0,565	0,37	0,28	172	4,3	4375	1575
BM0092	3x50+3x25/3E	62-65	0,393	0,35	0,31	215	6,1	5210	2250
BM0098	3x50+3x50/3E	62-65	0,393	0,35	0,31	215	6,1	5480	2250
BM0093	3x70+3x35/3E	67-70	0,277	0,33	0,34	265	8,5	6565	3150
BM0099	3x70+3x50/3E	67-70	0,277	0,33	0,34	265	8,5	6740	3150

BiTmining® NTSCGEWOEU-W .../3E

Medium voltage, flexible power supply cable for use in water based on DIN VDE 0250-813

BiTmining® NTSCGEWOEU-W .../3E 12/20 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0100	3x25+3x16/3E	60-63	0,795	0,41	0,22	139	3,0	4475	1125
BM1220	3x25+3x25/3E	60-63	0,795	0,41	0,22	139	3,0	4610	1125
BM0101	3x35+3x16/3E	62-65	0,565	0,39	0,24	172	4,3	4915	1575
BM1221	3x35+3x25/3E	62-65	0,565	0,39	0,24	172	4,3	5045	1575
BM1222	3x35+3x50/3E	62-65	0,565	0,39	0,24	172	4,3	5310	1575
BM0102	3x50+3x25/3E	68-71	0,393	0,37	0,27	215	6,1	6070	2250
BM1223	3x50+3x35/3E	68-71	0,393	0,37	0,27	215	6,1	6165	2250
BM1224	3x50+3x50/3E	68-71	0,393	0,37	0,27	215	6,1	6335	2250

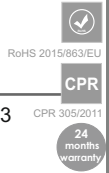
BiTmining® NTSCGEWOEU-W .../3E 14/25 kV

Cat. no	n x mm ²	Outer diameter min. – max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM0110	3x25+3x16/3E	67-70	0,795	0,43	0,19	139	3,0	5495	1125
BM0109	3x25+3x25/3E	68-71	0,795	0,43	0,19	139	3,0	5630	1125
BM0111	3x35+3x16/3E	69-72	0,565	0,41	0,21	172	4,3	5965	1575
BM0118	3x35+3x25/3E	70-73	0,565	0,41	0,21	172	4,3	6105	1575
BM0119	3x35+3x50/3E	70-73	0,565	0,41	0,21	172	4,3	6370	1575

Cable Factory BITNER reserves the right to modify specifications without prior notification.

Note: on customer's request other cross sections or number of cores can be produced

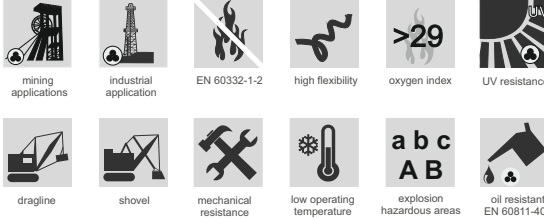
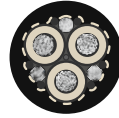
BiTmining® NTSCGEWOEU-TR



Medium voltage, flexible power supply cable for trailing applications based on DIN VDE 0250-813

CPR 305/2011

Mining cables



Technical data:

Thermal parameters:

Ambient temperature:
 fixed installation: -50 °C to 90 °C
 flexible operation: -35 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C
De-rating factors: acc. to DIN VDE 0298-4

Mechanical parameters:

Max. tensile load per conductor: 15N/mm²
Bending radius: acc. to DIN VDE 0298-3
Torsional stresses: ±100 %/M.

Design:

Main cores: Conductors:

tinned copper wires, finely stranded, class 5
 acc. to IEC 60228

Insulation:

- inner semi-conductive stress control layer
 - EPR compound, type 3GI3 acc. to DIN VDE 0207-20
 - outer semi-conductive insulation shield layer

Protective conductor:

tinned copper wires, finely stranded, class 5
 acc. to IEC 60228, semi-conductive layer

Core arrangement:

three main cores laid-up with the symmetrically split protective-earth conductor cross-section in the interstices high-tec, tear-resistant reinforcing grid tape, acting as a protection against sheath movement and protection from transverse and longitudinal stress

Reinforcement:

Inner / outer sheath:

heavy duty rubber compound, type 5GM5 acc. to DIN VDE 0207-21, with improved tear- and abrasion resistance, colour: black, inkjet marking

Application:

Flexible power supply cable for large devices in open-pit mines where exposed to extremely high mechanical stresses, abrasion and tear usually during trailing operation.

Chemical parameters:

Resistance to oil:	DIN EN / IEC 60811-404
Behaviour in case of fire:	DIN EN / IEC 60332-1-2
Weather resistance:	unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U ₀ /U [kV]	3.6/6	6/10	8.7/15	12/20	14/25	18/30
Max. permissible operating voltage U _{0,max} in AC systems [kV]:	4.2/7.2	6.9/12	10.4/18	13.9/24	17.3/30	20.8/36
Max. permissible operating voltage U _{0,max} in DC systems [kV]:	5.4/10.8	9/18	13.5/27	18/36	22.5/45	27/54
AC test voltage acc. to DIN VDE 0250-813 [kV]	11	17	24	29	36	43
Current-carrying capacities [A]:	acc. to DIN VDE 0298-4					

BiTmining® NTSCGEWOU-TR

Medium voltage, flexible power supply cable for trailing applications based on DIN VDE 0250-813

BiTmining® NTSCGEWOU-TR 3.6/6 kV

Cat. no	n x mm ²	Outer diameter min.-max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM1400	3x25+3x25/3	44-47	0,795	0,36	0,34	131	3,2	2855	1125
BM1401	3x35+3x25/3	46-49	0,565	0,34	0,39	162	4,48	3222	1575
BM1402	3x50+3x25/3	51-54	0,393	0,32	0,43	202	6,4	3963	2250
BM1403	3x70+3x35/3	55-58	0,277	0,30	0,49	250	8,96	5036	3150
BM1404	3x95+3x50/3	60-63	0,210	0,29	0,54	301	12,16	6214	4275
BM1405	3x120+3x70/3	63-66	0,164	0,28	0,60	352	15,36	7243	5400
BM1406	3x150+3x70/3	68-71	0,132	0,27	0,65	404	19,2	8484	6750
BM1407	3x185+3x95/3	74-77	0,108	0,27	0,70	461	23,68	10212	8325

BiTmining® NTSCGEWOU-TR 6/10 kV

Cat. no	n x mm ²	Outer diameter min.-max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM1425	3x25+3x25/3	47-50	0,795	0,37	0,31	131	3,2	3123	1125
BM1426	3x35+3x25/3	49-52	0,565	0,34	0,35	162	4,48	3503	1575
BM1427	3x50+3x25/3	53-56	0,393	0,33	0,39	202	6,4	4246	2250
BM1428	3x50+3x50/3	53-56	0,393	0,33	0,39	202	6,4	4426	2250
BM1429	3x70+3x35/3	58-61	0,277	0,31	0,44	250	8,96	5370	3150
BM1430	3x95+3x50/3	62-65	0,210	0,30	0,49	301	12,16	6435	4275
BM1431	3x120+3x70/3	65-68	0,164	0,29	0,54	352	15,36	7592	5400
BM1432	3x150+3x50/3	68-71	0,132	0,28	0,58	404	19,2	8576	6750
BM1433	3x150+3x70/3	70-73	0,132	0,28	0,58	404	19,2	8892	6750
BM1434	3x185+3x50/3	76-79	0,108	0,28	0,63	461	23,68	10283	8325
BM1435	3x185+3x95/3	76-79	0,108	0,27	0,63	461	23,68	10621	8325

BiTmining® NTSCGEWOU-TR 8.7/15 kV

Cat. no	n x mm ²	Outer diameter min.-max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM1450	3x25+3x25/3	52-55	0,795	0,39	0,25	139	3,2	3708	1125
BM1451	3x35+3x25/3	54-57	0,565	0,37	0,28	172	4,48	4113	1575
BM1452	3x50+3x25/3	59-62	0,393	0,35	0,31	215	6,4	4933	2250
BM1453	3x70+3x35/3	63-66	0,277	0,33	0,35	265	8,96	6086	3150
BM1454	3x95+3x50/3	68-71	0,210	0,32	0,39	319	12,16	7351	4275
BM1455	3x120+3x70/3	71-74	0,164	0,31	0,42	371	15,36	8426	5400
BM1456	3x150+3x70/3	76-79	0,132	0,30	0,46	428	19,2	9757	6750
BM1457	3x185+3x95/3	82-85	0,108	0,29	0,50	488	23,68	11591	8325

BiTmining[®]NTSCGEWOU-TR

Medium voltage, flexible power supply cable for trailing applications based on DIN VDE 0250-813

BiTmining[®]NTSCGEWOU-TR 12/20 kV

Cat. no	n x mm ²	Outer diameter min.-max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM1470	3x25+3x25/3	57-60	0,795	0,41	0,22	139	3,2	4203	1125
BM1471	3x35+3x25/3	60-63	0,565	0,39	0,25	172	4,48	4762	1575
BM1472	3x50+3x25/3	64-67	0,393	0,37	0,27	215	6,4	5604	2250
BM1473	3x70+3x35/3	69-72	0,277	0,35	0,30	265	8,96	6836	3150
BM1474	3x95+3x50/3	73-76	0,210	0,33	0,33	319	12,16	7990	4275
BM1475	3x120+3x70/3	76-79	0,164	0,32	0,36	371	15,36	9226	5400
BM1476	3x150+3x70/3	81-84	0,132	0,31	0,39	428	19,2	10650	6750
BM1477	3x185+3x95/3	87-90	0,108	0,30	0,42	488	23,68	12473	8325

BiTmining[®]NTSCGEWOU-TR 14/25 kV

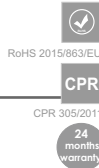
Cat. no	n x mm ²	Outer diameter min.-max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM1490	3x25+3x25/3	64-67	0,795	0,43	0,19	139	3,2	5162	1125
BM1491	3x35+3x25/3	66-69	0,565	0,41	0,21	172	4,48	5620	1575
BM1492	3x50+3x25/3	71-74	0,393	0,39	0,23	215	6,4	6553	2250
BM1493	3x70+3x35/3	75-78	0,277	0,37	0,25	265	8,96	7817	3150
BM1494	3x95+3x50/3	80-83	0,210	0,35	0,28	319	12,16	9204	4275
BM1495	3x120+3x70/3	83-86	0,164	0,34	0,30	371	15,36	10343	5400
BM1496	3x150+3x70/3	88-91	0,132	0,33	0,33	428	19,2	11802	6750
BM1497	3x185+3x95/3	94-97	0,108	0,32	0,35	488	23,68	13785	8325

BiTmining[®]NTSCGEWOU-TR 18/30 kV

Cat. no	n x mm ²	Outer diameter min.-max. [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
BM1510	3x25+3x25/3	70-73	0,795	0,45	0,17	139	3,2	6047	1125
BM1511	3x35+3x25/3	72-75	0,565	0,43	0,19	172	4,48	6533	1575
BM1512	3x50+3x25/3	77-80	0,393	0,40	0,21	215	6,4	7489	2250
BM1513	3x70+3x35/3	81-84	0,277	0,38	0,23	265	8,96	8847	3150
BM1514	3x95+3x50/3	85-88	0,210	0,37	0,25	319	12,16	10104	4275
BM1515	3x120+3x70/3	89-92	0,164	0,35	0,27	371	15,36	11431	5400
BM1516	3x150+3x70/3	94-97	0,132	0,34	0,29	428	19,2	12998	6750
BM1517	3x185+3x95/3	100-103	0,108	0,33	0,31	488	23,68	15014	8325

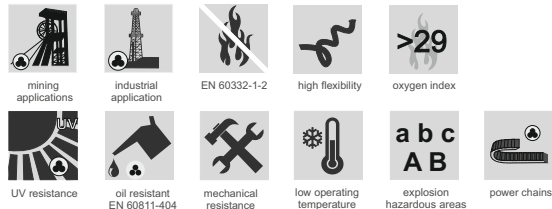
Cable Factory BITNER reserves the right to modify specifications without prior notification.
 Note: on customer's request other cross sections or number of cores can be produced

BiTmining[®](N)TSKCGECW0EU-CH



Medium voltage, flexible power supply cable for trailing applications based on DIN VDE 0250-813

Mining cables



Technical data:

Thermal parameters:

Ambient temperature:

fixed installation: -40 °C to 90 °C

flexible operation: -25 °C to 80 °C

Max. permissible conductor temp.: 90 °C

Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Tensile load: 15 N/mm²

Min. bending radius: acc. to DIN VDE 0298, Part 3, or 2.3 x D with tensile load limited to 5 N/mm²

Minimum distance with S-type directional changes: 20 x D

Design:

Conductors:

finely stranded class 6 (EN 60228, DIN VDE 0295) tinned, electrolytic copper

Control/

protective conductor:

spirally applied concentric tinned copper wires forming control conductors around support element, EPR insulation and spirally applied concentric CuSn wires to form protective conductor

Insulation:

EPR compound with improved electrical and mechanical characteristics (DIN VDE 0207, Part 20)

Electrical field control:

Core identification:

inner and outer layers of semiconductive rubber natural colouring with black semiconductive rubber with printed white digits 1-3

Core arrangement:

three power conductors laid-up with double concentric control/protective conductor elements in the outer interstices, with optimised lay length GM1b (acc. to DIN VDE 0207, Part 21)

Inner sheath:

Signal/monitoring conductor:

spirally applied galvanized steel and tinned copper wires in a vulcanized bond between inner and outer sheath.

Outer sheath:

5GM5 compound with improved mechanical characteristics (acc. to DIN VDE 0207, Part 21), colour: red

Application:

Flexible power supply cable for use in underground mining facilities for mobile machines like coal cutters etc. Designed for use in cable chains trailed behind the machines. Chains have protective function.

Chemical parameters:

Resistance to oil:

DIN EN / IEC 60811-404

Behaviour in case of fire:

DIN EN / IEC 60332-1-2

Weather resistance:

unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]	3.6/6
Max. permissible operating voltage $U_{0,max}$ in AC systems [kV]:	4.2/7.2
Max. permissible operating voltage $U_{0,max}$ in DC systems [kV]:	5.4/10.8
AC test voltage acc. to DIN VDE 0250-813 [kV]	11
Current-carrying capacities	acc. to DIN VDE 0298-4

BiTmining® (N)TSKCGECWEOEU-CH

Medium voltage, flexible power supply cable for trailing applications based on DIN VDE 0250-813

n x mm ²	Outer diameter* [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approx. cable weight [kg/km]	Maximum permissible tensile force [N]
Cat. no								
BM0940 3x25+3x(1,5ST KON+16/3KON) + ÜL KON)	48	0,795	0,35	0,34	131	3,2	3900	1125
BM0941 3x35+3x(1,5ST KON+25/3KON) + ÜL KON)	51	0,565	0,33	0,38	162	4,5	4405	1575
BM0942 3x50+3x(1,5ST KON+25/3KON) + ÜL KON)	54	0,393	0,32	0,43	202	6,4	5510	2250
BM0943 3x70+3x(1,5ST KON+35/3KON) + ÜL KON)	58	0,277	0,29	0,49	250	8,9	6350	3150
BM0944 3x95+3x(1,5ST KON+50/3KON) + ÜL KON)	61	0,210	0,28	0,55	301	12,1	7420	4275
BM0945 3x120+3x(1,5ST KON+70/3KON) + ÜL KON)	69	0,164	0,27	0,60	352	15,4	9750	5400
BM0946 3x150+3x(1,5ST KON+70/3KON) + ÜL KON)	71	0,132	0,27	0,64	404	19,2	10470	6750
BM0947 3x50+3x(2x1,5ST KON+25/3KON) + ÜL KON)	58	0,393	0,30	0,43	202	6,4	6250	2250
BM0136 3x70+3x(2x1,5ST KON+35/3KON) + ÜL KON)	61	0,277	0,31	0,49	250	8,9	7005	3150
BM0948 3x95+3x(2x1,5ST KON+50/3KON) + ÜL KON)	66	0,210	0,28	0,55	301	12,1	8460	4275

*Outer diameter tolerance: +/-5%
 Cable Factory BITNER reserves the right to modify specifications without prior notification.
 Note: on customer's request other cross sections or number of cores can be produced

BiTmining® (N)TSKCGECW0EU-FN

RoHS 2015/863/EU

CPR

CPR 305/2011

24 months warranty

Medium voltage, flexible power supply cable for underground festoon systems



mining applications



industrial application



EN 60332-1-2



high flexibility



oxygen index



UV resistance

oil resistant
EN 60811-404

mechanical resistance



low operating temperature



explosion hazardous areas

Technical data:

Thermal parameters:

Ambient temperature:

fixed installation: -40 °C to 90 °C

flexible operation: -25 °C to 80 °C

Max. permissible conductor temp.: 90 °C

Max. short-circuit temp. at conductor: 250 °C

Mechanical parameters:

Max. tensile load per conductor: 15 N/mm²

Bending radius: acc. to DIN VDE 0298-3

Design:

Main cores:

Conductor:

tinned copper wires, finely stranded, class 5
acc. to DIN VDE 0295

Insulation:

EPR compound with improved electrical and mechanical characteristics as per DIN VDE 0207-20

Control/protective conductor:

conductor:

spirally applied concentric tinned copper wires forming control conductors around supporting element, EPR insulation and spirally applied concentric tinned copper wires forming protective conductor

Electrical field control:

Core identification:

inner and outer layers of semiconductive rubber
natural colouring with black semiconductive rubber with printed white digits 1-3

Core arrangement:

three power conductors laid-up with double concentric control/protective conductor elements in the outer interstices, with optimised lay length
GM1b acc. to DIN VDE 0207-21

Inner sheath:

Signal/monitoring conductor:

spirally applied galvanised steel and tinned copper wires in a vulcanized bond between inner and outer sheath
heavy duty rubber compound, type 5GM5 acc. to DIN VDE 0207-21, colour: red, inkjet marking

Outer sheath:

Application:

Flexible power supply cable for use in underground mining facilities especially for festoon systems.

Chemical parameters:

Resistance to oil:

DIN EN / IEC 60811-404

Behaviour in case of fire:

DIN EN / IEC 60332-1-2

Weather resistance:

unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U_0/U [kV]

3.6/6

Max. permissible operating voltage $U_{0,max}$ in AC systems [kV]:

4.2/7.2

Max. permissible operating voltage $U_{0,max}$ in DC systems [kV]:

5.4/10.8

AC test voltage acc. to DIN VDE 0250-813 [kV]:

11

Current-carrying capacities [A]:

acc. to DIN VDE 0298-4

BiTmining[®](N)TSKCGECWOEU-FN

Medium voltage, flexible power supply cable for underground festoon systems

BiTmining[®](N)TSKCGECWOEU-FN 3.6/6 kV

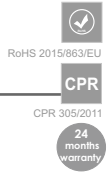
n x mm ²	Outer diameter* [mm]	Conductor resistance at 20°C [Ω/km]	Inductance [mH/km]	Operating capacitance [μF/km]	Current carrying capacity at 30°C [A]	Permissible short-circuit current (1s) [kA]	Approximate cable weight [kg/km]	Maximum permissible tensile force [N]
Cat. no								
BM0140 3x35+3x(1,5ST KON+25/3KON) + 6ÜL KON	47	0,554	0,30	0,28	162	4,3	3494	1575
BM0141 3x50+3x(1,5ST KON+25/3KON) + 6ÜL KON	52	0,386	0,29	0,33	202	6,1	4339	2250
BM0142 3x70+3x(1,5ST KON+35/3KON) + 6ÜL KON	56	0,272	0,28	0,37	250	8,5	5410	3150
BM0143 3x95+3x(1,5ST KON+50/3KON) + 6ÜL KON	59	0,206	0,27	0,42	301	11,6	6281	4275
BM0144 3x120+3x(1,5ST KON+70/3KON) + 6ÜL KON	68	0,164	0,26	0,46	352	14,6	8353	5400

*Outer diameter tolerance: +/- 2,5 mm

Cable Factory BITNER reserves the right to modify specifications without prior notification.

Note: on customer's request other cross sections or number of cores can be produced

BiTmining® NTMCGCWOEU



Medium voltage, screened single core cable according to DIN VDE 0250-813

Mining cables



Technical data: Design:

Thermal parameters:

Ambient temperature:
 fixed installation: -40 °C to 80 °C
 flexible operation: -25 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C
De-rating factors: acc. to DIN VDE 0298-4

Mechanical parameters:

Max. tensile load per conductor: 15 N/mm²
Bending radius:
 - fixed installation: ≥ 6 x outer-Ø
 - free moving: ≥ 10 x outer-Ø

Main core Conductor: tinned copper wires, finely stranded, class 5 acc. to DIN EN/IEC 60228

Insulation:
 - inner semi-conductive stress control layer
 - EPR compound with improved electrical and mechanical characteristics based on DIN VDE 0207-20
 - outer semi-conductive insulation shield layer

Protective conductor: spirally applied tinned copper wires, design acc. to DIN VDE 0250-1

Outer sheath: heavy duty rubber compound, type 5GM5 acc. to DIN VDE 0207-21, unrestricted use indoors, outdoors, resistance to ozone, UV and moisture, colour: red, inkjet marking

Application:

Flexible high voltage cable used in short lengths, e.g. as a connection in switch-gear or transformer houses where small bending radius is requested.

Chemical parameters:

Resistance to oil: DIN EN / IEC 60811-404
 Behaviour in case of fire: DIN EN / IEC 60332-1-2
 Weather resistance: unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U ₀ /U [kV]	3.6/6	6/10	8.7/15	12/20	14/25	18/30
Maximum permissible operating voltage U _{0,max} in AC systems [kV]:	4.2/7.2	6.9/12	10.4/18	13.9/24	17.3/30	20.8/36
Maximum permissible operating voltage U _{0,max} in DC systems [kV]:	5.4/10.8	9/18	13.5/27	18/36	22.5/45	27/54
AC. test voltage acc. to DIN VDE 0250-813 [kV]:	11	17	24	29	36	43

BiTmining[®] NTMCGCWOEU

Medium voltage, screened single core cable according to DIN VDE 0250-813

BiTmining[®] NTMCGCWOEU 3.6/6 kV

Cat. no	n x mm ²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity ¹⁾
BM0789	1x16/16	1.24	12.5	20.5 - 23.5	670	116
BM0790	1x25/16	0.795	14	22 - 25	810	135
BM0791	1x35/16	0.565	15	23 - 26	950	169
BM0792	1x50/16	0.393	17	25 - 28	1140	207
BM0793	1x70/16	0.277	18	27 - 30	1380	268
BM0794	1x95/16	0.210	20	28.5 - 31.5	1630	328
BM0795	1x120/16	0.164	21	30 - 33	1870	383
BM0796	1x150/25	0.132	23	33 - 36	2280	444
BM0797	1x185/25	0.108	26	35 - 38	2640	510
BM0798	1x240/25	0.0817	27	37.5 - 40.5	3220	607
BM0788	1x300/25	0.0654	30	40 - 43	3930	703
BM0787	1x400/35	0.0495	34	44.5 - 47.5	5000	823
BM0786	1x500/35	0.0391	36	46 - 49	5980	946

BiTmining[®] NTMCGCWOEU 6/10 kV

Cat. no	n x mm ²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity ¹⁾
BM0799	1x16/16	1.24	13	21 - 24	700	116
BM0800	1x25/16	0.795	15	22 - 25	880	135
BM0801	1x35/16	0.565	16	23 - 26	980	169
BM0802	1x50/16	0.393	17	25 - 28	1180	207
BM0803	1x70/16	0.277	19	27 - 30	1420	268
BM0804	1x95/16	0.210	21	30 - 33	1630	328
BM0805	1x120/16	0.164	22	31 - 34	1940	383
BM0806	1x150/25	0.132	24	33 - 36	2330	444
BM0807	1x185/25	0.108	26	36 - 39	2700	510
BM0808	1x240/25	0.0817	28	38 - 41	3270	607
BM0809	1x300/25	0.0654	31	41 - 43	3970	703
BM0810	1x400/35	0.0495	35	45 - 48	5070	823
BM0811	1x500/35	0.0391	36	47 - 50	6050	946

BiTmining[®] NTMCGCWOEU 8.7/15 kV

Cat. no	n x mm ²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity ¹⁾
BM0820	1x16/16	1.24	15.5	23.5 - 26.5	840	116
BM0821	1x25/16	0.795	17	25 - 28	980	135
BM0822	1x35/16	0.565	18	26.5 - 29.5	1120	169
BM0823	1x50/16	0.393	20	28 - 31	1290	207
BM0824	1x70/16	0.277	21	30 - 33	1540	268
BM0825	1x95/16	0.210	23	32 - 35	1830	328
BM0826	1x120/16	0.164	24	33.5 - 36.5	2080	383
BM0827	1x150/25	0.132	26	36 - 39	2470	444
BM0828	1x185/25	0.108	29	39 - 41	2950	510
BM0829	1x240/25	0.0817	30	40.5 - 43.5	3460	607
BM0830	1x300/25	0.0654	33	43 - 46	4150	703
BM0831	1x400/35	0.0495	37	48 - 51	5350	823
BM0832	1x500/35	0.0391	39	50 - 53	6360	946

BiTmining[®] NTMCGCWOEU

Medium voltage, screened single core cable according to DIN VDE 0250-813

Mining cables

BiTmining[®] NTMCGCWOEU 12/20 kV

Cat. no	n x mm ²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity ¹⁾
BM0849	1x16/16	1.24	17.5	26 - 29	970	116
BM0850	1x25/16	0.795	19	27.5 - 30.5	1080	135
BM0851	1x35/16	0.565	20	28.5 - 31.5	1220	169
BM0852	1x50/16	0.393	22	30 - 33	1360	207
BM0853	1x70/16	0.277	23	32.5 - 35.5	1690	268
BM0854	1x95/16	0.210	25	34 - 37	1970	328
BM0855	1x120/16	0.164	26	35.5 - 38.5	2230	383
BM0856	1x150/25	0.132	28	39 - 41	2700	444
BM0857	1x185/25	0.108	31	41 - 44	3080	510
BM0858	1x240/25	0.0817	32	42 - 45	3600	607
BM0859	1x300/25	0.0654	35	45 - 48	4320	703
BM0862	1x400/35	0.0495	39	50 - 53	5540	823
BM0863	1x500/35	0.0391	41	52 - 55	6570	946

BiTmining[®] NTMCGCWOEU 14/25 kV

Cat. no	n x mm ²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity ¹⁾
BM0883	1x25/16	0.795	22	30 - 33	1210	135
BM0884	1x35/16	0.565	23	32 - 35	1390	169
BM0885	1x50/16	0.393	24	33.5 - 36.5	1590	207
BM0886	1x70/16	0.277	26	35 - 38	1880	268
BM0887	1x95/16	0.210	28	38 - 41	2250	328
BM0888	1x120/16	0.164	29	40 - 43	2520	383
BM0889	1x150/25	0.132	31	41 - 44	2890	444
BM0890	1x185/25	0.108	33	43.5 - 46.5	3290	510
BM0891	1x240/25	0.0817	35	45 - 48	3820	607
BM0892	1x300/25	0.0654	37	48.5 - 51.5	4680	703
BM0893	1x400/35	0.0495	41	53 - 56	5810	823
BM0894	1x500/35	0.0391	43	54.5 - 57.5	6850	946

BiTmining[®] NTMCGCWOEU 18/30 kV

Cat. no	n x mm ²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity ¹⁾
BM0865	1x25/16	0.795	24	33 - 36	1430	135
BM0866	1x35/16	0.565	25	34 - 37	1560	169
BM0867	1x50/16	0.393	27	36 - 39	1760	207
BM0868	1x70/16	0.277	28	38.5 - 41.5	2140	268
BM0869	1x95/16	0.210	30	40 - 43	2440	328
BM0870	1x120/16	0.164	31	41.5 - 44.5	2720	383
BM0871	1x150/25	0.132	33	43.5 - 46.5	3090	444
BM0872	1x185/25	0.108	36	46 - 49	3510	510
BM0873	1x240/25	0.0817	37	48.5 - 51.5	4140	607
BM0874	1x300/25	0.0654	40	51 - 53	4920	703
BM0875	1x400/35	0.0495	44	55 - 58	6070	823
BM0876	1x500/35	0.0391	46	57 - 60	7120	946

¹⁾ acc. to IEC 60364-5-52, conductor temperature: 90 °C/Reference ambient temperature: 30 °C, free in air, based on installation method F, three loaded conductors trefoil, values for further installation methods not expected

Cable Factory BITNER reserves the right to modify specifications without prior notification.

Note: on customer's request other cross sections or number of cores can be produced

BITNER[®] (N)TMCGC11Y

Medium voltage, screened single core cable based on DIN VDE 0250-813



Technical data:

Thermal parameters:

Ambient temperature:
fixed installation: -40 °C to 90 °C
flexible operation: -35 °C to 80 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 250 °C
De-rating factors: acc. to DIN VDE 0298-4

Mechanical parameters:

Max. tensile load per conductor: 15 N/mm²
Bending radius:
- fixed installation: ≥ 6 x outer - Ø
- free moving: ≥ 10 x outer - Ø

Design:

Main cores
Conductors: tinned copper wires, finely stranded, class 5 acc. to DIN EN/IEC 60228
Insulation:
- inner semi-conductive stress control layer
- EPR compound with improved electrical and mechanical characteristics based on DIN VDE 0207-20
- outer semi-conductive insulation shield layer

Protective conductor: spirally applied tinned copper wires, design acc. to DIN VDE 0250-1
Outer sheath: special PUR compound with improved mechanical characteristics, oil resistance acc. to EN 60811-404, unrestricted use indoors, outdoors, resistance to moisture, colour: red, inkjet marking

Application:

Flexible high voltage cable used in short lengths, e.g. as a connection in switch-gear or transformer houses where small bending radius is requested.

Chemical parameters:

Resistance to oil: DIN EN / IEC 60811-404
Behaviour in case of fire: DIN EN / IEC 60332-1-2
Weather resistance: unrestricted use indoors, outdoors, resistance to ozone, UV and moisture

Electrical parameters:

Rated voltage U ₀ /U [kV]	3.6/6	6/10	8.7/15	12/20	14/25	18/30
Maximum permissible operating voltage U _{0,max} in AC systems [kV]:	4.2/7.2	6.9/12	10.4/18	13.9/24	17.3/30	20.8/36
Maximum permissible operating voltage U _{0,max} in DC systems [kV]:	5.4/10.8	9/18	13.5/27	18/36	22.5/45	27/54
AC. test voltage acc. to DIN VDE 0250-813 [kV]:	11	17	24	29	36	43

Cable Factory BITNER reserves the right to modify specifications without prior notification.
Note: on customer's request other cross sections or number of cores can be produced

Bitflex[®] (N)TMCGC11Y

Medium voltage, screened single core cable based on DIN VDE 0250-813

Bitflex[®] (N)TMCGC11Y 6/10 kV

Cat. no	n x mm ²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity ¹⁾
IP5470	1x25/16	0.795	14,5	21-23	730	135
IP5471	1x35/16	0.565	16,0	22-24	860	169
IP5472	1x50/16	0.393	17,0	24-26	1045	207
IP5473	1x70/16	0.277	19,0	26-28	1290	268
IP5474	1x95/16	0.210	20,5	27-29	1545	328
IP5475	1x120/16	0.164	22,0	29-31	1820	383
IP5476	1x150/25	0.132	24,0	31-33	2170	444
IP5477	1x185/25	0.108	26,0	33-35	2515	510
IP5478	1x240/25	0.0817	28,0	36-38	3085	607

Bitflex[®] (N)TMCGC11Y 12/20 kV

Cat. no	n x mm ²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity ¹⁾
IP5490	1x25/16	0.795	18,0	25-27	925	135
IP5491	1x35/16	0.565	19,0	26-28	1065	169
IP5492	1x50/16	0.393	20,5	27-29	1250	207
IP5493	1x70/16	0.277	22,0	29-31	1520	268
IP5494	1x95/16	0.210	24,0	31-33	1790	328
IP5495	1x120/16	0.164	25,5	33-35	2075	383
IP5496	1x150/25	0.132	27,5	35-37	2455	444
IP5497	1x185/25	0.108	29,5	37-39	2815	510
IP5498	1x240/25	0.0817	31,5	39-41	3350	607

¹⁾ acc. to IEC 60364-5-52, conductor temperature: 90 °C/Reference ambient temperature: 30 °C, free in air, based on installation method F, three loaded conductors trefoil, values for further installation methods on request

Cable Factory BITNER reserves the right to modify specifications without prior notification.
Note: on customer's request other cross sections or number of cores can be produced

Chapter XIII

Special application cables

BiTcharger®EVC H07BZ5-F	428
BiTsteel AQUA POWER	429
MULTIBIT® 2xCOAX-75 2xUTP5e 1xFTTH2J	431
BiTflex®TWIN BATTERY CABLE	433
BiTflex®TWIN BATTERY CABLE LSOH	434
BiTsound®Speaker Cable OFC	435
BiTsound®INSTAL Speaker Cable OFC	436
BiTsound®INSTAL Speaker Cable LSOH OFC	437
BiTsound®Power Cable 300/500V	438
BiTsound®LP0217 Digital Hybrid Cable Power 3G1,5 + DMX 1x(2x0,25) OFC	439
BiTsound®LP0501 Hybrid Cable Power 3G1,5 + MOBILE DATA PATCHCORD U/UTP cat.5e OFC	440
BiTsound®LP0504 Multi Hybrid Cable Power 3G1,5 + DMX 2x(2x0,25) + MOBILE DATA PATCHCORD 2xU/UTP cat.5e OFC	441

BiTcharger[®] EVC H07BZ5-F

Halogen-free charging cable



external application



internal application



high flexibility



halogen-free
EN 60754



low smoke emission



chemical resistance



UV resistance



EN 60332-1-2



based on
IEC 62893-3



EN 50620
VDE Certificate

Technical data:

Thermal parameters:

Operating temperature:

fixed installations: -40 °C to 80 °C
flexible connections: -40 °C to 80 °C

Max. power conductor operating temperature: 90 °C

Short-circuit temperature: +250 °C (max. 5 sec. on conductor)

Electrical parameters:

Operating voltage: 450/750 V
Test voltage: 3500 V

Mechanical parameters:

Min. bending radius:

fixed installation: 4 x Ø
flexible connections: 6,5 x Ø

Design:

Power cores:

Conductors:

bare copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

elastomer, type EVI-2

Core identification:

green/yellow, blue, brown; green/yellow, blue, brown, black, grey

Control core:

Conductor:

bare, copper conductors, multi-stranded class 5
acc. to EN 60228

Insulation:

elastomer, type EVI-1

Core identification:

red

Outer sheath:

PUR, type EVM-1; colour: black

Application:

H07BZ5-F cables are intended for charging electric vehicles on the vehicle charger-connector section. Light, flexible and durable compounds used for their production improve the functionality of use. Cables are halogen-free and flame retardant (EN 60332-1-2, IEC 60332-1-2) as well as UV, weather, oil, alkali and chemical resistant.

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
CH0001	3G1,5+1x0,5	8,8	106
CH0002	3G2,5+1x0,5	10,0	140
CH0003	5G2,5+1x0,5	12,7	229
CH0004	3G4+1x0,5	11,3	203
CH0005	5G4+1x0,5	14,4	324
CH0006	3G6,0+1x0,5	12,6	266
CH0007	5G6,0+1x0,5	16,0	437
CH0008	3G10+1x0,5	15,8	434
CH0009	5G10+1x0,5	19,2	678
CH0010	3G16+1x0,5	19,3	676
CH0011	5G16+1x0,5	23,0	1027

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

VDE Prüf- und Zertifizierungsinstitut



BITNER AQUA POWER

PE sheathed, armored power cables for submersible applications, rated 0.6/1kV



Special application cables



external application



halogen-free
EN 60754



UV resistance

Technical data:

Thermal parameters:

Conductor operating temperature: 90 °C

Operating temperature:

-30 °C up to 80 °C

Installation temperature:

-5 °C up to 50 °C

Electrical parameters:

Operating voltage: 600/1000 V

Test voltage 4000 V: 50 Hz

Mechanical parameters:

Minimum bending radius: 10 x Ø

Design:

Conductors:

bare copper class 2 acc. to IEC 60228 (*class 5 tinned copper available on customer's request)

Insulation:

XLPE

Core identification:

see table (*other insulation colours available on request)

Central element:

filling element (*tube available on customer's request)

Core arrangement:

cores twisted together around central filler (*FO element available on customer's request)

Separator:

PPS tape

Inner sheath:

special PUR

Separator:

PPS tape

Armor:

galvanized steel wire armor with helically applied anti-torsion tape; PE, colour: black

Application:

Power supply cable designed for submersible applications in salt water at max. depth of 300m. PE sheath and galvanized steel wire armor ensure high mechanical resistance.

Insulation colours:

Number of cores	Colours
Cables without protective cores	brown, black, grey
3	blue, brown, black, grey
4	
Cables with protective cores	
3	green-yellow, blue, brown
4	green-yellow, brown, black, grey

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EN5300	3x16	24,4	1386
EN5301	3G50	34,5	2886
EN5302	3G95	43,0	4930
EN5303	3x120	48,2	6060

BiTsteel AQUA POWER

PE sheathed, armored power cables for submersible applications, rated 0.6/1kV

BiTsteel AQUA POWER (t)

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EN5310	3G50	41,1	3678
EN5311	3G95	52,8	6341
EN5312	3x120	55,6	7350

BiTsteel AQUA POWER FO

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EN5320	3x95	43,0	4935
EN5321	3x120	47,8	5995
EN5322	3x150	53,8	7586

BiTsteel AQUA POWER (t) FO

Cat. no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]
EN5330	3x50	41,6	3670
EN5331	4x50	41,6	4010

*Outer diameter tolerance: +/-5%
Cable Factory BITNER reserves the right to modify specifications without prior notification.

MULTIBiT[®] 2xCOAX-75 2xUTP5e 1xFTTH2J

RoHS 2015/863/EU



LVD 2014/35/EU



CPR 305/2011



Special application cables

Hybrid cable for telecom application

BITNER MULTIBiT[®] 2xCOAX-75 2xUTP 5E 1xFTTH 2J

internal application



EN 60332-1-2



data transmission

BiTLAN[®] U/UTP cat.5e

Technical data:

Electrical parameters:

DC loop resistance at 20 °C (max): 196 Ω/km

Insulation resistance (min): 5 GΩ x km

Resistance unbalance within a pair: ≤ 2%

Mutual capacitance at 1 kHz: 50 ± 5 nF/km

Capacitance unbalance pair to ground at

1 kHz (max): 1600 pF/km

Nominal voltage: 150 V

Test voltage - 1min:

AC 50 Hz: 700 V

DC: 1000 V

Characteristic impedance at 100 MHz:

100 ± 5 Ω

NVP value: 69 %

Return loss dB (min):

f = 4 + 10 MHz: 20 + 5 x log₁₀(f)

f = 10+20 MHz: 25

f = 20+200 MHz: 25 - 7 x log₁₀(f/20)

BiTSAT[®] 757

Technical data:

Electrical parameters:

Inner conductor resistance: 21 Ω/km

Outer conductor resistance: 25,8 Ω/km

Insulation resistance (min.): 5 GΩ x km

Mutual capacitance: 57 nF/km

Wave impedance: 75 ± 3 Ω

NVP value: 80 %

Attenuation screening (min.) - A class:

30 + 1000 Mhz: 85 dB

1GHz + 2,2Ghz: 75 dB

Return loss (min):

5 + 1000 MHz: 23

1 + 2,2 GHz: 21

BiTFiber[®] FTTH 2J

Technical data:

Electrical parameters:

Attenuation at 1310 nm (singlemode fiber):

≤ 0,4 dB/km

Attenuation at 1550 nm (singlemode fiber):

≤ 0,25 dB/km

Design:

Conductors:

solid round copper conductors 24 AWG (0,5)

Insulation:

special polyolefin compound

Core identification:

wh/bu-bu, wh/or-or, wh/gn-gn, wh/bn-bn

Core arrangement:

cores twisted in pairs, pairs twisted together

Outer sheath:

PVC compound, colour: white RAL 9010 and green RAL

6018

Outer diameter:

4,8 mm

Design:

Inner conductor:

solid copper conductor, Ø = 1,05mm outer

Insulation:

foamed PE, Ø = 5,0mm outer

Outer conductor:

aluminium backed polyester tape Al/Pet/Al. and aluminium

wire braid with coverage min. 77 %

Outer sheath:

PVC compound, self-extinguishing and flame retardant

(as per EN 60332-1-2, IEC 60332-1-2),

colour: white RAL 9010 and green RAL 6018

Outer diameter:

6,9 mm

Design:

Fiber optic:

Optical telecommunication fiber in accordance with ITU-T-G657A2 - 2 pieces

Dielectric reinforcement:

FRP - 2 pieces

Outer sheath:

halogen-free compound, colour: white RAL 9010

Fiber colours acc. to PN-IEC 60304:

red, green

Outer diameter:

2,0 x 3,0 mm

MULTIBiT[®] 2xCOAX-75 2xUTP5e 1xFTTH2J

Hybrid cable for telecom application

Technical data:

Core arrangement:

2 x data transmission cable BiTLAN[®]U/UTP cat.5e, 2 x coaxial cable BITSAT[®]757, colour coded and twisted together with a centrally arranged optotelecommunication fiber cable BiTFiber[®]FTTH 2J

Design:

Outer sheath: PVC compound, colour RAL 9010

Application:

MULTIBiT[®] hybrid is designed for comprehensive telecommunication infrastructure. It allows to create five different installations in modern buildings: structural LAN cabling, video and intercom network, digital terrestrial TV DVB-T, DVB-T2, satellite TV DVB-T(S), cable TV DVB-C and fiber optic installation. Colour coding allows easy installation. Cable classified in accordance with **EN 50575 (CPR)**.

Cat. no	Outer diameter* [mm]	Cable weight [kg/km]
TI0114	19,5	330

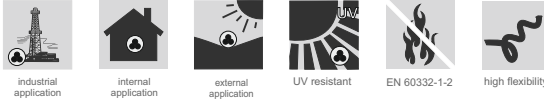
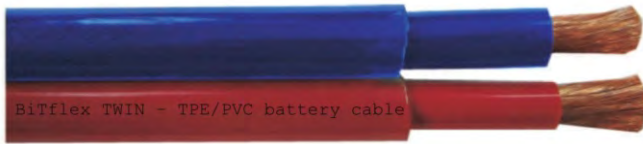
*Outer diameter tolerance: +/-5%
Cable Factory Bitner reserves the right to modify the specifications without prior notice.

BITflex® TWIN BATTERY CABLE



Special application cables

Extra flexible battery cable, rated 300/500 V



Technical data:

Thermal parameters:

Temperature range: -25 °C to 70 °C

Electrical parameters:

Operating voltage: 300/500 V
Test voltage (50 Hz): 3000 V

Mechanical parameters:

Min bending radius: 6 x Ø

Standards:

Based on VDE 0250

Design:

Conductors: highly flexible plain copper conductors, multi-stranded class 6 acc. to EN 60228
Insulation: special, acid resistant TPE (thermoplastic elastomer)
Core identification: red/blue
Outer sheath: transparent PVC; imprint

Application:

Highly flexible battery cable, with TPE insulation and halogen-free outer sheath, used mainly on battery powered equipment such as forklift trucks, field conveyors and in motorized vehicles. Can also be used as jumper cables. Suitable for use in dry and wet environment both indoors and outdoors. Cables classified according to EN 50575 (CPR).

Cat. no.	Cross section [mm ²]	Max wire dia.	Outer diameter* [mm]	Nominal cable weight [kg/km]	Current rating Amps [30 °C]	Current rating Jumper cable Amps [max.3min.]
EM8795	2x2,5	0,16	5,1x10,6	108	33	68
EM8796	2x4,0	0,21	5,7x11,7	150	45	110
EM8797	2x6,0	0,21	6,5x14,0	197	58	150
EM8798	2x10	0,21	7,2x14,8	288	80	220
EM8799	2x16	0,21	8,8x17,2	415	107	300
EM8800	2x25	0,21	11,2x23,5	630	138	400
EM8801	2x35	0,21	12,5x26,3	799	171	500
EM8802	2x50	0,21	14,3x30,2	1130	209	600
EM8803	2x70	0,21	16,2x34,2	1550	268	700
EM8804	2x95	0,21	18,2x38,3	2020	328	850

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

Conversion factors

ambient temperature	Up to 30	30 + 35	35 + 40	40 + 45	45 + 50	50 + 55	55 + 60	60 + 65
conversion factor	1	0,94	0,87	0,79	0,71	0,61	0,5	0,35

Bitflex® TWIN BATTERY CABLE LSOH



Extra flexible battery cable, rated 300/500 V



industrial application



internal application



external application



UV resistant



EN 60332-1-2



high flexibility



halogen-free
EN 60754



low smoke emission
EN 61034

Technical data:

Thermal parameters:

Temperature range: -25 °C to 70 °C

Electrical parameters:

Operating voltage: 300/500 V

Test voltage (50 Hz): 3000 V

Mechanical parameters:

Min bending radius: 6 x Ø

Standards:

Based on VDE 0250

Design:

Conductors:

highly flexible plain copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation:

special, acid resistant TPE (thermoplastic elastomer)

Core identification:

red/blue

Outer sheath:

special halogen-free compound; colour: black

Application:

Highly flexible battery cable, with TPE insulation and halogen-free outer sheath, used mainly on battery powered equipment such as forklift trucks, field conveyors and in motorized vehicles. Can also be used as jumper cables. Suitable for use in dry and wet environment both indoors and outdoors. Cables classified according to EN 50575 (CPR).

Cat. no.	Cross section [mm ²]	Max wire dia.	Outer diameter* [mm]	Nominal cable weight [kg/km]	Current rating Amps [30 °C]	Current rating Jumper cable Amps [max.3min.]
EM8805	2x2,5	0,16	5,1x10,6	108	33	68
EM8806	2x4	0,21	5,7x11,7	150	45	110
EM8807	2x6	0,21	6,5x14,0	197	58	150
EM8808	2x10	0,21	7,2x14,8	288	80	220
EM8809	2x16	0,21	8,8x17,2	415	107	300
EM8810	2x25	0,21	11,2x23,5	630	138	400
EM8811	2x35	0,21	12,5x26,3	799	171	500
EM8812	2x50	0,21	14,3x30,2	1130	209	600
EM8813	2x70	0,21	16,2x34,2	1550	268	700
EM8814	2x95	0,21	18,2x38,3	2020	328	850

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

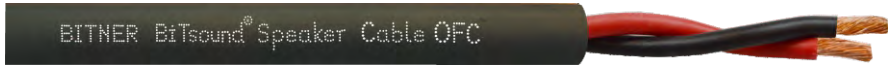
Conversion factors

ambient temperature	Up to 30	30 + 35	35 + 40	40 + 45	45 + 50	50 + 55	55 + 60	60 + 65
conversion factor	1	0,94	0,87	0,79	0,71	0,61	0,5	0,35

BiTsound® Speaker Cable OFC



Highly flexible speaker cable



Technical data:

Thermal parameters:

Operating temperature: -30 °C to 80 °C
Min. ambient temperature for fixed installations: -40 °C
Min. installation temperature: -5 °C

Electrical parameters:

Test voltage 50 Hz: 2000 V
Min. insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius: 5 x Ø (Ø - cable diameter)

Cable properties:

- high impact strength and flexibility at both room and low temperatures
- thermal stability
- special black, matt outer sheath eliminating the light reflection effect

Design:

Conductors: bare copper conductors, highly flexible class 6 acc. to EN 60228
Insulation: PVC compound
Core identification: 2 cores: black, red
4 cores: black, red, white, green
8 cores: black, red, white, green, yellow, grey, violet, blue cores twisted together
Core arrangement:
Outer sheath: PVC compound, self-extinguishing and flame retardant acc. to EN 60332-1-2, UV resistant; colour: black matt

Application:

BiTsound® Speaker Cables OFC are characterized by high flexibility and increased transmission parameters. They can be installed in channels, cable trays or in plaster. Special black, matt, UV and weather-resistant outer sheath enables outdoor installation and eliminates the light reflection effect. Cables are also designed for internal, external and on-stage applications. BiTsound® Speaker Cables OFC are classified in accordance with **EN 50575 (CPR)**.

Cat no.	n x mm ²	Outer diameter* [mm]	Approximate cable weight [kg/km]	Max. conductor resistance DC at 20 °C [Ω/km]
LP0199	2x1,5	7,0	75	12,80
LP0274	4x1,5	9,3	138	12,80
LP0200	2x2,5	8,0	108	7,20
LP0201	4x2,5	10,5	194	7,20
LP0296	8x2,5	13,8	369	7,20
LP0202	2x4,0	10,0	172	4,35
LP0203	4x4,0	11,7	272	4,35
LP0277	8x4,0	16,6	570	4,35

*Outer diameter tolerance: +/-5%
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

BiTsound® INSTAL Speaker Cable OFC



Highly flexible speaker installation cable



Technical data:

Thermal parameters:

Operating temperature: -30 °C to 80 °C
Min. ambient temperature for fixed installations: -40 °C
Min. installation temperature: -5 °C

Electrical parameters:

Test voltage 50 Hz: 2000 V
Min. insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius: 5 x Ø (Ø - cable diameter)

Cable properties:

- high impact strength and flexibility at both room and low temperatures
- thermal stability

Design:

Conductors:

bare copper conductors
 class 6 (1,5 mm², 2,5 mm², 4 mm² acc. to EN 60228)
 class 5 (6 mm², 10 mm², 16 mm² acc. to EN 60228)

Insulation:

PVC compound

Core identification:

2 cores: black, red

Core arrangement:

4 cores: black, red, white, green
 cores twisted together

Filling sheath:

PVC compound (only for cables with core sizes > 6 mm²)

Outer sheath:

PVC compound, self-extinguishing and flame retardant acc. to EN 60332-1-2, UV resistant; colour: black

Application:

BiTsound®INSTAL Speaker Cables OFC are characterized by high flexibility and increased transmission parameters. They can be installed in channels, cable trays or in plaster. Special UV and weather-resistant outer sheath enables outdoor installations as well as direct burial in ground. Cables are designed for internal and external applications. BiTsound®INSTAL Speaker Cables OFC are classified in accordance with **EN 50575 (CPR)**.

Cat no.	n x mm ²	Outer diameter* [mm]	Nominal cable weight [kg/km]	Max. conductor resistance DC at 20 °C [Ω/km]
LP0250	2x1,5	7,5	86	12,80
LP0285	4x1,5	9,1	139	12,80
LP0204	2x2,5	8,5	121	7,20
LP0253	4x2,5	10,1	191	7,20
LP0205	2x4,0	10,5	190	4,35
LP0254	4x4,0	12,4	304	4,35
LP0206	2x6,0	11,6	237	3,30
LP0255	4x6,0	13,6	378	3,30
LP0234	2x10	16,2	475	1,91
LP0235	4x10	18,7	716	1,91
LP0236	2x16	18,2	637	1,21
LP0237	4x16	21,2	988	1,21

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiTsound® INSTAL Speaker Cable LSOH OFC

Halogen-free speaker cable



Special application cables

Technical data:

Thermal parameters:

Operating temperature: -30 °C to 80 °C
Min. ambient temperature for fixed installations: -40 °C
Min. installation temperature: -5 °C

Electrical parameters:

Test voltage 50 Hz: 2000 V
Min. insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius: 5 x Ø (Ø - cable diameter)

Cable properties:

- halogen free outer sheath
- flame retardance
- low smoke emission
- limited corrosive gases emission
- usage in places with increased fire safety requirements
- high impact strength and flexibility at both room and low temperatures
- thermal stability

Design:

Conductors:

bare copper conductors
 class 6 (1,5 mm², 2,5 mm², 4 mm² acc. to EN 60228)
 class 5 (6 mm², 10 mm², 16 mm² acc. to EN 60228)

Insulation:

Core identification:

special halogen-free compound
2 cores: black, red
4 cores: black, red, white, green

Core arrangement:

Filling sheath:

Outer sheath:

cores twisted together
 special halogen-free compound
 special halogen-free compound, self-extinguishing and flame retardant acc. to EN 60332-1-2, UV resistant;
 colour: black

Application:

BiTsound®INSTAL Speaker Cables LSOH OFC are designed for operation in dry and damp rooms. They can be installed in sound distribution systems in large venues such as sports stadiums, amphitheatres, theaters and cinema halls. Cables are halogen-free, they do not emit smoke and significantly limit flame propagation during fire. They can be used both in indoor and outdoor installations. BiTsound®INSTAL Speaker Cables LSOH OFC are classified in accordance with **EN 50575 (CPR)**.

Cat no.	n x mm ²	Outer diameter* [mm]	Nominal cable weight [kg/km]	Max. conductor resistance DC at 20 °C [Ω/km]
LP0244	2x1,5	8,2	108	12,80
LP0279	4x1,5	9,4	154	12,80
LP0238	2x2,5	9,1	145	7,20
LP0256	4x2,5	10,5	212	7,20
LP0241	2x4,0	11,1	222	4,35
LP0243	4x4,0	12,9	333	4,35
LP0242	2x6,0	12,2	273	3,30
LP0257	4x6,0	14,2	416	3,30
LP0239	2x10	15,2	440	1,91
LP0251	4x10	17,7	674	1,91
LP0240	2x16	17,2	599	1,21
LP0252	4x16	20,2	622	1,21

*Outer diameter tolerance: +/-5%
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

BiTsound[®] Power Cable 450/750V



Flexible, unshielded power cable



internal application



external application



EN 60332-1-2



UV resistant



low operating temperature



high flexibility

Technical data:

Thermal parameters:

Operating temperature: -30 °C to 80 °C

Min. ambient temperature for fixed installation: -40 °C

Min. installation temperature: -5 °C

Electrical parameters:

Test voltage 50 Hz: 3500 V

Min. insulation resistance: 20 MΩ x km

Mechanical parameters:

Min. bending radius: 5 x Ø (Ø - cable diameter)

Cable properties:

- high impact strength and flexibility at both room and low temperatures
- thermal stability
- matt outer sheath eliminating the light reflection effect

Design:

Conductors:

bare copper conductors, stranded class 5 acc. to EN 60228

Insulation:

PVC compound

Core identification:

brown, blue, black, grey, green-yellow

Core arrangement:

cores twisted together

Outer sheath:

PVC compound, self-extinguishing and flame retardant acc. to EN 60332-1-2; UV-resistant; colour: black, matt

Application:

BiTsound[®]Power Cables 450/750V are designed for supplying power to low voltage electric and portable devices. They are suitable for indoor and outdoor installations in places exposed to UV-radiation and other atmospheric conditions. Matt outer sheath eliminates the light reflection effect. BiTsound[®]Power Cables 450/750V are classified in accordance with EN 50575 (CPR).

Cat no.	n x mm ²	Outer diameter* [mm]	Nominal cable weight [kg/km]	Max. conductor resistance DC at 20 °C [Ω/km]
LP0610	5G4,0	14,0	365	4,95
LP0611	5G6,0	15,7	485	3,30
LP0612	5G10	18,8	758	1,91

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiTsound® LP0217 Digital Hybrid Cable Power 3G1,5 + DMX 1x(2x0,25) OFC

RoHS 2015/863/EU
 CE
 LVD 2014/35/EU
 CPR
 CPR 305/2011
 24 months warranty

Special application cables

Flexible hybrid cable for digital signal transmission



Technical data:

Thermal parameters:
Operating temperature:
 fixed installation: -30 °C to 70 °C
 flexible connections: -5 °C to 70 °C
Min. installation temperature: -5 °C

Electrical parameters:
Test voltage (power cable, 50 Hz): 2000 V
Capacitance (DMX cable, 1 kHz):
 Conductor/conductor: ≤ 60 nF/km
 Conductor/screen: ≤ 115 nF/km
Impedance (DMX cable): 110 ± 10
Min. insulation resistance (DMX cable):
 1,0 GΩ x km
Min. insulation resistance (power cable):
 20 MΩ x km

Mechanical parameters:
Min. bending radius: 5 x Ø (Ø - cable diameter)

Cable properties:

- impact strength and flexibility at both low and room temperatures
- high flexibility
- matt outer sheath eliminating the light reflection effect

Design:

DMX cable
Conductors: tinned copper conductors, multi-stranded (8x0,20)
Insulation: special PE
Core identification: white, red
Core arrangement: cores twisted together
Screen: aluminium backed polyester tape with tinned copper drain wire underneath and tinned copper wire braid with coverage min. 85%

Outer sheath: PVC compound; colour: black

Power cable
Conductors: bare copper conductors, stranded class 5 acc. to EN 60228
Insulation: PVC compound
Core identification: brown, blue, green-yellow
Core arrangement: cores twisted together
Screen: aluminium backed polyester tape with tinned copper drain wire
Outer sheath: PVC compound; colour: black

Hybrid
Core arrangement: DMX and power cables twisted together with fillers
Outer sheath: PVC compound, self-extinguishing and flame retardant acc. to EN 60332-1-2; colour: black, matt

Application:

BiTsound® LP0217 Digital Hybrid Cable Power 3G1,5 + DMX 1x(2x0,25) OFC is a combination of DMX cable designed for transmission of digital signals e.g. in lighting or stage motion systems and power cable. DMX cable is double screened with tinned copper wire braid and AL/PET tape with additional drain wire what ensures very good protection against external interferences. Matt outer sheath eliminates the light reflection effect. BiTsound® LP0217 Digital Hybrid Cable Power 3G1,5 + DMX 1x(2x0,25) OFC is classified in accordance with **EN 50575 (CPR)**.

Cat no.	Colour	nx2xAWG	Outer diameter* [mm]	Nominal weight [kg/km]	Max screen resistance DC at 20°C [Ω/km]	DC loop resistance at 20°C (max.)
LP0217	black	3G1,5+1x(2x0,25)	13,7	228	13,3	220

*Outer diameter tolerance: +/-5%
 Cable Factory BITNER reserves the right to modify the specifications without prior notice
 Note: on customer's request other cross sections or number of cores can be produced

BiTsound® LP0501 Hybrid Cable Power 3G1,5 + MOBILE DATA PATCHCORD U/UTP cat.5e OFC



Flexible, hybrid cable with power conductors, designed for computer networks



Technical data:

Thermal parameters:

Operating temperature:

fixed installation: -30 °C to 70 °C

flexible connections: -5 °C to 50 °C

Min. installation temperature: -5 °C

Electrical parameters:

Test voltage: power conductor 50 Hz: 2000 V

Capacitance: U/UTP (at 1 kHz):

conductor/conductor: ≤ 60 nF/km

Impedance (at 100MHz): U/UTP: 100 Ω ± 5

Min. insulation resistance: U/UTP: 1 GΩ x km

Min. insulation resistance: power conductor:

20 MΩ x km

Insulated conductor diameter: U/UTP:

0,97 ± 0,05 mm

Mechanical parameters:

Min. bending radius: 5 x Ø (Ø - cable diameter)

Cable properties:

- high impact strength and flexibility at both room and low temperatures
- high flexibility
- matt outer sheath eliminating the light reflection effect

Design:

U/UTP

Conductors: tinned copper conductors, multi-stranded (26 AWG/7(0,18 mm²))

Insulation: special PE

Core identification in pairs:

- 1st pair: blue, white-blue
 - 2nd pair: orange, white-orange
 - 3rd pair: green, white-green
 - 4th pair: brown, white-brown
- cores twisted together; pairs twisted together on a centrally located cross spacer

Core arrangement:

Sheath:

Power cable
Conductors: bare copper, multi-stranded class 5, acc. to EN 60228
Insulation: PVC compound
Core identification: brown, blue, green-yellow
Core arrangement: cores twisted together
Screen: aluminium backed polyester tape with tinned copper drain wire
Sheath: PVC compound; colour: black

Hybrid

Core arrangement: power cable and U/UTP twisted together with fillers
Sheath: PVC compound, self-extinguishing and flame retardant acc. to EN 60332-1-2; colour: black, matt

Application:

BiTsound®LP0501 Hybrid Cable Power 3G1,5 + MOBILE DATA PATCHCORD U/UTP cat. 5e OFC is composed of data transmission cable designed for computer networks with frequency up to 100 MHz and bandwidth up to 1 Gb/s and power cable. U/UTP is suitable for transmitting data, audio and visual HDTV signals and can be used in control systems. The cable is dedicated to professional and studio applications. Matt outer sheath eliminates the light reflection effect. BiTsound®LP0501 Hybrid Cable Power 3G1,5 + MOBILE DATA PATCHCORD U/UTP cat. 5e OFC is classified in accordance with **EN 50575 (CPR)**.

Cat no.	Colour	nx2xAWG	Outer diameter* [mm]	Nominal weight [kg/km]	Max screen resistance DC at 20°C [Ω/km]	DC loop resistance at 20°C (max.)
LP0501	black	3G1,5+4x2x26AWG/7	15,9	288	13,3	220

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

BiTsound® LP0504 Multi Hybrid Cable Power 3G1,5 + DMX 2x(2x0,25) + MOBILE DATA PATCHCORD 2xU/UTP cat.5e OFC

RoHS 2015/863/EU
 CE
 LVD 2014/35/EU
 CPR
 CPR 305/2011
 24 months warranty

Special application cables

Flexible, hybrid cable with power conductors, designed for computer networks



Technical data:

Thermal parameters:
Operating temperature:
 fixed installation -30 °C to 70 °C
 flexible connections -5 °C to 50 °C
Min. installation temperature: -5 °C

Electrical parameters:
Test voltage: power cable 50 Hz: 2000 V
Capacitance: U/UTP (at 1 kHz):
 conductor/conductor: ≤ 60 nF/km
Capacitance: DMX cable (at 1 kHz):
 conductor/conductor: ≤ 60 nF/km
Conductor/screen: ≤ 115 nF/km
Impedance (at 100MHz): U/UTP: 100 Ω ± 5
Impedance: DMX cable: 110 Ω ± 10
Min. insulation resistance: U/UTP:
 1,0 GΩ x km
Min. insulation resistance: DMX:
 1,0 GΩ x km
Min. insulation resistance: power conductor: 20 MΩ x km
Insulated conductor diameter: U/UTP:
 0,97 ± 0,05mm

Mechanical parameters:
Min. bending radius: 5 x Ø (Ø - cable diameter)

Cable properties:

- impact strength and flexibility at both low and room temperatures
- high flexibility
- matt outer sheath eliminating the light reflection effect

Design:

U/UTP
Cores: tinned copper conductors, multi-stranded (26 AWG/7 (0,18 mm²))
Insulation: special PE
Core identification in pairs:
 1st pair: blue, white-blue
 2nd pair: orange, white-orange
 3rd pair: green, white-green
 4th pair: brown, white-brown
 cores twisted in pairs; pairs twisted together on a centrally located cross spacer
Core arrangement: PVC compound
Sheath colour: black

DMX
Cores: tinned copper conductors, multi-stranded (8 x 0,20)
Insulation: special PE
Core identification: white, red
Core arrangement: cores twisted together
Screen: aluminium backed polyester tape with tinned copper drain wire underneath and tinned copper wire braid with coverage min. 85 %
Sheath: PVC compound
Sheath colour: black

Power cable
Cores: bare copper, multi-stranded class 5, acc. to EN 60228
Insulation: PVC compound
Core identification: brown, blue, green-yellow
Core arrangement: cores twisted together
Screen: aluminium backed polyester tape with tinned copper drain wire
Sheath: PVC compound
Sheath colour: black

Hybrid
Core arrangement: power cable, 2 x DMX and 2 x U/UTP twisted together with fillers
Sheath: PVC compound, self-extinguishing and flame retardant acc. to EN 60332-1
Sheath colour: black, matt

Application:

BiTsound® LP0504 Multi Hybrid Cable Power 3G1,5 + DMX 2x(2x0,25) + MOBILE DATA PATCHCORD 2xU/UTP cat. 5e is composed of data transmission cable designed for computer networks with frequency up to 100 MHz and bandwidth up to 1 Gb/s, power cable and DMX cable designed for transmitting digital signals e.g. in lighting or stage motion systems. DMX is double screened with tinned copper wire braid and AL/PET tape with additional drain wire what ensures very good protection against external interferences. U/UTP is suitable for transmitting data, audio and visual HDTV signals and can be used in control systems. Matt outer sheath eliminates the light reflection effect. BiTsound® LP0504 Multi Hybrid Cable Power 3G1,5 + DMX 2x(2x0,25) + MOBILE DATA PATCHCORD 2xU/UTP cat. 5e is classified in accordance with EN 50575 (CPR).

BiTsound® LP0504 Multi Hybrid Cable Power 3G1,5 + DMX 2x(2x0,25) + MOBILE DATA PATCHCORD 2xU/UTP cat.5e OFC

Flexible, hybrid cable with power conductors, designed for computer networks

Cat no.	Colour	nx2xAWG	Outer diameter* [mm]	Nominal weight [kg/km]	Max screen resistance DC at 20°C [Ω/km]	DC loop resistance at 20°C (max.)
LP0504	black	3G1,5+2x(2x0,25)+2x(4x2x26AWG/7)	18,6	378	13,3	79

*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced

Chapter XIV

Technical data

List of standards pertaining to the construction, properties, parameters and testing of cables	444
Insulating materials	445
Properties of insulating materials	446
Conductor insulation colours	448
Conductor flexibility classes	451
Conductor resistance	452
Long-term current-carrying capacity of control and power supply cables with PVC insulation	453
Current-carrying capacity of cables with silicone insulation	454
Current-carrying capacity - BiT1000®Power i BiT1000®H Power	455
Electrical parameters - BiTflame®S FE180/E90, BiTflame®S(St) FE180/E90	456
Current rating for NHXH, NHXCH, (N)HXH, (N)HXCH	457
Guidelines for laying cable support systems in fire safety installations	459
Guidelines regarding cable installation in drag chains	460
Reduction factors for cables laid singly and in bundles in the air	463
Reduction factors for cables laid in the air	464
Correction factors for bunched multicore cables	465
Selection of frequency converter cables adapted to the power of the frequency converter	466
Tests for halogen-free and fire-resistant cables	467
CPR Construction Products Regulation	470
Guidelines regarding the handling of cable drums during transport and storage	472

List of standards pertaining to the construction, properties, parameters and testing of cables

- DIN 4102-12:1998-11** - Brandverhalten von Baustoffen und Bauteilen - Teil 12: Funktionserhalt von elektrischen Kabelanlagen; Anforderungen und Prüfungen
- DIN 47100:1979-11** - Fernmeldeschnüre - Kennzeichnung der Adern, Farben der Außenhüllen
- DIN VDE 0207-20 VDE 0207-20:1993-07** - Insulating and sheathing compounds for cables and flexible cords - Rubber insulating compounds
- DIN VDE 0207-21 VDE 0207-21:1993-07** - Insulating and sheathing compounds for cables and flexible cords - Rubber sheathing compounds
- DIN VDE 0207-24 VDE 0207-24:1986-02** - Insulating and sheathing compounds for cables and flexible cords - Halogen-free sheathing compounds
- DIN VDE 0250-812 VDE 0250-812:1985-05** - Cables, wires and flexible cords for power installation - Rubber insulated flexible cable NSSHÖU
- DIN VDE 0266 VDE 0266:2000-03** - Power cables with improved characteristics in the case of fire - Nominal voltages 0,6/1 kV
- DIN VDE 0298-3 VDE 0298-3:2006-06** - Application of cables and cords in power installations - Part 3: Guide to use of non-harmonized cables
- DIN VDE 0298-4 VDE 0298-4:2013-06** - Application of cables and cords in power installations - Part 4: Recommended current-carrying capacity for sheathed and non-sheathed cables for fixed wirings in and around buildings and for flexible cables and cords
- DIN VDE 0472-814 VDE 0472-814:1991-01** - Prüfung an Kabeln und isolierten Leitungen Isolationserhalt bei Flammeneinwirkung
- DIN VDE 0815+A1 VDE 0815+A1:1988-05** - Wiring cables for telecommunication and data processing systems
- DIN VDE 0816-1 VDE 0816-1:1988-02** - External cables for telecommunication and data processing systems - Cables insulated and sheathed with polyethylen, unit stranded
- ISO/IEC 11801-1:2017** - Information technology - Generic cabling for customer premises - Part 1: General requirements
- PN-EN 12954:2004** - Cathodic protection of buried or immersed metallic structures. General principles and application for pipelines
- PN-EN 45545-2+A1:2015-12** - Railway applications. Fire protection on railway vehicles. Requirements for fire behaviour of materials and components
- PN-EN 50117-2-4:2005+A1:2008+A2:2014-04** - Coaxial cables -- Part 2-4: Sectional specification for cables used in cabled distribution networks - Indoor drop cables for systems operating at 5 MHz - 3000MHz
- PN-EN 50173-1:2018-07** - Information technology. Generic cabling systems. General requirements
- PN-EN 50200:2016-01** - Method of test for resistance to fire of unprotected small cables for use in emergency circuits
- PN-EN 50525-2-21:2011** - -- Electric cables. Low voltage energy cables of rated voltages up to and including 450/750V (U₀/U). Cables for general applications. Flexible cables with crosslinked elastomeric insulation
- PN-EN 50575:2015-03+A1:2016-11** - Power, control and communication cables. Cables for general applications in construction works subject to reaction to fire requirements
- PN-EN 60228:2007** - Conductors of insulated cables
- PN-EN 60332-1-2:2010+A1:2016-02+A11:2017-02** - Tests on electric and optical fibre cables under fire conditions. Test for vertical flame propagation for a single insulated wire or cable. Procedure for 1kW pre-mixed flame
- PN-EN 60332-3-22:2009** - Tests on electric and optical fibre cables under fire conditions. Test for vertical flame spread of vertically-mounted bunched wires or cables. Category A
- PN-EN 60332-3-23:2009** - Tests on electric and optical fibre cables under fire conditions. Test for vertical flame spread of vertically-mounted bunched wires or cables. Category B
- PN-EN 60332-3-24:2009** - Tests on electric and optical fibre cables under fire conditions. Test for vertical flame spread of vertically-mounted bunched wires or cables. Category C
- PN-EN 60754-2:2014-11** - Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity
- PN-EN 60811-404:2012** - Electric and optical fibre cables. Test methods for non-metallic materials. Miscellaneous tests. Mineral oil immersion tests for sheaths
- PN-EN 60811-504:2012** - Electric and optical fibre cables. Test methods for non-metallic materials. Mechanical tests. Bending tests at low temperature for insulation and sheaths
- PN-EN 61034-2:2010+A1:2014-02** - Measurement of smoke density of cables burning under defined conditions - Part 2: Test procedure and requirements
- PN-HD 308 S2:2007** - Identification of cores in cables and flexible cords by colours
- PN-IEC 60331-21:2003** - Tests for electric cables under fire conditions - Circuit integrity - Part 21: Procedures and requirements - Cables of rated voltage up to and including 0,6/1,0 kV
- TIA-568.2** - Balanced twisted-pair telecommunications cabling and components standards
- UIC 552** - Electrical power supply for trains - Standard technical characteristics of the train line
- UIC 895** - Technical specification for the supply of insulated electric cables for railway vehicles

Insulating materials

Insulating materials are one of the main components of cables and wires. In order to obtain improved usage properties, manufacturers use an ever broader assortment of insulating materials intended both for cable insulations and sheaths. We have presented below information concerning insulating materials, while thermal and electric properties, and chemical resistance have all been described in the pertinent tables.

PVC a group of plastic materials produced on the basis of plasticized polyvinyl chloride. They are characterised by improved resistance to fire (they do not convey flames), oils, ozone, UV radiation and the majority of dissolvents. The electric permeability of PVC is greater than that of PE polyethylene, which limits the applications of transmission cables insulated with PVC due to their relatively high capacitance (in the case of high frequencies, cables with a PE insulation should be used). PVCs may be freely modified, changing their mechanical, thermal, electric properties, and chemical resistance.

Polyethylene (PE) has good electric properties, and is characterised by a small dielectric constant, small lossiness, and high electric strength and resistivity. The hardness and elasticity of polyethylene depends on its density. Low density polyethylene (LDPE) is more elastic and soft, while polyethylene with a greater density (HDPE) is harder. Polyethylene insulation is light, and resistant to water and the majority of chemical compounds. Due to the small dielectric constant and low lossiness, polyethylene is used as insulation for data transmission cables and wherever low conductor capacitance is required. Polyethylene is not UVresistant, but the addition of antioxidants and pigments makes it resistant to solar radiation and weather conditions. Polyethylene is flammable and propagates flames, and during combustion it discharges flaming drops, but these drawbacks may be eliminated by using admixes that decrease flammability.

Foamed polyethylene is created by the introduction of gas bubbles into the structure of polyethylene (polyethylene foaming process). The dielectric constant of foamed polyethylene decreases in inverse proportion to the degree of foam formation. This material is excellent for the insulation of conductors of concentric cables intended for the transmission of high frequency signals. Due to its low mechanical resistance, during the production process a thin layer of polyethylene is extruded onto foamed polyethylene (foamed polyethylene with a skin)

Cross-linked polyethylene (XLPE) is created during the so-called process of cross-linking PE polyethylene, which consists in the formation of additional bonds between crosswise polyethylene chains; this type of polyethylene retains the electrical properties of thermoplastic polyethylene, however its mechanical properties are superior. A cross-linked polyethylene insulation is used primarily in power engineering cables, also due to the low lossiness and high electrical strength. The long-term temperature permitted for XLPE insulations is 90 °C (PVC 70 °C), while the temperature permitted during a short-circuit is as high as 250 °C (PVC 160 °C); in consequence, the long-term current-carrying capacity is approx. 20% than that of PVC.

Polypropylene (PP) has electric properties similar to those of polyethylene, but it is harder and more resistant to temperature. It is stiffer than polyethylene, and is used mainly for insulating cables with small dimensions.

Thermoplastic elastomers (TPE) are a group of plastic materials with exceptional properties. Although they can be extruded in the same way as the majority of thermoplastic materials, their usage properties are similar to those of rubber. Their fundamental feature is resistance to a wide range of temperatures.

Halogen-free plastic materials (HFFR) do not contain chemical elements from the halogen group and during combustion do not emit aggressive and poisonous gases and smoke. Their electric and mechanical properties are similar to those of PVCs.

Properties of insulating materials

Electric properties of insulating materials

	Electric strength kV/mm at a temperature of. 20°C	Dielectric constant at 50 Hz and 20 °C	Dielectric loss coefficient	Resistivity at 30 °C [$\Omega \cdot \text{cm}$]
PVC	25	3,5-6,5	0,1	10^{12} - 10^{15}
Heat resistant PVC	25	3,5-6,5	0,1	10^{12} - 10^{15}
Oil resistant PVC	25	3,5-6,5	0,1	10^{12} - 10^{15}
Polyethylene	70-85	2,3	0,0001-0,0003	10^{17}
Cross-linked polyethylene	30	2,3	0,0005	10^{17}
Foamed polyethylene	50	depends on the degree of foam formation	0,00015	10^{17}
Polyurethane	20	4-8	0,03-0,08	10^{10} - 10^{13}
Polypropylene	75	2,3	0,0008	10^{17}

Thermal properties of insulating and sheathing materials

	PVC	Heat resistant PVC	LDPE	HDPE
Operating temp. [°C]	-40 up to 80	-20 up to 105	-50 up to 70	-50 up to 100
Melting point [°C]	>140	>140	105-110	130
Oxygen index	23-42	23-42	≤ 22	≤ 22

	Foamed PE	XLPE	PUR	Silicone	Neoprene rubber
Operating temp. [°C]	-40 up to 70	-35 up to 90	-55 up to 80	-60 up to 180	-30 up to 90
Melting point [°C]	105		150		
Oxygen index	18-30	≤ 22	20-26	25-35	≤ 22

Properties of insulating materials

Chemical resistance of insulating and sheathing materials

Type of material	Concentration	Temp. to [°C]	PVC	Flame retardant PVC	Oilproof PVC	PE	PUR	Silicone	Halogen-free material	Neoprene rubber
Ethyl alcohol	100	20	-	-	-	+	O	+	O	+
Methyl alcohol	100	20	O	O	O	+	O	+	O	O
Petrol		50	-	-	-	-	+	O	-	-
Ethylene glycol		50	O	O	+		+	O	O	
Concentrated hydrochloric acid	100	20	-	-	-	+	-	-	-	-
Hydrochloric acid	20	20	+	+	+		+	+	O	
Sulphuric acid	50	50	+	+	+		+	+	O	
Citric acid			+	+	+		O	+	+	+
Acetic acid	20	20	O	O	O		O	+	+	
Soda lye	50	50	+	+	+		+	+	O	
Butter		50	+	+	+		+	+	O	
Gear oil		100	+	+	+		+	+	O	
Machine oil		20	O	O	+		+	+	O	O
Diesel fuel			-	-	O		+	O	O	
Engine oil		120	+	+	+	-	+	+	-	
Vegetable oils			+	+	+	+	+	+	-	O
Olive oil		50	+	+	+	+	+	+	-	
Brake fluid			O	O	O		O	+	-	
Mercury	100	20	+	+	+	+	+	+	+	+
Sea water		20	+	+	+		+	O	O	+

+ resistant

O resistant under certain conditions

- not resistant

NOTE: The above table is made on the basis of knowledge and experience, but should only be considered as an aid in selection of appropriate wiring, since the final assessment, in many cases, is made after taking into account hazards occurring in the work environment.

Conductor insulation colours

Conductor insulation colours, cables BiT LiYY, BiT LiYCY, BiT LiHH, BiT LiHCH, BiT LiHC11Y

Colour codes as per DIN 47100

Conductor no.	Colour	Conductor no.	Colour	Conductor no.	Colour
1	white	17	white/grey	33	green/red
2	brown	18	grey/brown	34	yellow/red
3	green	19	white/pink	35	green/black
4	yellow	20	pink/brown	36	yellow/black
5	grey	21	white/blue	37	grey/blue
6	pink	22	brown/blue	38	pink/blue
7	blue	23	white/red	39	grey/red
8	red	24	brown/red	40	pink/red
9	black	25	white/black	41	grey/black
10	purple	26	brown/black	42	pink/black
11	grey/pink	27	grey/green	43	blue/black
12	red/blue	28	yellow/grey	44	red/black
13	white/green	29	pink/green		
14	brown/green	30	yellow/pink		
15	white/yellow	31	green/blue		
16	yellow/brown	32	yellow/blue		

Colour codes as per DIN 47100 for cables with paired conductors

Pair no.	Conductor colour-a	Conductor colour-b	Pair no.	Conductor colour-a	Conductor colour-b
1	white	brown	13	white/black	brown/black
2	green	yellow	14	grey/green	yellow/grey
3	grey	pink	15	pink/green	yellow/pink
4	blue	red	16	green/blue	yellow/blue
5	black	purple	17	green/red	yellow/red
6	grey/pink	red/blue	18	green/black	yellow/black
7	white/green	brown/green	19	grey/blue	pink/blue
8	white/yellow	yellow/brown	20	grey/red	pink/red
9	white/grey	grey/brown	21	grey/black	pink/black
10	white/pink	pink/brown	22	blue/black	red/black
11	white/blue	brown/blue			
12	white/red	brown/red			

Conductor insulation colours

Conductor insulation colours, cables BiTflame®A, BiTflame®AS wg PN-T-90321:1992

No. of pair	Insulation colours	
	conductor a	conductor b
1	white	blue
2		orange
3		green
4		brown
5		grey
6	red	blue
7		orange
8		green
9		brown
10		grey
11	black	blue
12		orange
13		green
14		brown

Conductor insulation colours, cables BiTflame®1000, BiTflame®1000C, (N)HXH, NHXH, (N)HXCH, NHXCH

Cores insulation colours

No. of cores	Insulation colours
Cables without protective conductor	
1	black
2	blue, brown
3	brown, black, grey
4	blue, brown, black, grey
5	blue, brown, black, grey, black
Cables with protective conductor	
1	green-yellow
3	green-yellow, blue, brown
4	green-yellow, brown, black, grey
5	green-yellow, blue, brown, black, grey
> 5	green-yellow, remaining conductors numbered

Conductor insulation colours

Conductor insulation colours, cables YTKSY, YTKSYekw

No. of pair	Insulation colours	
	a	b
1		blue
2		orange
3	white	green
4		brown
5		grey
6		blue
7		orange
8	red	green
9		brown
10		grey
11		blue
12		orange
13	black	green
14		brown
15		grey
16		blue
17		orange
18	yellow	green
19		brown
20		grey
21		blue
22		orange
23	white/blue	green
24		brown
25		grey
26		blue
27		orange
28	red/blue	green
29		brown
30		grey
31		blue
32		orange
33	black/blue	green
34		brown
35		grey
36		blue
37		orange
38	yellow/blue	green
39		brown
40		grey
41		blue
42		orange
43	white/orange	green
44		brown
45		grey
46		blue
47		orange
48	red/orange	green
49		brown
50		grey
51		blue
52	black/orange	orange
53		green

Conductor flexibility classes

Standard PN-EN 60228 specifies a number of conductor flexibility classes

Class 1: conductors executed as a single wire in cables intended for permanent installations

Class 2: stranded conductors for cables intended for permanent installations

Class 5: flexible multi-stranded conductors

Class 6: very flexible multi-stranded conductors

Cross section [mm ²]	Class 2		Class 5	Class 6
	Column 1 Number of wires x wire outer diameter [mm]	Column 2 Number of wires x wire outer diameter [mm]	Column 3 Number of wires x wire outer diameter [mm]	Column 4 Number of wires x wire outer diameter [mm]
0,14			~18 x 0,1	~18 x 0,1
0,25			~14 x 0,15	~32 x 0,1
0,34		7 x 0,25	~19 x 0,15	~42 x 0,1
0,5	7 x 0,3	7 x 0,3	~16 x 0,2	~28 x 0,15
0,75	7 x 0,37	7 x 0,37	~24 x 0,2	~42 x 0,15
1	7 x 0,43	7 x 0,43	~32 x 0,2	~56 x 0,15
1,5	7 x 0,52	7 x 0,52	~30 x 0,25	~84 x 0,15
2,5	7 x 0,67	19 x 0,41	~50 x 0,25	~140 x 0,15
4	7 x 0,85	19 x 0,52	~56 x 0,3	~224 x 0,15
6	7 x 1,05	19 x 0,64	~84 x 0,3	~192 x 0,2
10	7 x 1,35	49 x 0,51	~80 x 0,4	~320 x 0,2
16	7 x 1,70	49 x 0,65	~128 x 0,4	~512 x 0,2
25	7 x 2,13	84 x 0,62	~200 x 0,4	~800 x 0,2
35	7 x 2,52	133 x 0,58	~280 x 0,4	~1120 x 0,2
50	19 x 1,83	133 x 0,69	~400 x 0,4	~705 x 0,3
70	19 x 2,17	189 x 0,69	~356 x 0,5	~990 x 0,3
95	19 x 2,52	259 x 0,69	~485 x 0,5	~1340 x 0,3
120	37 x 2,03	336 x 0,67	~614 x 0,5	~1690 x 0,3
150	37 x 2,27	392 x 0,69	~765 x 0,5	~2123 x 0,3
185	37 x 2,52	494 x 0,69	~944 x 0,5	~1470 x 0,4
240	37 x 2,87	627 x 0,70	~1225 x 0,5	~1905 x 0,4
300	61 x 2,50	790 x 0,70	~1530 x 0,5	~2385 x 0,4
400	61 x 2,89		~2035 x 0,5	

Cross section [mm ²]	Copper conductors [Ω/km] class 1 and class 2		Tinned copper conductors [Ω/km]	
		class 5 and class 6	class 1 and class 2	class 5 and class 6
0,14	–	~134	–	~138
0,25	–	~76	–	~79
0,34	–	~53	–	~56
0,5	36	39	36,7	40,1
0,75	24,5	26	24,8	26,7
1	18,1	19,5	18,2	20
1,5	12,1	13,3	12,2	13,7
2,5	7,41	7,98	7,56	8,21
4	4,61	4,95	4,7	5,09
6	3,08	3,3	3,11	3,39
10	1,83	1,91	1,84	1,95
16	1,15	1,21	1,16	1,24
25	0,727	0,78	0,734	0,795
35	0,524	0,554	0,529	0,565
50	0,387	0,386	0,391	0,393
70	0,268	0,272	0,27	0,277
95	0,193	0,206	0,195	0,21
120	0,153	0,161	0,154	0,164
150	0,124	0,129	0,126	0,132
185	0,0991	0,106	0,1	0,108
240	0,0754	0,0801	0,0762	0,0817
300	0,0601	0,0641	0,0607	0,0654
400	0,047	0,0486	0,0475	0,0495

Long-term current-carrying capacity of control and power supply cables with PVC insulation

Cross section [mm ²]	Group 1 current-carrying capacity [A]	Group 2 current-carrying capacity [A]	Group 3 current-carrying capacity [A]
0,14	2	2	3,5
0,25	4	4,5	6
0,34	6	6	9
0,5	9	9	12
0,75	12	12	15
1	15	15	19
1,5	18	18	24
2,5	26	26	32
4	34	34	42
6	44	44	54
10	61	61	73
16	82	82	98
25	108	108	129
35	135	135	158
50	168	168	198
70	207	207	245
95	250	250	292
120	292	292	344
150	335	335	391
185	382	382	448
240	–	453	528
300	–	523	608

Group 1: Single-conductor cables and wires with PVC insulation placed in cable ducts (BiT 1000® single-conductor).

Group 2: Multicore cables with sheaths, smooth cables, cables in metal armours or with screens, placed in open or ventilated cable ducts (BiT 500®, BiT 500°CY, BiT 750®, BiT*1000®).

Group 3: Single-conductor cables installed with a space equal to at least the outer diameter of the cable.

Correction factors for an ambient temperature above 30 °C,
permitted conductor temperature 70 °C

Ambient temperature	Correction factor
31 up to 35	0,94
36 up to 40	0,87
41 up to 45	0,79
46 up to 50	0,71
51 up to 55	0,61
56 up to 60	0,50
61 up to 65	0,35

Current-carrying capacity of cables with silicone insulation

Cross section [mm ²]	Group A current-carrying capacity [A]	Group B current-carrying capacity [A]	Group C current-carrying capacity [A]
0,25	2,8	–	5
0,5	6	7	10
0,75	9	12	15
1	12	15	19
1,5	16	18	24
2,5	21	26	32
4	28	34	42
6	36	44	54
10	49	61	73
16	65	82	98
25	85	108	129
35	105	135	158
50	140	168	198
70	175	207	245
95	210	250	292
120	250	292	344
150	–	335	391
185	–	382	448
240	–	453	528
300	–	523	608

Group A: Single-conductor cables placed singularly or in bundles in cable ducts

Group B: Multicore cables routed in the air or in ventilated cable ducts

Group C: Single-conductor cables routed in the air installed with a space equal to at least the outer diameter of the cable.

Correction factors for an ambient temperature in exceeding of 150 °C

Temperature [°C]	Correction factor
up to 150	1
151 up to 155	0,91
156 up to 160	0,82
161 up to 165	0,71
166 up to 170	0,58
171 up to 175	0,41

Current-carrying capacity - BiT1000[®] Power i BiT1000[®] H Power

Current-carrying capacity of 3, 4 and 5-wire cables, individually laid in the air or in the ground, working in three-phase systems with symmetric load

Cross section [mm ²]	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240
in the air 30 °C	23	32	42	53	75	100	133	162	197	250	308	359	412	475	564
in the ground 20 °C	31	40	52	64	86	112	145	174	206	254	305	348	392	444	517

Current-carrying capacity of 1-core cables, laid out individually in the air or in the ground, working in DC systems with a distant return conductor

Cross section [mm ²]	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400
in the air 30 °C	33	43	57	72	99	131	177	217	265	336	415	485	557	646	774	900	1060
in the ground 20 °C	41	63	82	102	136	176	229	275	326	400	480	548	616	698	815	927	1064

Current-carrying capacity of 1-core cables, arranged in a triangle in the air or in the ground, working in three-phase systems with symmetric load

Cross section [mm ²]	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400
in the air 30 °C	26	34	44	56	77	102	138	170	207	263	325	380	437	507	604	697	811
in the ground 20 °C	33	42	54	67	89	115	148	177	209	256	307	349	393	445	517	583	663

Correction factors for ambient temperature other than 30 °C

Temperatura otoczenia °C	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Correction factors	1,18	1,14	1,10	1,05	1,00	0,95	0,89	0,84	0,77	0,71	0,63	0,55	0,45	0,32

Electrical parameters -

BiTflame® S FE180/E90, BiTflame® S(St) FE180/E90

cross-section	Max. L/R ratio	Core-core capacitance	Core-screen capacitance
mm ²	μH/Ω	pF/m	pF/m
1	25	100	175
1,5	40	102	180
2,5	50	115	205

Current-carrying capacity

Ambient temperature 30 °C

Current-carrying capacity and correction factors acc. PN-IEC60364-5-523:2001

Cores cross-section [mm ²]	cables laid directly on the grips	
	2-cores cables AC single-phase and DC circuits	2 and 4-core cables three-phase circuits
	Current rating	Current rating
	[A]	[A]
1,0	19	17
1,5	24	22
2,5	33	30
4,0	45	40







Cores cross-section [mm ²]	Cables laid in insulated tubes in walls or ceilings and in cable ducts	
	2-cores cables AC single-phase and DC circuits	2 and 4-core cables three-phase circuits
	Current rating	Current rating
	[A]	[A]
1,0	14,5	13
1,5	18,5	16,5
2,5	25	22
4,0	33	30

Correction factors for different ambient temperature

Ambient temperature [°C]	30	35	40	45	50	55	60	65	70	75	80
Correction factor	1,00	0,96	0,91	0,87	0,82	0,76	0,71	0,65	0,58	0,50	0,41

Current rating for NHXH, NHXCH, (N)HXH, (N)HXCH

(according to DIN VDE 0276-604 and DIN VDE 0276-627)

Arrangement	NHXH (N)HXH BiTflame®1000			NHXCH (N)HXCH BiTflame®1000C		
						
No. of loaded cores	1	3	3	3	3	
Cross section	Laying in air			Laying in air		
1,5	33	24	26	25	27	
2,5	43	32	34	33	36	
4,0	57	42	44	43	47	
6,0	72	53	56	54	59	
10	99	74	77	75	81	
16	131	98	102	100	109	
25	177	133	138	136	146	
35	217	162	170	165	179	
50	265	197	207	201	218	
70	336	250	263	255	275	
95	415	308	325	314	336	
120	485	359	380	364	388	
150	557	412	437	416	438	
185	646	475	507	480	501	
240	774	564	604	565	580	
300	901		697			

Correction factors for multicore cables

No. of cores	Laying in the air
5	0,75
7	0,65
10	0,55
14	0,50
19	0,45
24	0,40
40	0,35
61	0,30

Core temperature during short circuit [°C]	Cores temperature at the moment of short circuit [°C]							
	90	80	70	60	50	40	30	20
	Short-circuit current density [A/mm ²] for 1 second short circuit							
250	143	149	154	159	165	170	176	181

Current rating for NHXH, NHXCH, (N)HXH, (N)HXCH

(according to DIN VDE 0276-604 and DIN VDE 0276-627)

Installation method	BiTflame®1000, BiTflame®1000C, NHXH FE180, NHXCH FE180, (N)HXH FE180, (N)HXCH FE180							
	A2		B2		C		E	
No. of loaded cores	2	3	2	3	2	3	2	3
cross-section [mm ²]	Current rating [A]							
1,5	18,5	16,5	22	19,5	24	22	26	23
2,5	25	22	30	26	33	30	36	32
4	33	30	40	35	45	40	49	42
6	42	38	51	44	58	52	63	54
10	57	51	69	60	80	71	86	75
16	76	68	91	80	107	96	115	100
25	99	89	119	105	138	119	149	127
35	121	109	146	128	171	147	185	158
50	145	130	175	154	209	179	225	192
70	183	164	221	194	269	229	289	246
95	220	197	265	233	328	278	352	298
120	253	227	305	268	382	322	410	346
150	290	259	—	—	441	371	473	399
185	329	295	—	—	506	424	542	456
240	386	346	—	—	599	500	641	538

BiTflame®1000, BiTflame®1000C, NHXH FE180, NHXCH FE180, (N)HXH FE180, (N)HXCH FE180						
Installation method	F			G		
	Single core cables with an interval of at least 1 x D from the wall					
	Without a spacing			With spacing = D		
No. of loaded cores	2	3	3	3	3	3
cross-section [mm ²]	Current rating [A]					
25	161	141	135	182	161	161
35	200	176	169	226	201	201
50	242	216	207	275	246	246
70	310	279	268	353	318	318
95	377	342	328	430	389	389
120	437	400	383	500	454	454
150	504	464	444	577	527	527
185	575	533	510	661	605	605
240	679	634	607	781	719	719
300	783	736	703	902	833	833

Guidelines for laying cable support systems in fire safety installations

1. A base for laying cable support systems should have a fire resistance classification at least equal to the cable way category (30 or 90 min.). The optimal base for cable support systems that supports their proper functioning is either concrete (category B25 min.) or natural stone.

A sprinkler system should be used if for constructional reasons it is impossible to reach base category 90 min.

2. Support systems should be run in a manner which does not risk a deterioration in proper functioning during fires (falling construction elements, installations exposed to risk of explosion, expansion joints in buildings).

3. Support systems should be run above the sprinkler system, because cable insulation is not tight during fire (mica or ceramics).

4. In the case of vertical cable support systems, compensation reserves should be provided every 3.5m (according to the DIN 4102-12) and cables should be fastened to a supporting structure min. every 300mm. Instead of compensation reserves, other elements can be used to prevent the cable from slipping after the sheath burns (cable boxes, culverts).

5. All other system elements including connection boxes and wall culverts should have a category at least equal to that of the cable support systems.

6. Cables shall be laid with a reserve compensating for ceiling bend and deflection of supporting structures.

7. Do not use clamps with sharp edges, which may block cable movement or cause insulation damage.

8. In order to ensure proper functioning of the system, it is recommended that clamps are used to stabilise the cable's distance from the base.

9. A suitably larger clamp compared to the cable diameter should be selected so as to ensure that the cable moves freely.

10. When selecting the cables, one should bear in mind the possible effects occurring during fire, particularly cable movement due to expansion of the working conductors.

In case of any questions, please contact the manufacturers of the cable support systems elements.

The way a cable support systems and its elements are designed and made determines about safety during fire.

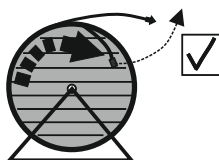
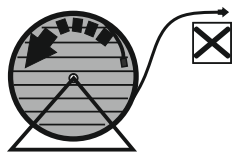
PROTECT HUMAN LIFE AND PROPERTY BY USING CLASSIFIED CABLE SUPPORT SYSTEMS!

Guidelines regarding cable installation in drag chains

Flexible cables intended for use in control and protective devices, suitable for building control circuits as well as supplying electricity should be installed in drag chains with remarkable precision and due diligence. It is advisable to follow all the guidelines included in this manual in order to ensure maximum performance and operational durability.

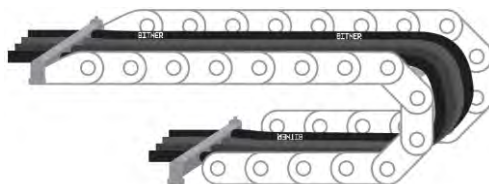
1. Correct cable unreeling

Correct cable unreeling aims at eliminating possible cable twists during installation in a drag tray. Do not unroll the cable from drums or coils that are placed in reverse position. It is advisable to unroll the cable that will be used for installation directly from the drum or the coil.



2. The choice of drag tray

Drag trays should be selected in accordance with anticipated cable operating conditions.



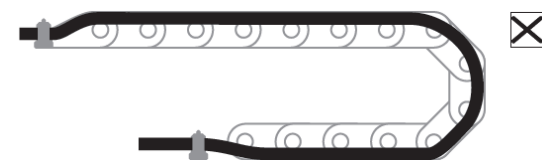
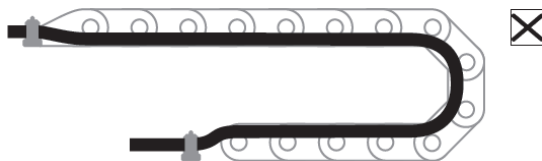
Note: it is recommended not to use multi-core cables with 25 conductors or more. In such a case it is advisable to split the required number of conductors over several cables.

3. Arrangement of the cables in a drag tray

The cable needs to be cut to appropriate length in order to ensure correct installation and strain relief in the tray. Cables should be installed loosely next to one another in separate chain zones or with the use of separators.



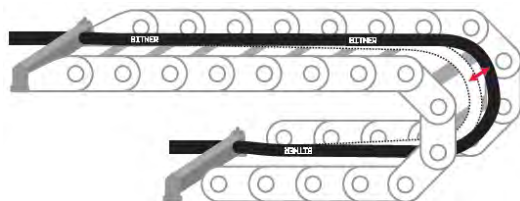
Note: please make sure that cables are installed in a position that does not allow any cable twists and that they have free space in the drag tray. Free space should equal at least 10% of the cable outer diameter. If cables having different outer diameters are installed together, it is mandatory to use special separators or install the cables in different tray zones. If the drag tray and installed cables are put in a vertical position, more free space is necessary as cables will get extended while working in a chain. After several cycles it is advisable to check and adjust cable lengths if necessary. This can be done periodically during exploitation (if required).



4. Cables in a bending part of the drag tray

Cables need to be installed in a way that would allow free movement in a bending part of a drag tray. It will ensure maximum operational durability and limit the possibility of wear and tear.

Note: it needs to be checked whether the cables are installed properly with required free space, no twists and are distributed over the tray in a correct manner.



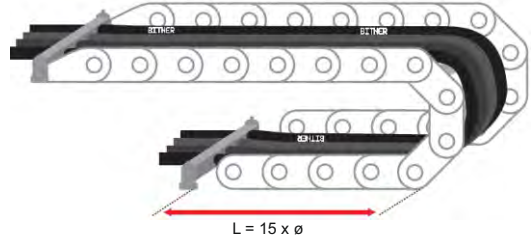
There must be no cable tensile forces over the entire drag chain.

Guidelines regarding cable installation in drag chains

5. Cable fastening

Cables must be fixed at both ends of the drag tray. They can't be fastened in the bending part of a drag tray. The distance between the fastening place and the bending tray part should be as long as possible (minimum distance is 15 x cable outer diameter).

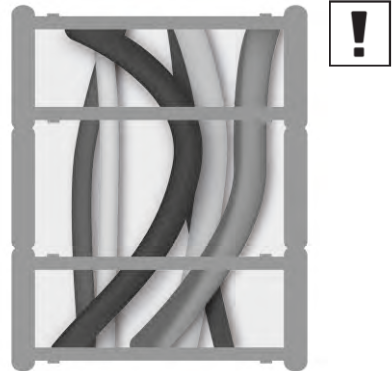
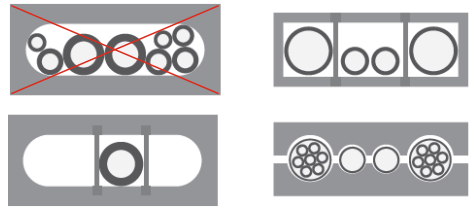
Note: do not fasten the cable in the bending part of the drag tray.



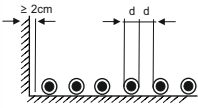
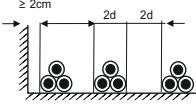
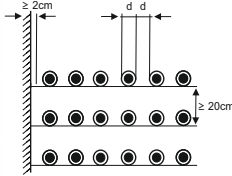
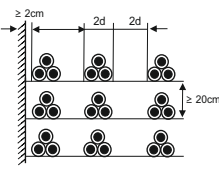
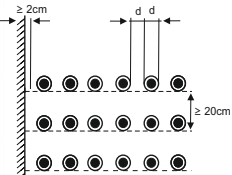
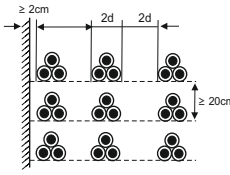
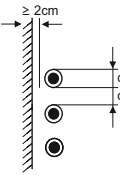
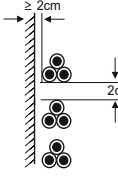
6. Proper cables distribution in a drag tray

In order to ensure proper drag chain operation and maximize its operational durability, it is advisable to spread the cables evenly on the entire drag tray. Heavier cables should be installed on the edges and the lighter ones in the middle of the drag tray.

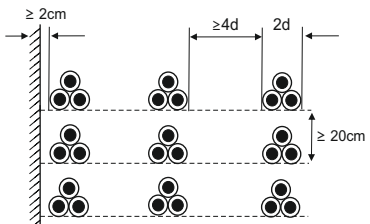
Note: incorrect distribution or cables fastening can result in unwanted cable movement against each other that can cause their blocking in the tray, deformation of cable assembly, insulation or core damage. Moreover, it can shift the centre of gravity of the installed cables what can in turn change operating path and cause mechanical damage of the drag tray.



Reduction factors for cables laid singly and in bundles in the air

Placement method	Number of cables laying on tray or ladder	installed singly with spacing = cable diameter, distance to wall $\cong 2\text{cm}$			installed singly with spacing = cable diameter, distance to wall $\cong 2\text{cm}$				
		No. of systems			No. of systems				
		1	2	3	1	2	3		
On the floor	-	0,92	0,89	0,88		0,95	0,90	0,88	
On trays	1	0,92	0,89	0,88		0,95	0,90	0,88	
	2	0,87	0,84	0,83		0,90	0,85	0,83	
	3	0,84	0,82	0,81		0,88	0,83	0,81	
	6	0,82	0,80	0,79		0,86	0,81	0,79	
On ladders	1	1,00	0,97	0,96		1,00	0,98	0,96	
	2	0,97	0,94	0,93		1,00	0,95	0,93	
	3	0,96	0,93	0,92		1,00	0,94	0,92	
	6	0,94	0,91	0,90		1,00	0,93	0,90	
At the supports or on the wall	-	0,94	0,91	0,89		0,89	0,86	0,84	

Arrangement where there is no need to apply the reduction factors

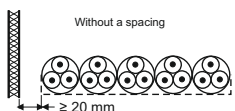
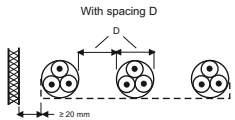
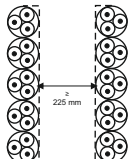
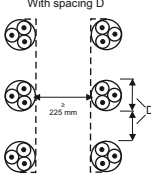
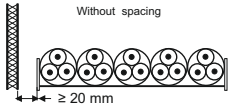
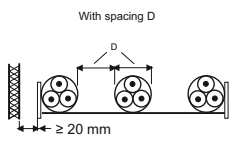


Reduction factors for cables laid in the air

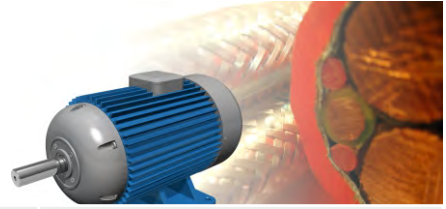
Placement method	Number of cables laying on tray or ladder	Installed with spacing = cable diameter, distance to wall ≠ 2cm					Installed as bundles without spacing and without distance to the wall						
		number of cables					number of cables						
		1	2	3	6	9	1	2	3	6	9		
On the floor	-	0,95	0,90	0,88	0,85	0,84		0,90	0,84	0,80	0,75	0,73	
On trays	1	0,95	0,90	0,88	0,85	0,84		0,95	0,84	0,80	0,75	0,73	
	2	0,90	0,85	0,83	0,81	0,80		0,95	0,80	0,76	0,71	0,69	
	3	0,88	0,83	0,81	0,79	0,78		0,95	0,78	0,74	0,70	0,68	
	6	0,86	0,61	0,79	0,77	0,76		0,95	0,76	0,72	0,68	0,66	
On ladders	1	1,00	0,98	0,96	0,93	0,92		0,95	0,84	0,80	0,75	0,73	
	2	1,00	0,95	0,93	0,90	0,89		0,95	0,80	0,76	0,71	0,69	
	3	1,00	0,94	0,92	0,89	0,88		0,95	0,78	0,74	0,70	0,68	
	6	1,00	0,93	0,90	0,87	0,86		0,95	0,76	0,72	0,68	0,66	
At the supports or on the wall	-	1,00	0,93	0,90	0,87	0,86		0,95	0,78	0,73	0,68	0,66	
Arrangement where there is no need to apply the reduction factors								Number of cables arranged side by side is unlimited					

Correction factors for bunched multicore cables

Multicore cables laid in the air - Installation Method E

Installation method	Number of cable tray or ladder	Number of multicore cables						
		1	2	3	4	6	9	
		Correction factors						
Horizontal perforated cable trays	Without a spacing 	1	1,00	0,88	0,82	0,79	0,76	0,73
		2	1,00	0,87	0,80	0,77	0,73	0,68
	3	1,00	0,86	0,79	0,76	0,71	0,66	
	With spacing D 	1	1,00	1,00	0,98	0,95	0,91	-
		2	1,00	0,99	0,96	0,92	0,87	-
		3	1,00	0,98	0,95	0,91	0,85	-
Vertical perforated cable trays	Without spacing 	1	1,00	0,88	0,82	0,78	0,73	0,72
		2	1,00	0,88	0,81	0,76	0,71	0,70
	With spacing D 	1	1,00	0,91	0,89	0,88	0,87	-
		2	1,00	0,91	0,88	0,87	0,85	-
		3	1,00	0,91	0,88	0,87	0,85	-
		4	1,00	0,91	0,88	0,87	0,85	-
Horizontal ladder, cable clamps etc.	Without spacing 	1	1,00	0,87	0,82	0,80	0,79	0,78
		2	1,00	0,86	0,80	0,78	0,76	0,73
		3	1,00	0,85	0,89	0,76	0,73	0,70
	With spacing D 	1	1,00	1,00	1,00	1,00	1,00	-
		2	1,00	0,99	0,98	0,97	0,96	-
		3	1,00	0,98	0,97	0,96	0,93	-

Selection of frequency converter cables adapted to the power of the frequency converter

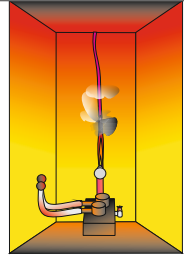


Cable	cross section [n x mm ²]		cross section [n x mm ²]		
	asymmetrical	symmetrical	asymmetrical	symmetrical	
BiTservo®2YSLCY-J BiTservo®UV 2YSLCYK-J FR BiTservo®2YSLCH-J BiTservo®3plus 2YSLCY-J BiTservo®UV 3plus 2YSLCYK-J FR BiTservo®3plus 2YSLCH-J			BiTservo®2XSLCY-J BiTservo®UV 2XSLCYK-J FR BiTservo®2XSLCH-J BiTservo®UV 2XSLCHK-J BiTservo®3plus 2XSLCY-J BiTservo®UV 3plus 2XSLCYK-J FR BiTservo®3plus 2XSLCH-J BiTservo®UV 3plus 2XSLCHK-J		
power [kW]	cross section [n x mm ²]		cross section [n x mm ²]		
	asymmetrical	symmetrical	asymmetrical	symmetrical	
0,18	4G1,5	3x1,5+3G0,25	4G1,5	3x1,5+3G0,25	
0,25	4G1,5	3x1,5+3G0,25	4G1,5	3x1,5+3G0,25	
0,37	4G1,5	3x1,5+3G0,25	4G1,5	3x1,5+3G0,25	
0,55	4G1,5	3x1,5+3G0,25	4G1,5	3x1,5+3G0,25	
1,1	4G1,5	3x1,5+3G0,25	4G1,5	3x1,5+3G0,25	
1,5	4G1,5	3x1,5+3G0,25	4G1,5	3x1,5+3G0,25	
2,2	4G2,5	3x2,5+3G0,5	4G2,5	3x2,5+3G0,5	
3	4G2,5	3x2,5+3G0,5	4G2,5	3x2,5+3G0,5	
4	4G4	3x4+3G0,75	4G4	3x4+3G0,75	
5,5	4G4	3x4+3G0,75	4G4	3x4+3G0,75	
7,5	4G4	3x4+3G0,75	4G4	3x4+3G0,75	
11	4G6	3x6+3G1	4G6	3x6+3G1	
15	4G10	3x10+3G1,5	4G10	3x10+3G1,5	
18,5	4G16	3x16+3G2,5	4G10	3x10+3G1,5	
22	4G25	3x25+3G4	4G16	3x16+3G2,5	
30	4G25	3x25+3G4	4G25	3x25+3G4	
37	4G35	3x35+3G6	4G25	3x25+3G4	
45	4G35	3x35+3G6	4G35	3x35+3G6	
55	4G50	3x50+3G10	4G35	3x35+3G6	
75	4G70	3x70+3G10	4G70	3x70+3G10	
90	4G95	3x95+3G16	4G70	3x70+3G10	
110	4G120	3x120+3G16	4G95	3x95+3G16	
132	4G150	3x150+3G25	4G120	3x120+3G16	
160	4G185	3x185+3G35	4G150	3x150+3G25	
200	4G240	3x240+3G50	4G185	3x185+3G35	

Tests for halogen-free and fire-resistant cables

Test of cable fire resistance to flame propagation for a single cable acc. to the IEC 60332-1, (PN-EN 60332-1)

The test involves putting a standard burner to a vertically fixed, 600mm-long cable section placed in a chamber, at an angle of 45° for specific time (1-2min), depending on sample diameter. The test result is considered positive if, after the fire source is removed, the flame on the sample goes out automatically and there is no visible charring or other damage along a maximum 50mm-long cable section. The duration of the test depends on the dimensions of the cable sample.



Test of cable resistance to flame propagation for bunched cables acc. to the IEC 60332-3, (PN-EN 60332-3)

A specific number of 3.5 m-long cable sections is fixed to a vertical rack placed in a chamber. The amount of flammable cable materials and the flame application time depends on the category to which a given cable belongs to.

Category A – 7 dm³ of flammable cable materials – fire application time:

40 minutes.

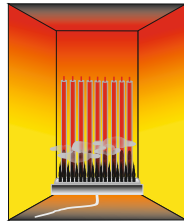
Category B – 3.5 dm³ of flammable cable materials – fire application time:

40 minutes.

Category C – 1.5 dm³ of flammable cable materials – fire application time:

20 minutes.

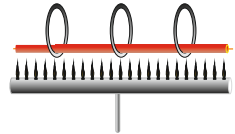
The resistance of bunched cables is correct if, after specific burning time and removal of the fire source, the flame on the sample goes out automatically and the length of charred sections does not exceed 2.5 m of the height measured above the lower edge of the burner.



Test of cable insulation resistance to long term fire exposure FE 180 acc. to the IEC 60331-11 and IEC 60331-21, -23

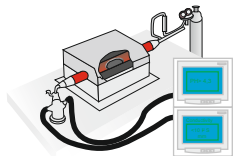
1,2 m cable sample is fixed horizontally in a special ventilated cubicle. During the test, a rated voltage is applied to the cable conductors, thus forming an open electric circuit. A standard source of fire at a temperature of 750 °C is placed under the sample.

The fire is applied for 180 minutes. The test result is considered positive if during this period there is no shorting in the circuit examined.



Test of corrosive gases emission levels for during burning process acc. to the IEC 60754-2, (PN-EN 50267)

A specified amount of non-metallic cable materials is burnt in a tubular furnace (500-600 mm). The gases generated are delivered by air blow to a washer with distilled water (1000ml). The solution thus obtained is tested with respect to acidity, pH (power hydrogen) and conductivity. The test result is considered positive if the pH value of the solution is higher than 4,3, and its conductivity is lower than 10 µS/mm.



Emission density test for smokes released during cable burning process acc. to the IEC 61034-1 and IEC 61034-2, (PN-EN 50268)

Cable sections (1m) are burned in a special cube-shaped cubicle with a photometric measuring system installed on opposite walls. The number of samples depends on the external diameter of the cable. The photometric measuring system registers light transmittance inside the cubicle. The test result is considered positive if, after completion of the test, light transmittance is not lower than 60%.



Tests for halogen-free and fire-resistant cables

Circuit integrity tests under fire conditions: PH classification

Method used to test thin cables with external diameter no higher than 20 mm.

The standards according to which individual cables are tested are effective throughout Poland, according to the **PN-EN 50200**

A 1200mm-long "U"-shaped cable sample

is fixed in a chamber onto a board made of inflammable material (on single clamps spaced every 30 cm).

A rated voltage is applied to one side of the conductors, and the load is connected to the other side.

During the test, the cable is exposed to fire (temperature 830+870 °C) and mechanical impact applied for specific time.

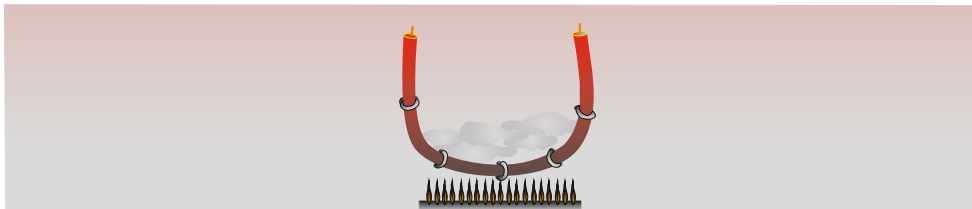
The time measured during which the cable functions properly corresponds to the so - called fire resistance class:

PH 15 - 15 min,

PH 30 - 30 min,

PH 60 - 60 min,

PH 90 - 90 min.



Test method and requirements when using fire and mechanical impact - cables and conductors for rated voltage 0,6/1 kV

The standards according to which individual cables are tested are effective throughout Poland, according to the **PN-IEC 60331-31:2004**

A 1500mm-long arc-shaped cable sample is fixed on the board made of inflammable material (on single clamp spaced every 30 cm).

A rated voltage is applied to one side of the conductors, and the load is connected to the other side.

During the test, the cable is exposed to fire (temperature 830+870 °C) and mechanical impact applied at specific intervals (every 5 min).

The time measured during which the cable functions properly corresponds to the so-called fire resistance class:

PH 15 - 15 min,

PH 30 - 30 min,

PH 60 - 60 min,

PH 90 - 90 min.



Tests for halogen-free and fire-resistant cables

Circuit integrity tests under fire conditions: E30, E90 classification

The DIN 4102-12 standard is not obligatory in Poland.
Tests conducted according to this standard involve checking cable support systems, that is:

CABLES + SUPPORTING SYSTEM + FASTENINGS

The tests are carried out in a chamber with min. dimensions 2x3x2,5m. The temperature increases up to 970 °C (according to the curve specified in the standard). Cable ways are laid along the chamber ceiling. Sections of the following cable types are used in the tests:

- 2 power cables 4 x 1,5 mm²
- 2 power cables 4 x 50 mm²
- 2 telecommunication cables with the lowest acceptable number of pairs

The voltage of 400 V is connected to the power cables, and 100 V - to the telecommunication cables.
If there is no break or shorting in the electric circuit during a specified time, the cable line is classified as follows:

Classes of fire integrity functions:

E30 - for fire integrity functions time ≥ 30 minutes

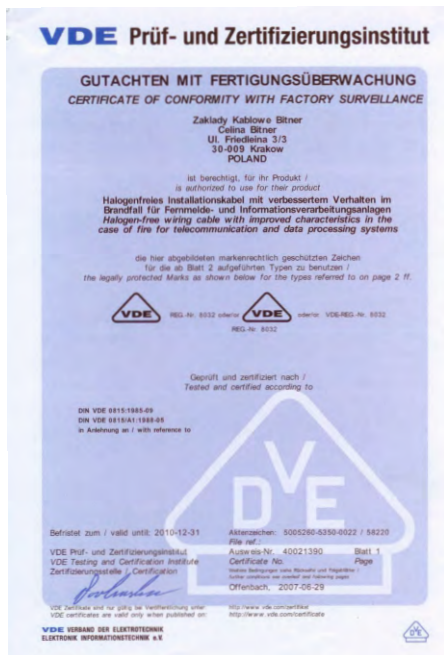
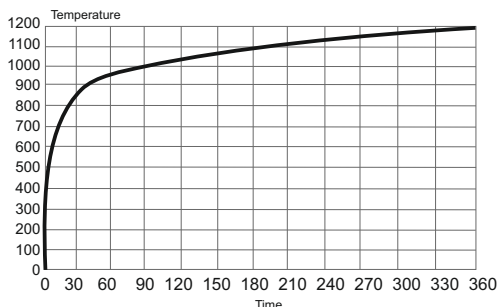
E90 - for fire integrity functions time ≥ 90 minutes

Tests carried out in a horizontal position are transferred to vertical and oblique positions provided that the cables are protected against slipping (fastened).



Zdjęcie komory ogniowej przeznaczonej do testów wg DIN 4102-12

ISO - Diagram "Temperature-Time"



CPR

Construction Products Regulation

From 1/07/2017 new rules for CE marking of construction products in accordance with Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 came into force.

The new regulation, also called CPR, has replaced the existing Directive 89/106 / EEC and sets new harmonized conditions for the placing construction products on the market. Its validity in the field of cables and wires is closely related to the entry into force of the new EN 50575 standard, which specifies the requirements for electric cables and wires as construction products. The harmonized standard PN-EN 50575 specifies the methods of testing, verification and confirmation of the products performance by cable manufacturers.

A consequence of the process of harmonizing EN 50575 with the CPR Regulation is the obligation to issue a Declaration of Performance (DoP) and marking products intended for construction with the CE mark according to the requirements of the abovementioned standard. The Declaration of Performance should be issued by the cable manufacturer after having previously tested the products in the Notified Laboratory and classified in accordance with EN 13501-6.

BITNER
ISO 9001:2008, ISO 14001:2004

DECLARATION OF PERFORMANCE
No. 0364/DWU/1/2017

DoP no.

1. Product: **BIT L2 BUS FC LSOH 1 x 2 x 0,64/2,55 mm**
Cable type

2. Product type, part, series: **BIT L2 BUS FC LSOH 1 x 2 x 0,64/2,55 mm**
Cables range

Application: **Communication cables intended for use in buildings and other civil engineering works with the objective of limiting the generation and spread of fire.**

3. Application:

4. Manufacturer (full name and address): **Zakłady Kablowe BITNER sp. z o.o. (Cable Factory BITNER Ltd.)
3/3 Friedleina Street, 30-009 Kraków
Production plant: 32-353 Trzyciąż near Kraków 165**

5. System or systems of evaluation and verification of functional properties stability: **3**
AVCP: 1+/3/4

6. Identification of notified bodies: **NB 1438**
Identification of the notification body

7. Declared properties:

Subject of Declaration of Performance	Functional properties	Harmonised standard
Reaction to fire	Dca-s2,d2,s1	PN-EN 50575:2015-03+A1:2016-11
Dangerous substances	none	

8. Functional properties declared in Point 7 are applicable to the product specified in Point 1 and 2 of this declaration.
Declared properties

This Declaration of Performance is issued under the sole responsibility of the manufacturer being subject of this declaration and indicated in point 4.

ZAKŁADY KABLOWE BITNER
sp. z o.o.
Ul. Józefa Friedleina 3/3, 30-009 Kraków
Działalność w Rozwoju Lokalnym
Inżynier Stanisławski
Name and signature

Trzyciąż, 29.12.2017
Place and date of issue

This document replaces DoP no 0364/DWU/1/2017 of 14.07.2017.

Cable Factory BITNER (Ltd.) 30-009 Kraków, 3/3 Józefa Friedleina Street
Correspondence address: 32-353 Trzyciąż 165, Telephone: +48 12 389 40 24 • fax: +48 12 380 17 00
www.bitner.com.pl
bitner@bitner.com.pl
The District Court for Kraków-Śródmieście in Kraków, 11th Economic Division of the National Court Register
KRS number 000053658, NIP (Tax Identification Number): 6372104473, REGON (Statistical number): 121183910,
BDO: 000018818
The share capital: 63 807 588 zł

Construction Products Regulation

Reaction to fire acc. to EN 13501-6:

Class	Test methods	Additional classification	Examples of products
B1ca	EN 50399 i EN 60332-1-2	smoke emission, drops, acidity	-
B2ca	EN 50399 i EN 60332-1-2	smoke emission, drops, acidity	halogen-free cables
Cca	EN 50399 i EN 60332-1-2	smoke emission, drops, acidity	halogen-free cables
Dca	EN 50399 i EN 60332-1-2	smoke emission, drops, acidity	PVC cables
Eca	EN 60332-1-2	-	PVC cables
Fca	no performance determined	-	other cables

The EN 13501-6 standard introduces the concept of "reaction to fire class" and at the same time defines individual classes:

Aca, B1ca, B2ca, Cca, Dca, Eca, Fca

The highest class of reaction to fire is Aca class. The lowest class Fca, which means no requirements for reaction to fire. The current state of the art allows the production of cables with insulation and sheath made of thermoplastics that meet the requirements of the B2ca class. In practice, we will deal with classes:

B2ca, Cca, Dca, Eca, Fca

Depending on the reaction to fire class, the various qualification procedures set out in EN 50575 will be applied:

AVCP System 1+ - Classification B2ca and Cca made by Notified Body. In the assessment process, we perform a cable test at the Notified Laboratory and audits of the production process and factory production control carried out by the Notified Body. The Declaration of Performance is issued by the manufacturer based on the certificate issued by the Notified Body. Qualification of cables in the 1+ system is also associated with continuous production supervision by a Notified Body.

AVCP System 3 - Classification Eca and Dca made by the manufacturer based on tests carried out by the Notified Laboratory. The Declaration of Performance is issued by the manufacturer based on the qualification report from Notified Laboratory.

AVCP System 4 - Classification Fca made by the manufacturer - the cables do not meet any other reaction to fire class. The Declaration of Performance is issued by the manufacturer based on own research.

Cable Factory BITNER make every effort to ensure that the cables we offer for installation in buildings meet the requirements of the CPR Regulation in the field of fire safety. For several years, we have been researching our products and materials used for production, which allowed us to develop cables that meet the requirements of the Regulation. We confirm the properties of our products in Notified Laboratories and provide Declarations of Performance for our cables.

If you have questions regarding the use of products in accordance with the CPR, product qualifications and testing of new cable constructions placed on the market, please contact the Technical Advisor : +48 12 389 40 24, ext. 123

Guidelines regarding the handling of cable drums during transport and storage

1. In order to transport drums, one shall use suitable devices. Cables must be transported vertically and drums must be fixed in a way which would prevent them from rolling away.
2. Cable drums must be handled with great care. Improper handling procedures may cause the cable damage therefore the rules concerning transport, unloading and storage must be obeyed.
3. Lifting and transport of drums by means of a forklift is only permitted from the flange side. The fork shall never touch the cable or its protective cover in order to avoid damage.
4. Drums shall be labelled to allow easy and quick identification. Therefore, every drum has got an identification label with a cable type, its length and the number of production-identifying code.

Loading and transport of the drums:

Cable drums should only be transported with suitable vehicles. They shall also be fixed and protected against rolling down or shifting during transportation. Different drum sizes or cable types require different security measures. Drums should be protected by means of wooden bars (Fig. 1) or wedges in the heels of the flanges (Fig. 2).

Figure 1

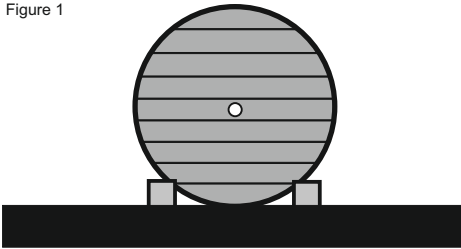
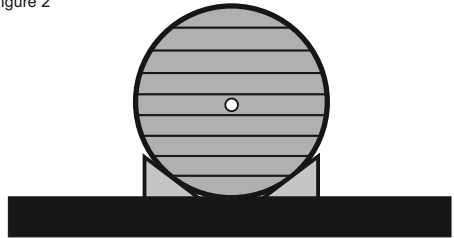


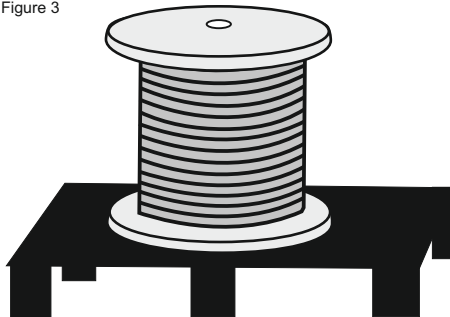
Figure 2



Drums shall be transported in one of the following ways :

- ⇒ „vertically” (flange placed vertically) - drums to Φ -140 cm (Fig. 2)
- ⇒ „horizontally” (flange placed horizontally) - drums to Φ -120cm; if drums are fixed to the pallets they are dispatched on, they can be piled up (Fig. 3).

Figure 3



Guidelines regarding the handling of cable drums during transport and storage

Drums unloading:

In order to unload drums, proper unloading equipment is required (a forklift, a crane, a hydraulic crane, a lift – Fig. 4). Drums cannot be thrown off the vehicle. It may be dangerous or can damage the drum (what concomitantly means damaging the cable).

Figure 4

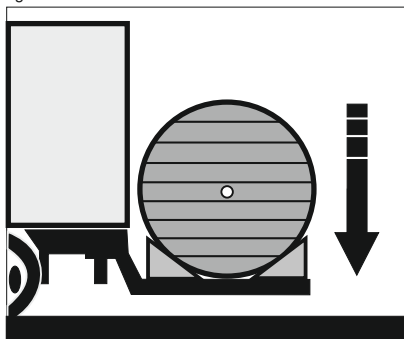
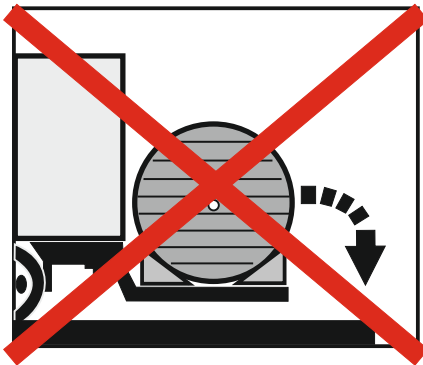


Figure 5



Unloading shall take place in the designated site where it is possible to maneuver the unloading equipment in a safe and free manner. The person responsible for the discharge shall decide when to start the procedure. They are also responsible for designating the right place of unloading. The procedure starts when the vehicle enters the Receiver's site. The answerable person decides how to do it and what equipment to use. Other employees taking part in the aforementioned procedure are obliged to take particular care and obey the given safety rules.

When unloading drums by means of a crane, it is required to be particularly careful in order to avoid the cable damage. Figure 6 shows the correct way of lifting the drum. Unloading the drum in other way (e.g. Figure 7) is not recommended.

Crane unloading is possible only when using the following means of transport:

- ⇒ Vehicle with a pulled top tarpaulin
- ⇒ Vehicle with no tarpaulin

Figure 6

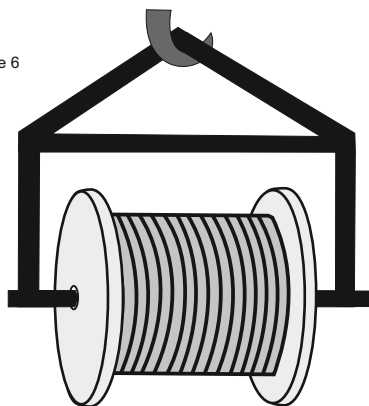


Figure 7



Guidelines regarding the handling of cable drums during transport and storage

Proper cable storage:

Drums with cables should be stored in a designated storage place. It is advisable to protect the drums by means of wooden bars or wedges. Improper storing conditions may cause danger for people working in a storage place and can also contribute to cables and drums damage.

Drums should be stored in good conditions and cannot be exposed to high temperatures, chemical substances, acids etc.

Important!

Under no circumstances can the damaged drum with a cable be transported! The cable must be rewound on a new, undamaged drum.

Cables designed for indoor installations should be protected against UV and weather conditions when stored.

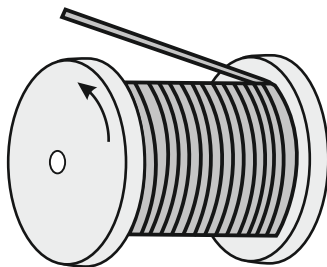
Cable unreeling:

Unreeling the cables from drums should take place in vertical drum position (Fig. 9). Under no circumstances can the cables be unreeled in horizontal drum position (Fig. 8) - it can cause their entanglement and consequently make the unreeling impossible.

Figure 8



Figure 9

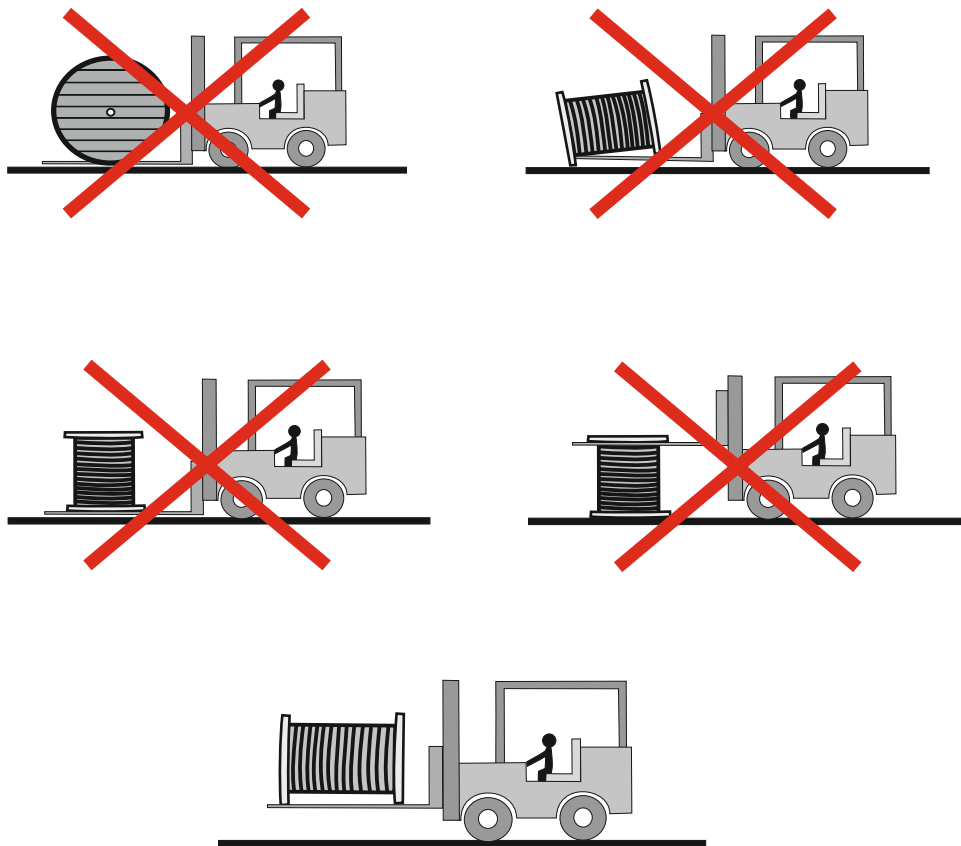


Guidelines regarding the handling of cable drums during transport and storage

Transport of drums with cables:

Drums shall be transported by means of the fork of a fork lift and placed with their flanges towards the moving direction. The fork shall also support drum flanges in a firm way and its width shall be adjusted to the drum or pallet size.

Figure 10



Guidelines regarding the handling of cable drums during transport and storage

The fork shall only support drum flanges (Figure 11) - never the cable itself or its protective cover (Fig. 12 and 13)

Figure 11

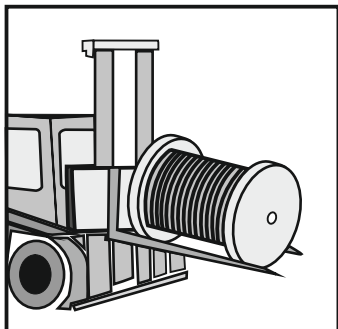


Figure 12

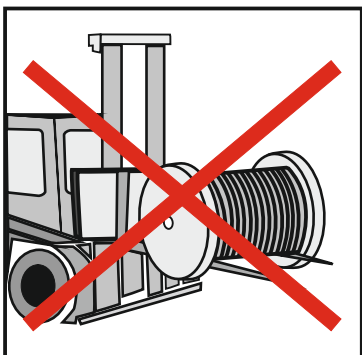


Figure 13

