

BiTflame[®] 1000 FE180/E90



Fire resistant, halogen-free control and power supply cables, rated 0,6/1kV



Technical data:

Operating temperature:

Fixed installation: -40°C to 90°C

Min. installation temp.: -5°C

Permissible conductor operating temperature:

90°C

Permissible conductor temperature during short circuit:

250°C

Operating voltage:

$U_0/U=0,6/1kV$

Test voltage: 3500V

Insulation resistance: >2000MΩxkm

Min. bending radius: 10xØ

Construction:

Conductors: bare, annealed copper conductors, singlewires cl1 (RE) or multiwires cl. 2 (RM), acc. to EN 60228

Insulation: special, cross-linked halogen-free compound

Core identification: up to 5 cores color coded (see table) >5 cores black, number coded conductors, cables with protective earth conductor marked G (e.g. 7G1,5)

Filling inserts: special halogen-free compound, only in multi-core cables over 16mm²

Outer sheath: special halogen-free, self-extinguishing and flame retardant (acc. to EN 60332-1, EN 50265, IEC 60332-1, EN 60332-3-24, IEC 60332-3 cat. C), UV resistant

Outer sheath colour: orange

Application:

Fire resistant E90 cables that provide security 90 minutes of power supply or controlling during a fire. The cables are designed for power supply in buildings with higher requirements of fire protection (skyscrapers, hospitals, shopping centers, tunnels, museums, theaters, cinemas).

Cables can be used to supply power and control to receivers (lighting, fire protection appliances, pumps). Cables with electrical support E90 must be installed on appropriate bearing systems tested in accordance with DIN 4102-12. Cables made of halogen-free materials, not emitting harmful substances during a fire. They are suitable for fixed installation in buildings, in industrial equipment, technological lines, machines working in dry and damp rooms - also in public buildings.

Cables are suitable for outdoor installation. The outer sheath is UV resistant.

Tests:

Flame propagation test for a single insulated cable: EN 60332-1, IEC 60332-1, 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 602754-2, IEC 602754-2, 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: VDE 4102-12

Fire integrity function of cable installation (PH90): EN 50200

cables without green-yellow core

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]
B62600	1x1,5 RE	6,0	53	14,4	B62616	2x1,5 RE	10,4	131	28,0
B62601	1x2,5 RE	6,4	65	24,0	B62617	2x2,5 RE	11,2	160	48,0
B62602	1x4 RE	6,8	84	38,4	B62618	2x4 RE	12,1	202	76,8
B62603	1x6 RE	7,3	105	57,6	B62619	2x6 RE	13,1	255	115,2
B62604	1x10 RE	8,1	150	96,0	B62620	2x10 RE	14,7	350	192,0
B62605	1x16 RE	9,1	220	153,6	B62621	2x16 RE	16,7	505	307,2
B62606	1x25 RM	11,2	330	240,0	B62622	2x25 RM	20,8	770	480,0
B62607	1x35 RM	12,3	425	336,0	B62623	2x35 RM	23,1	985	672,0
B62608	1x50 RM	14,4	588	480,0	B62624	2x50 RM	27,4	1365	960,0
B62609	1x70 RM	15,8	775	672,0	B62625	2x70 RM	30,2	1790	1344,0
B62610	1x95 RM	17,9	1060	912,0	B62626	3x1,5 RE	11,0	150	43,2
B62611	1x120 RM	19,6	1280	1152,0	B62627	3x2,5 RE	11,8	186	72,0
B62612	1x150 RM	22,2	1640	1440,0	B62628	3x4 RE	12,8	240	115,2
B62613	1x185 RM	23,9	1990	1776,0	B62629	3x6 RE	13,8	325	172,8
B62614	1x240 RM	27,6	2545	2304,0	B62630	3x10 RE	15,5	460	288,0
B62615	1x300 RM	29,7	3090	2880,0	B62631	3x16 RE	17,7	675	460,8

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Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
B62632	3x25 RM	22,1	1035	720,0
B62633	3x35 RM	24,6	1335	1008,0
B62634	3x50 RM	29,3	1870	1440,0
B62635	3x70 RM	32,3	2460	2016,0
B62636	3x95 RM	36,7	3380	2736,0
B62637	3x120 RM	40,5	4090	3456,0
B62638	3x150 RM	46,0	5255	4320,0
B62639	3x185 RM	49,8	6370	5328,0
B62640	3x240 RM	57,6	8190	6912,0
B62641	4x1,5 RE	11,9	186	57,6
B62642	4x2,5 RE	12,8	235	96,0
B62643	4x4 RE	13,9	305	153,6
B62644	4x6 RE	15,1	412	230,4
B62645	4x10 RE	17,0	590	384,0
B62646	4x16 RE	19,5	875	614,4
B62647	4x25 RM	24,4	1355	960,0
B62648	4x35 RM	27,2	1760	1344,0
B62649	4x50 RM	32,6	2480	1920,0
B62650	4x70 RM	36,0	3280	2688,0

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
B62651	4x95 RM	41,1	4490	3648,0
B62652	4x120 RM	45,2	5440	4608,0
B62653	4x150 RM	51,4	6995	5760,0
B62654	4x185 RM	57,4	8640	7104,0
B62655	4x240 RM	64,3	10910	9216,0
B62656	5x1,5 RE	12,9	225	72,0
B62657	5x2,5 RE	14,0	285	120,0
B62658	5x4 RE	15,2	372	192,0
B62659	5x6 RE	16,5	482	288,0
B62660	5x10 RE	18,7	700	480,0
B62661	5x16 RE	21,4	1045	768,0
B62662	5x25 RM	27,0	1620	1200,0
B62663	5x35 RM	30,3	2110	1680,0
B62664	5x50 RM	36,3	2995	2400,0
B62665	5x70 RM	40,1	3975	3360,0
B62666	5x95 RM	45,8	5460	4560,0
B62667	5x120 RM	50,4	6615	5760,0
B62668	5x150 RM	57,4	8505	7200,0
B62669	5x185 RM	62,0	10320	8880,0

cables with green-yellow core

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
B62670	1G1,5 RE	6,0	53	14,4
B62671	1G2,5 RE	6,4	65	24,0
B62672	1G4 RE	6,8	84	38,4
B62673	1G6 RE	7,3	105	57,6
B62674	1G10 RE	8,1	150	96,0
B62675	1G16 RE	9,1	220	153,6
B62676	1G25 RM	11,2	330	240,0
B62677	1G35 RM	12,3	425	336,0
B62678	1G50 RM	14,4	588	480,0
B62679	1G70 RM	15,8	775	672,0
B62680	1G95 RM	17,9	1060	912,0
B62681	1G120 RM	19,6	1280	1152,0
B62682	1G150 RM	22,2	1640	1440,0
B62683	1G185 RM	23,9	1990	1776,0
B62684	1G240 RM	27,6	2545	2304,0
B62685	1G300 RM	29,7	3090	2880,0
B62686	3G1,5 RE	11,0	150	43,2
B62687	3G2,5 RE	11,8	186	72,0
B62688	3G4 RE	12,8	240	115,2
B62689	3G6 RE	13,8	325	172,8
B62690	3G10 RE	15,5	460	288,0
B62691	3G16 RE	17,7	675	460,8
B62692	3G25 RM	22,1	1035	720,0
B62693	3G35 RM	24,6	1335	1008,0
B62694	3G50 RM	29,3	1870	1440,0
B62695	3G70 RM	32,3	2460	2016,0
B62696	3G95 RM	36,7	3380	2736,0
B62697	3G120 RM	40,5	4090	3456,0
B62698	3G150 RM	46,0	5255	4320,0
B62699	3G185 RM	49,8	6370	5328,0
B62700	3G240 RM	57,6	8190	6912,0
B62701	4G1,5 RE	11,9	186	57,6
B62702	4G2,5 RE	12,8	235	96,0

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
B62703	4G4 RE	13,9	305	153,6
B62704	4G6 RE	15,1	412	230,4
B62705	4G10 RE	17,0	590	384,0
B62706	4G16 RE	19,5	875	614,4
B62707	4G25 RM	24,4	1355	960,0
B62708	4G35 RM	27,2	1760	1344,0
B62709	4G50 RM	32,6	2480	1920,0
B62710	4G70 RM	36,0	3280	2688,0
B62711	4G95 RM	41,1	4490	3648,0
B62712	4G120 RM	45,2	5440	4608,0
B62713	4G150 RM	51,4	6995	5760,0
B62714	4G185 RM	57,4	8640	7104,0
B62715	4G240 RM	64,3	10910	9216,0
B62716	5G1,5 RE	12,9	225	72,0
B62717	5G2,5 RE	14,0	285	120,0
B62718	5G4 RE	15,2	372	192,0
B62719	5G6 RE	16,5	482	288,0
B62720	5G10 RE	18,7	700	480,0
B62721	5G16 RE	21,4	1045	768,0
B62722	5G25 RM	27,0	1620	1200,0
B62723	5G35 RM	30,3	2110	1680,0
B62724	5G50 RM	36,3	2995	2400,0
B62725	5G70 RM	40,1	3975	3360,0
B62726	5G95 RM	45,8	5460	4560,0
B62727	5G120 RM	50,4	6615	5760,0
B62728	5G150 RM	57,4	8505	7200,0
B62729	5G185 RM	62,0	10320	8880,0
B62730	7G1,5 RE	14,0	276	100,8
B62731	7G2,5 RE	15,1	357	168,0
B62732	7G4 RE	16,5	473	268,8
B62733	7G6 RE	18,0	620	403,2
B62734	7G10 RE	20,4	915	672,0

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Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
B62735	10G1,5 RE	17,6	392	144,0
B62736	10G2,5 RE	19,1	510	240,0
B62737	10G4 RE	20,9	665	384,0
B62738	12G1,5 RE	18,1	437	172,8
B62739	12G2,5 RE	19,7	572	288,0
B62740	12G4 RE	21,6	770	460,8
B62741	14G1,5 RE	19,4	520	201,6
B62742	14G2,5 RE	21,1	675	336,0
B62743	14G4 RE	23,1	910	537,6

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
B62744	19G1,5 RE	21,5	665	273,6
B62745	19G2,5 RE	23,4	875	456,0
B62746	19G4 RE	25,7	1185	729,6
B62747	24G1,5 RE	25,1	835	345,6
B62748	24G2,5 RE	27,5	1105	576,0
B62749	30G1,5 RE	26,6	995	432,0
B62750	30G2,5 RE	29,2	1335	720,0
B62751	48G1,5 RE	33,1	1550	691,2
B62752	48G2,5 RE	36,4	2085	1152,0

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

Cores coloring:

Number of 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