

BiTflame® AS(St) FE180/PH120/E90

Fire resistant, halogen-free cable



24 months warranty

BITNER BiTflame®AS(St) FE180/PH120/E90



Internal application



EN 60332-1



IEC 60332-3
EN 60332-3



halogen-free
EN 60754



low smoke emission
EN 61034



insulation
resistance
to fire 180 min.



PH120 fire
integrity function



E90 fire
integrity function



sprinklers
zone



B2ca

Technical data:

Thermal parameters:

Temperature range:

operating temperature: -25 °C to 70 °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

Capacitance of pair at 1 kHz (max.):

150 nF/km

Inductance (max.): 0,7 mH/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Conductors:

solid copper conductor

Insulation:

mica tape wrapping and halogen-free compound

Core colours:

acc. to table „conductor insulation colour“ in Technical Data chapter

Core arrangement:

pairs twisted parallelly

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 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 120 minutes (PH120) 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/PH120/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).

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 (PH120):

EN 60332-1-2, IEC 60332-1-2, VDE 0482-332-1

EN 60332-3-22, IEC 60332-3-22, VDE 0482-332-3-22

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

IEC 60331-21, VDE 0472-814

DIN 4102-12

EN 50200

Cable characteristics:

- fire resistant
- halogen-free
- flame retardant
- no corrosive gases
- low smoke emission
- increased insulation resistance (FE180)
- fire integrity function (PH120)
- low fire load (calorific value)

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Pair number	Core insulation colours	
	core a	core b
1	white	blue
2		orange
3		green
4		brown
5		grey
6	red	blue
7		orange
8		green

Cat. no.	nx2xmm	Approximate outer diameter [mm]	Calculated cable weight [kg/km]
B11020	1x2x0,8	5,7	36
B11021	2x2x0,8	7,9	69
B11022	3x2x0,8	8,7	79
B11023	4x2x0,8	10	100
B11024	5x2x0,8	10,9	127
B11025	8x2x0,8	12,7	174
B11026	1x2x1,0	6,2	45
B11027	2x2x1,0	8,8	89
B11029	4x2x1,0	11,2	132
B11030	5x2x1,0	12,3	170
B11031	8x2x1,0	14,2	235
B11032	1x2x1,4	7,4	66
B11033	2x2x1,4	10,6	140
B11034	4x2x1,4	13,7	211
B11035	1x2x1,8	8,9	102
B11036	1x2x2,3	10,1	141
B11037	2x2x2,3	14,7	302
B11038	1x2x2,8	11,3	189

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