

HTKSH FE180/PH120 E90

Fire resistant, halogen-free telecommunication cable



BITNER HTKSH FE180/PH120/E90



internal application



EN 60332-1



EN 60332-3



halogen-free
EN 60754



low smoke emission
EN 61034



FE180
insulation
resistance
to fire 180min



PH120 fire
integrity function



E90 fire
integrity function



sprinklers zone

Technical data:

Thermal parameters:

Temperature range:

Fixed installation: -30°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 (min.): 500MΩ·km

Pair loop resistance at 20°C (max.):

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 1kHz

(maximum): 120 nF/km

Mechanical parameters:

Min. bending radius: 10 x Ø

Design:

Cores:

Insulation:

Core colours:

Cores arrangement:

Outer sheath:

solid copper conductor class 1, acc. to EN 60228

mica tape wrapping and halogen-free compound
acc. to table „conductor insulation colour” in Technical Data
chapter (acc. to PN-T-90321:1992)

pairs twisted together parallelly

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. 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. HTKSH 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 30cm and 60cm).

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 (PH120)
- installation on clamps located every 60cm in E90 systems
- low fire load (calorific value)

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 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 60331-21, VDE 0472-814

Fire integrity function of cable support system E90: VDE 4102-12

Fire integrity function of cable installation (PH120): EN 50200

HTKSH FE180/PH120 E90

Fire resistant, halogen-free telecommunication cable

No cat.	nx2xmm	Outer diameter* [mm]	Approx. cable weight [kg/km]
B10900	1x2x0,8	5,2	32
B10901	1x4x0,8	6,0	50
B10902	2x2x0,8	7,5	65
B10903	3x2x0,8	8,2	74
B10904	4x2x0,8	9,5	93
B10905	5x2x0,8	10,4	119
B10906	7x2x0,8	11,5	145
B10907	8x2x0,8	12,4	173
B10908	10x2x0,8	13,9	210
B10909	1x2x1,0	5,8	41
B10910	1x4x1,0	6,7	65
B10911	2x2x1,0	8,4	84
B10912	3x2x1,0	9,2	97
B10913	4x2x1,0	10,7	125
B10914	5x2x1,0	12,1	172
B10915	7x2x1,0	13,4	210
B10916	8x2x1,0	14,0	234
B10917	10x2x1,0	15,7	285
B10918	1x2x1,4	6,9	62
B10919	1x4x1,4	8,0	104
B10920	2x2x1,4	10,1	133
B10921	3x2x1,4	11,2	155
B10922	4x2x1,4	13,4	213
B10923	5x2x1,4	14,8	273
B10924	7x2x1,4	16,3	340
B10925	8x2x1,4	17,5	398
B10926	10x2x1,4	19,6	486

No cat.	nx2xmm	Outer diameter* [mm]	Approx. cable weight [kg/km]
B10927	1x2x1,8	8,4	95
B10928	1x4x1,8	9,7	161
B10929	2x2x1,8	12,7	218
B10930	3x2x1,8	14,0	254
B10931	4x2x1,8	16,2	326
B10932	5x2x1,8	18,2	437
B10933	7x2x1,8	20,1	544
B10934	8x2x1,8	21,1	610
B10935	10x2x1,8	23,9	758
B10936	1x2x2,3	9,6	134
B10937	1x4x2,3	11,2	233
B10938	2x2x2,3	14,6	304
B10939	3x2x2,3	16,1	364
B10940	4x2x2,3	19,2	489
B10941	5x2x2,3	21,1	628
B10942	7x2x2,3	23,6	805
B10943	8x2x2,3	24,7	905
B10944	10x2x2,3	27,7	1111
B10945	1x2x2,8	10,8	180
B10946	1x4x2,8	13,0	335
B10947	2x2x2,8	16,5	410
B10948	3x2x2,8	18,7	517
B10949	4x2x2,8	21,8	671
B10950	10x2x2,8	29,3	1540

*Outer diameter tolerance: +/-5%
Cable Factory BITNER reserve the right to modify specifications without prior notification
Note: On customer's request other cross sections or number of cores can be produced