

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

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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

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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