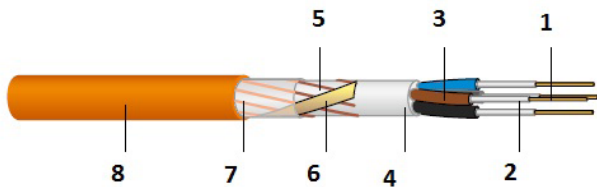


(N)HXCH FE180 E30-E60

Safety cable, 0.6/1kV, Keram

halogen-free, with improved fire characteristics,
with reference to VDE 0266 and CENELEC HD 604 S1,
circuit integrity (FE180) in accordance with VDE 0472-814, IEC 60331,
System Circuit Integrity E30-E60* in accordance with DIN 4102-12



- 1 Conductor: solid/stranded
- 2 Fire barrier: high-peformance Keram compound
- 3 Insulation: cross-linked polymer, zero halogen
- 4 Filler: flame retardant, zero halogen
- 5 Concentric conductor: bare copper wire
- 6 Reinforcing helix: bare copper tape
- 7 Separator: plastic tape
- 8 Sheath: FRNC/LSZH



Description

Cables with intrinsic fire resistance are installed in all areas that require special protection of people and equipment against fire and fire damages and where strict security requirements must be fulfilled. Suitable for indoor applications. For outdoor applications, protection must be provided against exposure to direct sunlight. The cable should only be laid directly in earth or water if a protective conduit is used. These cables correspond to the demands of System Circuit Integrity E30-E60* in accordance with DIN 4102-12. System Circuit Integrity is guaranteed at an operating voltage up to 400V. Permitted operating temperature at conductor of +90°C.

Construction

Concentric conductor	Bare copper wires with reinforced helix
Conductor	Bare copper, solid or stranded, IEC 60228 and EN 60228 (VDE 0295)
Core colours	CENELEC HD 308 S2, VDE 0293
Filler	Flame retardant, halogen-free thermoplastic compound
Insulation	Double insulation, cross-linked, high-performance Keram special compound, VDE 0266 "HX11"
Outer sheath colour	orange
Outer sheath material	Flame retardant Polyolefin compound, CENELEC HD 604 S1 and VDE 0276-604 "HM4"
Separator	Plastic tape

General Properties

Installation temperature	-5 °C - +50 °C
Operating temperature	-45 °C - +90 °C

Electrical properties

Nominal voltage	0.6/1kV
Test voltage 50Hz	4,000 V

Mechanical properties

Minimum bending during installation (multi core)	12 x D
Minimum bending during installation (single core)	15 x D
Minimum bending radius permanent (multi core)	12 x D
Minimum bending radius permanent (single core)	15 x D
Screened	No

Standards

Circuit integrity (FE180/PH120)	IEC 60331-11/-21 (180 minutes),VDE 0472-814 (FE180),BS 6387 C/W/Z,IEC 60331-1 (PH120),IEC 60331-2 (120 minutes),EN 50200 (PH120),VDE 0482-200 (PH120),VDE 0482-362,AREI-RGIE Art.104-FR1
Reaction to fire (Euroclasses)	not classified
Zero halogen no corrosive gases	IEC 60754-1/-2, EN 60754-1/-2, VDE 0482-754-1/-2, AREI-RGIE Art.104-SA
Flame Propagation	IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2, AREI-RGIE Art.104-F1
Flame Spread	IEC 60332-3-22/-24 Cat. A/C, EN 60332-3-22/-24 Cat. A/C, VDE 0482-332-3-22/-24 Cat. A/C, AREI-RGIE Art.104-F2
Smoke Density	IEC 61034-1/-2, EN 61034-1/-2, VDE 0482-1034-1/-2, AREI-RGIE Art.104-SD
System circuit integrity	DIN 4102-12, AREI-RGIE Art.104-FR2

Note

System Circuit Integrity is dependent on installation method.

Versions

Material number	Product	Outer sheath colour	Diameter mm ²	Outer sheath diameter [mm]	CU rate [kg/km]	Weight [kg/km]	Fire load [kWh/m]	Conductor	Construction
186943	(N)HXCH FE180 E30-E60 2 x 1.5/1.5	orange	1.5/1.5	12.7	52	224	0.60	solid	LN
186944	(N)HXCH FE180 E30-E60 2 x 2.5/2.5	orange	2.5/2.5	13.5	80	274	0.66	solid	LN
187232	(N)HXCH FE180 E30-E60 2 x 4/4	orange	4/4	14.9	123	353	0.78	solid	LN
187234	(N)HXCH FE180 E30-E60 2 x 6/6	orange	6/6	16	182	434	0.86	solid	LN
186945	(N)HXCH FE180 E30-E60 3 x 1.5/1.5	orange	1.5/1.5	13.2	66	249	0.65	solid	3L
186946	(N)HXCH FE180 E30-E60 3 x 2.5/2.5	orange	2.5/2.5	14.1	104	309	0.72	solid	3L
187238	(N)HXCH FE180 E30-E60 3 x 16/16	orange	16/16	21.3	624.7	1,028	1.63	stranded	3L
187239	(N)HXCH FE180 E30-E60 3 x 25/16	orange	25/16	25	902	1,435	1.90	stranded	3L
187240	(N)HXCH FE180 E30-E60 3 x 35/16	orange	35/16	37.3	1,190	1,804	2.20	stranded	3L
187241	(N)HXCH FE180 E30-E60 3 x 50/25	orange	50/25	31.7	1,723	2,454	2.84	stranded	3L
187242	(N)HXCH FE180 E30-E60 3 x 70/35	orange	70/35	36	2,410	3,351	3.52	stranded	3L
186985	(N)HXCH FE180 E30-E60 3 x 95/50	orange	95/50	41.1	3,296	4,458	4.50	stranded	3L
186986	(N)HXCH FE180 E30-E60 3 x 120/70	orange	120/70	44.5	4,236	5,538	5.30	stranded	3L
186987	(N)HXCH FE180 E30-E60 3 x 150/70	orange	150/70	49.2	5,100	6,748	6.00	stranded	3L

Material number	Product	Outer sheath colour	Diameter mm ²	Outer sheath diameter [mm]	CU rate [kg/km]	Weight [kg/km]	Fire load [kWh/m]	Conductor	Construction
186988	(N)HXCH FE180 E30-E60 3 x 240/120	orange	240/120	61.5	8,242	10,937	9.93	stranded	3L
186947	(N)HXCH FE180 E30-E60 4 x 1.5/1.5	orange	1.5/1.5	14.1	81	284	0.73	solid	3LN
186948	(N)HXCH FE180 E30-E60 4 x 2.5/2.5	orange	2.5/2.5	15.1	128	356	0.82	solid	3LN
186949	(N)HXCH FE180 E30-E60 4 x 4/4	orange	4/4	16.7	200	467	0.96	solid	3LN
186950	(N)HXCH FE180 E30-E60 4 x 6/6	orange	6/6	18.1	297	625	1.13	solid	3LN
186951	(N)HXCH FE180 E30-E60 4 x 10/10	orange	10/10	20.1	504	868	1.33	solid	3LN
186989	(N)HXCH FE180 E30-E60 4 x 16/16	orange	16/16	23.4	796	1,253	1.70	stranded	3LN
186990	(N)HXCH FE180 E30-E60 4 x 25/16	orange	25/16	27.2	1,142	1,752	2.20	stranded	3LN
186991	(N)HXCH FE180 E30-E60 4 x 35/16	orange	35/16	29.8	1,526	2,218	2.56	stranded	3LN
186992	(N)HXCH FE180 E30-E60 4 x 50/25	orange	50/25	34.8	2,203	3,050	3.41	stranded	3LN
186993	(N)HXCH FE180 E30-E60 4 x 70/35	orange	70/35	39.5	3,082	4,138	4.18	stranded	3LN
186994	(N)HXCH FE180 E30-E60 4 x 95/50	orange	95/50	45.2	4,208	5,516	5.58	stranded	3LN
186995	(N)HXCH FE180 E30-E60 4 x 120/70	orange	120/70	49.1	5,388	6,879	6.37	stranded	3LN
186996	(N)HXCH FE180 E30-E60 4 x 150/70	orange	150/70	54.3	6,540	8,418	7.83	stranded	3LN
186997	(N)HXCH FE180 E30-E60 4 x 185/95	orange	185/95	59.8	8,159	10,493	9.55	stranded	3LN
186998	(N)HXCH FE180 E30-E60 4 x 240/120	orange	240/120	67.9	10,546	13,629	12.00	stranded	3LN
187244	(N)HXCH FE180 E30-E60 7 x 1.5/2.5	orange	1.5/2.5	16.1	133	394	0.94	solid	7L
187245	(N)HXCH FE180 E30-E60 30 x 1.5/6	orange	1.5/6	28.4	499	1,245	2.67	solid	30L

Additional dimensions available on request.

Subject to technical modification

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