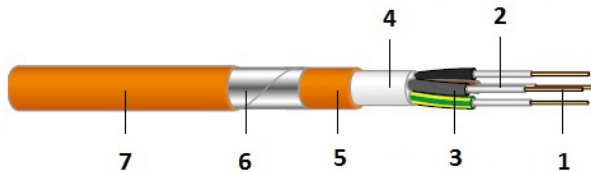


(N)HXH CL FE180 E30-E60

Safety cable, 0.6/1kV armoured with rodent protection, 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-performance Keram compound
- 3 Insulation: cross-linked polymer, zero halogen
- 4 Filler: flame retardant, zero halogen
- 5 Inner sheath: Polyolefin, flame retardant, low smoke, zero halogen
- 6 Armouring: galvanised steel tape
- 7 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 Circuit Integrity E30-E60* in accordance with DIN 4102-12. Circuit Integrity is guaranteed at an operating voltage up to 400V. Permitted operating temperature at conductor of +90°C.

Construction

Armouring (rodent protection)	Single-core cable with copper tape (CLCU) and multicore cable with galvanised steel tape (CL)
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
Inner sheath	Flame retardant Polyolefin compound, CENELEC HD 604 S1 and VDE 0276-604 "HM4"
Insulation	Double insulation, cross-linked, high-performance Keram special compound, VDE 0266 "HX11"
Outer sheath material	Flame retardant Polyolefin compound, CENELEC HD 604 S1 and VDE 0276-604 "HM4"

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

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
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	Diameter mm ²	Outer sheath diameter [mm]	CU rate [kg/km]	Weight [kg/km]	Fire load [kWh/m]	Conductor	Construction
192350	(N)HXH-O CL FE180 E30-E60 2 x 1.5	1.5	14.9	29	334	0.94	solid	LN
187562	(N)HXH-O CL FE180 E30-E60 2 x 2.5	2.5	16	48	383	1.02	solid	LN
191612	(N)HXH-O CL FE180 E30-E60 2 x 4	4	17	77	450	1.13	solid	LN
187563	(N)HXH-O CL FE180 E30-E60 2 x 6	6	18	115	531	1.25	solid	LN
191107	(N)HXH-J CL FE180 E30-E60 3 x 1.5	1.5	16	43	363	1.00	solid	LNPE
186940	(N)HXH-J CL FE180 E30-E60 3 x 2.5	2.5	16.3	72	425	1.10	solid	LNPE
192351	(N)HXH-J CL FE180 E30-E60 3 x 4	4	18	115	509	1.22	solid	LNPE
188326	(N)HXH-J CL FE180 E30-E60 3 x 6	6	19	173	607	1.35	solid	LNPE
191597	(N)HXH-J CL FE180 E30-E60 3 x 10	10	21	288	785	1.54	solid	LNPE
188327	(N)HXH-J CL FE180 E30-E60 3 x 16	16	24	461	1,074	1.93	stranded	LNPE
190590	(N)HXH-J CL FE180 E30-E60 4 x 2.5	2.5	18	96	484	1.22	solid	3LPE
191102	(N)HXH-J CL FE180 E30-E60 4 x 4	4	19	154	585	1.36	solid	3LPE
192593	(N)HXH-J CL FE180 E30-E60 4 x 6	6	20	230	709	1.51	solid	3LPE
192594	(N)HXH-J CL FE180 E30-E60 4 x 10	10	22	384	940	1.76	solid	3LPE
186980	(N)HXH-J CL FE180 E30-E60 4 x 16	16	25	614	1,293	2.20	stranded	3LPE

Material number	Product	Diameter mm ²	Outer sheath diameter [mm]	CU rate [kg/km]	Weight [kg/km]	Fire load [kWh/m]	Conductor	Construction
186981	(N)HXH-J CL FE180 E30-E60 4 x 25	25	29	960	1,814	2.78	stranded	3LPE
186982	(N)HXH-J CL FE180 E30-E60 4 x 35	35	32	1,344	2,296	3.16	stranded	3LPE
190589	(N)HXH-J CL FE180 E30-E60 4 x 50	50	36	1,920	3,030	4.02	stranded	2LNPE
192428	(N)HXH-J CL FE180 E30-E60 4 x 70	70	40	2,688	4,015	5.05	stranded	3LPE
192429	(N)HXH-J CL FE180 E30-E60 4 x 95	95	46	3,648	5,343	6.52	stranded	3LPE
192430	(N)HXH-J CL FE180 E30-E60 4 x 120	120	49	4,608	6,433	7.26	stranded	3LPE
192347	(N)HXH-J CL FE180 E30-E60 5 x 1.5	1.5	18	72	464	1.25	solid	3LNPE
188117	(N)HXH-J CL FE180 E30-E60 5 x 2.5	2.5	19	120	556	1.38	solid	3LNPE
188118	(N)HXH-J CL FE180 E30-E60 5 x 4	4	20	192	675	1.54	solid	3LNPE
186941	(N)HXH-J CL FE180 E30-E60 5 x 6	6	21	288	825	1.72	solid	3LNPE
186942	(N)HXH-J CL FE180 E30-E60 5 x 10	10	24	480	1,095	1.98	solid	3LNPE
187154	(N)HXH-J CL FE180 E30-E60 5 x 16	16	27	768	1,452	2.53	stranded	3LNPE
190525	(N)HXH-J CL FE180 E30-E60 5 x 16	16	26	768	1,531	2.53	stranded	3LNPE
186984	(N)HXH-J CL FE180 E30-E60 5 x 25	25	31	1,200	2,168	3.23	stranded	3LNPE
187132	(N)HXH-J CL FE180 E30-E60 5 x 35	35	35	1,680	2,702	3.85	stranded	3LNPE
190529	(N)HXH-J CL FE180 E30-E60 5 x 35	35	35	1,680	2,801	3.85	stranded	3LNPE
187131	(N)HXH-J CL FE180 E30-E60 5 x 50	50	39	2,400	3,613	4.83	stranded	3LNPE
191565	(N)HXH-J CL FE180 E30-E60 5 x 50	50	39	2,400	3,678	4.83	stranded	3LNPE
194049	(N)HXH-J CL FE180 E30-E60 5 x 70	70	45	3,360	4,999	6.05	stranded	3LNPE
188094	(N)HXH-J CL FE180 E30-E60 6 x 4	4	20	230	693	1.74	solid	5LPE
185232	(N)HXH-J CL FE180 E30-E60 7 x 1.5	1.5	19	101	531	1.38	solid	6LPE
185245	(N)HXH-J CL FE180 E30-E60 7 x 4	4	21	269	797	1.71	solid	6LPE
185247	(N)HXH-J CL FE180 E30-E60 7 x 6	6	23	403	985	1.9	solid	6LPE
185248	(N)HXH-J CL FE180 E30-E60 7 x 10	10	25	672	1,340	2.2	solid	6LPE
188095	(N)HXH-J CL FE180 E30-E60 8 x 4	4	23	307	834	1.91	solid	7LPE
185239	(N)HXH-J CL FE180 E30-E60 12 x 2.5	2.5	23	288	945	2.13	solid	LPE
185233	(N)HXH-J CL FE180 E30-E60 16 x 1.5	1.5	24	230	923	2.24	solid	15LPE
192725	(N)HXH-J CL FE180 E30-E60 16 x 2.5	2.5	26	384	1,154	2.52	solid	15LPE
185235	(N)HXH-J CL FE180 E30-E60 30 x 1.5	1.5	30	432	1,401	3.25	solid	29LPE
185241	(N)HXH-J CL FE180 E30-E60 30 x 2.5	2.5	33	720	1,839	3.81	solid	29LPE

Additional dimensions available on request.

