

BiTflame[®] AS(St) FE 180/E90

RoHS 2015/863/EU



LVD 2014/35/EU

CPR

CPR 305/2011

24 months warranty

Fire resistant, halogen-free telecommunication cable



internal application



EN 60332-1-2



EN 60332-3



halogen-free
EN 60754



low smoke emission
EN 61034



insulation
resistance
to fire 180min



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: -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

Design:

Cores: 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
0,4mm 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 3h (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 30cm and 60cm).

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 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

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(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