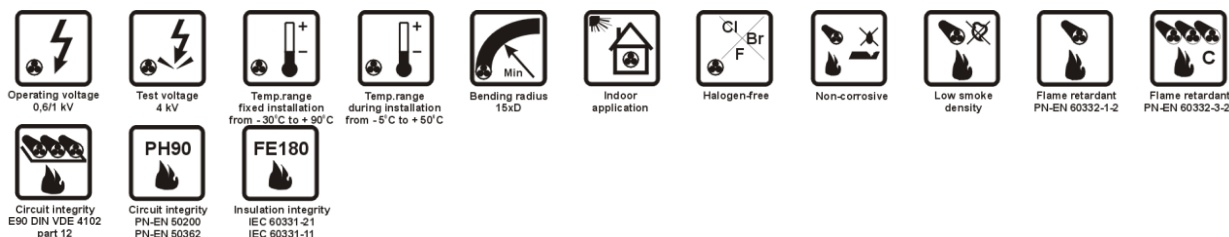


(N)HXCH FE180 PH90/E90 0,6/1 kV

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FIRE RESISTANT HALOGEN FREE POWER CABLES**APPLICATIONS**

(N)HXCH FE180 PH90/E90 0.6/1 kV fire resistant and halogen free power cables, are intended for power supply to fire protection equipment in objects of sharp fire protection requirements, particularly in fire alarm and fire automatic control systems.

The 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 (e.g. water pumps in fire extinguishing systems, smoke removing fans, emergency lighting and elevators).

The cables are certified by Scientific and Research Centre for Fire Protection - National Research Institute (Centrum Naukowo-Badawcze Ochrony Przeciwpowarowej - PIB) at Józefów.

The cables are flame retardant and their smoke emission is low, emitted fumes are non toxic and non corrosive.

The cables are suitable for fixed indoor and outdoor installations. UV radiation protection is required for outdoor installations. Laying cables in water or direct earth burial are only permitted if additional protection is used.

CONSTRUCTION

- bare annealed copper conductors meeting requirements of PN-EN 60228 standard:
 - RE** - class 1 single wire round conductor,
 - RM** - class 2 multiwire round conductor,
- double special cross-linked silicone rubber insulation – colours:
 - up to 5 wires in accordance with PN-HD 308,
 - above 5 wires black and white conductor number printed on it,
- insulated conductors laid-up into a cable core,
- inner covering made of halogen free compound,
- concentric conductor formed by bare copper wires with counter helix of copper tape over the inner sheath,
- concentric conductor wrapped in polyester tape,
- orange cable sheath made of halogen free compound type HM4 according to HD 604 S1 and VDE 0276-604, (oxygen index bigger than 35%).

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CHARACTERISTICS

Operating voltage	0.6/1 kV	Operating temperature range	
Voltage test	4.0 kV rms	during operation	from -30 to +90°C
Insulation resistance at 90°C, minimum	10 ¹¹ Ω·cm	during installation	from -5 to +50°C
Inductance, approximate	0.7 mH/km	Minimum bending radius	15 x cable diameter
Conductor temperature limit in work conditions	+ 90°C	Cable combustibility	fire resistant
in short-circuit	+ 250°C	Combustibility tests	PN-EN 60332-1-2, IEC 60332-1-2 PN-EN 60332-3-24, IEC 60332-3-24 (cat. C)
Corrosivity of emitted gases per	PN-EN 60754-1, PN-EN 60754-2, IEC 60754-2	Circuit integrity *	
pH, approximate	6.8	E90	DIN 4102-12
conductivity, approximate	0.4 μS/mm	PH90	PN-EN 50200 or PN-EN 50362
Smoke density per	PN-EN 61034-2, IEC 61034-2	Insulation integrity FE180	IEC 60331-21, IEC 60331-11
light transmittance, minimum	70%	Reference standards	AT-0603-0496/2016, WT-TK-44 DIN VDE 0266, PN-HD 604 S1
		*Circuit integrity is dependent on installation method.	

Cable installation - Only certified cable fixing systems shall be used. Systems certified according to DIN 4102 part 12 are recommended.

CE = the cable meets requirements of the low voltage directive 2014/35/EU

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)	Fire Load (appr.)
	mm ²	mm	kg/km	kg/km	kWh/m
1222 050	2 x 50 RM/ 25	29.0	1213.0	1866	3.20
1222 005	3 x 1,5 RE/ 1,5	13.3	58.0	245	0.80
1222 006	3 x 2,5 RE/ 2,5	14.3	96.0	300	0.90
1222 007	3 x 4 RE/ 4	15.8	154.0	390	1.05
1222 040	3 x 6 RE/ 6	17.1	230.0	495	1.19
1222 041	3 x 10 RE/ 10	19.2	384.0	700	1.41
1222 042	3 x 16 RE/ 16	22.6	614.0	1010	1.83
1222 043	3 x 25 RM/ 16	26.0	874.0	1410	2.52
1222 046	3 x 35 RM/ 16	28.0	1162.0	1750	2.88
1222 047	3 x 50 RM/ 25	31.8	1680.0	2350	3.57
1222 003	4 x 1,5 RE/ 1,5	14.2	72.0	285	0.90
1222 008	4 x 2,5 RE/ 2,5	15.5	120.0	360	1.04
1222 009	4 x 4 RE/ 4	16.9	192.0	460	1.18
1222 010	4 x 6 RE/ 6	18.3	288.0	585	1.33

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)	Fire Load (appr.)
	mm ²	mm	kg/km	kg/km	kWh/m
1222 011	4 x 10 RE/ 10	20.8	480.0	845	1.63
1222 044	4 x 16 RE/ 16	23.9	768.0	1210	2.04
1222 013	4 x 25 RM/ 16	28.1	1114.0	1710	2.84
1222 014	4 x 35 RE/ 16	30.4	1498.0	2160	3.26
1222 004	4 x 50 RM/ 25	34.5	2160.0	2920	4.19
1222 016	4 x 95 RM/ 50	44.9	4140.0	5516	5.75
1222 048	7 x 1,5 RE/ 2,5	16.6	125.0	405	1.18
1222 045	7 x 2,5 RE/ 2,5	17.6	192.0	495	1.31
1222 049	12 x 1,5 RE/ 2,5	20.7	197.0	605	1.73
1222 015	12 x 2,5 RE/ 4	22.5	326.0	775	1.94
1222 017	14 x 2,5 RE/ 4	22.4	387.0	815	2.68

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