TECHNOKABEL®

ISO 9001:2008

(N)HXH FE180 PH90/E90 0.6/1 kV; (N)HXH-J FE180 PH90/E90 0.6/1 kV

FIRE RESISTANT HALOGEN FREE POWER CABLES

APPLICATIONS

(N)HXH FE180 PH90/E90 0.6/1 kV and **(N)HXH-J FE180 PH90/E90 0.6/1 kV** fire resistant power cables, insulated and sheathed with halogen free compounds, are intended for power supply to fire protection equipment which is to operate in fire conditions (e.g. water pumps in fire extinguishing systems, smoke removing fans).

Halogen free cables shall be applied in locations where, in case of fire, higher safety for human beings and expensive electronic equipment is required.

Functions of the cables are maintained – power is supplied to equipment which must operate in fire conditions and during fire fighting. The cables are flame retardant and their smoke emission is low, emitted fumes are non toxic and non corrosive.

The cables are certified by Scientific and Research Development Centre for Fire Protection (Centrum Naukowo-Badawcze Ochrony Przeciwpożarowej) at Józefów.

The cables are suitable for indoor and outdoor installations.

CONSTRUCTION

conductor	–	bare copper, solid or stranded, according to PN-EN 60228, EN 60228, **RE** - single wire round conductor; **RM** - multiwire round conductor
insulation	–	double insulation ,cross-linked silicone rubber - colours in accordance with PN-HD 308,
filler	–	filler made of halogen free compound,
inner sheath	–	inner sheath made of halogen free compound,
sheath	–	orange, cable sheath made of halogen free compound according to HD 604 S1 and VDE 0276-604 –HM4, (oxygen index bigger than 35%).

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CE RoHS CNBOP-PIB

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CHARACTERISTICS

The cables maintain their functions for 90 minutes, meeting requirements of DIN 4102-12 and PN-EN 50200 standards

Operating voltage	0.6/1 kV
Voltage test	4.0 kV rms
Insulation resistivity at 90°C, minimum	10^{11} Ω·cm
Inductance, approximate	0.7 mH/km
Conductor temperature limit	
in work conditions	+ 90°C
at short-circuit	+ 250°C
Corrosivity of emitted gases per PN-EN 50267-2-3, IEC 60754-2	
pH, approximate	6.8
conductivity, approximate	0.4 µS/mm
Smoke density per PN-EN 61034-2, IEC 61034-2	
light transmittance, minimum	94%

Operating temperature range	
during operation	from -30 to +90°C
during installation	from -5 to +50°C
Minimum bending radius:	single core cables -15 x cable diameter multi core cables -12 x cable diameter
Cable combustibility	flame retardant
Circuit integrity *	
E90	DIN 4102-12
PH90	PN-EN 50200 or PN-EN 50362
Insulation integrity FE180	IEC 60331-21; IEC 60331-11
Combustibility tests	PN-EN 50266-2-4, IEC 60332-3-24 PN-EN 50200 and PN-EN 50362
Reference standards	AT-0603-0064/2010/2012, WT-TK-44 DIN VDE 0266, PN-HD 604 S1

*Circuit integrity is dependent on installation method.

CE = the cable meets requirements of the low voltage directive 2006/95/WE

Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)	Fire load
mm^2	mm	kg/km	kg/km	kWh/m
1 x 16 RE	8,8	154	240	0,39
1 x 25 RM	10,8	240	360	0,42
1 x 35 RM	11,8	336	470	0,43
1 x 50 RM	13,4	480	630	0,59
1 x 70 RM	15,2	672	885	0,65
1 x 95 RM	17,3	912	1260	0,78
1 x 120 RM	18,8	1152	1500	0,88
2 x 1,5 RE	9,7	28,8	142	0,74
2 x 2,5 RE	10,5	48	175	0,82
2 x 4 RE	11,4	77	225	0,93
2 x 6 RE	12,4	115	280	1,03
2 x 10 RE	14,0	192	395	1,22
2 x 16 RE	16,0	307	555	1,37
2 x 25 RM	19,9	480	850	1,86
3 x 1,5 RE	10,2	43,2	168	0,79
3 x 2,5 RE	11,0	72	210	0,85
3 x 4 RE	12,0	115	275	0,99
3 x 6 RE	13,1	173	350	1,07
3 x 10 RE	14,8	288	500	1,26
3 x 16 RM	17,6	461	770	1,52
3 x 25 RM	21,4	720	1110	1,88
4 x 1,5 RE	11,1	58	200	0,87

Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)	Fire load
mm^2	mm	kg/km	kg/km	kWh/m
4 x 2,5 RE	12,0	96	255	0,96
4 x 4 RE	13,1	154	335	1,06
4 x 6 RE	14,3	230	435	1,18
4 x 10 RE	16,5	384	630	1,40
4 x 16 RM	19,4	614	970	1,73
4 x 25 RM	23,6	960	1400	2,56
4 x 35 RM	26,3	1344	1840	3,03
4 x 50 RM	30,1	1920	2470	3,35
5 x 1,5 RE	12,1	72	240	0,98
5 x 2,5 RE	13,1	120	305	1,06
5 x 4 RE	14,3	192	400	1,16
5 x 6 RE	15,9	288	530	1,29
5 x 10 RE	18,0	480	765	1,57
5 x 16 RM	21,5	768	1190	1,88
5 x 25 RM	26,2	1200	1720	3,00
5 x 35 RM	29,0	1680	2250	3,24
5 x 50 RM	33,4	2400	3050	3,68
7 x 1,5 RE	13,1	101	280	1,07

Other cross-sections and conductor counts available on request.
TECHNOKABEL S.A reserves the right to change specifications without prior notice.