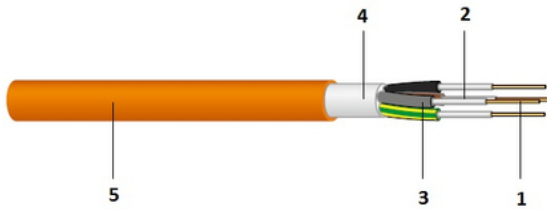


(N)HXH FE180 E30-E60



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-performance Keram compound
- 3 **Insulation:** cross-linked polymer, zero halogen
- 4 **Filler:** flame retardant, zero halogen
- 5 **Sheath:** FRNC/LSZH



DESCRIPTION

Safety cables 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.

System Circuit Integrity is provided up to 400 V operating voltage.
Permitted operating temperature at conductor of +90°C.

CONSTRUCTION

Conductor:	Bare copper, solid or stranded, IEC 60228 and EN 60228 (VDE 0295)
Insulation:	Double insulation, cross-linked, high-performance Keram special compound, VDE 0266 "HXI1"
Filler:	Flame retardant, halogen-free thermoplastic compound
Outer sheath material:	Flame retardant Polyolefin compound, CENELEC HD 604 S1 and VDE 0276-604 "HM4"
Core colours:	CENELEC HD 308 S2, VDE 0293
Outer sheath colour:	orange

ELECTRICAL PROPERTIES

Nominal voltage:	0.6/1kV
Test voltage:	4000V, 50Hz

MECHANICAL PROPERTIES

Minimum bending radius	during and permanent installation:	15* x D (single-core cable) 12* x D (multicore cable) (D = outer diameter)
	permanent installation:	*50% reduction if installation at 30°C and with a template
Operating temperature	permanent installation:	-45°C to +90°C
	during installation:	-5°C to +50°C

NOTE

* System Circuit Integrity is dependent on installation method

STANDARDS

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, SEV TP 20B/3C 3.4.1.1, AREI-RGIE Art.104-F1
Flame spread	IEC 60332-3-24 Cat. C, EN 60332-3-24 Cat. C, VDE 0482-332-3-24 Cat. C, SEV TP 20B/3C 3.4.1.3, 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
Circuit Integrity (FE180)	IEC 60331-11/-21 (180 minutes), VDE 0472 part 814 (FE180), IEC 60331-1, IEC 60331-2 (120 minutes), EN 50200, VDE 0482-200 (PH120) and EN 50362, VDE 0482-362 (120 minutes), BS 6387 C/W/Z, AREI-RGIE Art.104-FR1
System circuit integrity	DIN 4102-12, AREI-RGIE Art.104-FR2, NBN 713-020 (Rf1)

VERSIONS

Article No.	Product	Number of Cores	Cross section [mm²]	Sheath colour	Sheath Ø [mm]	Weight [kg/km]	Cu rate [kg/km]	Fire load [kWh/m]	Construction	Conductor	PU
171290	(N)HXH-0 FE180 E30-E60 1 x 6	1	6	orange	7.6	113	58.6	0.23	L	solid	by the metre

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171291	(N)HXH-0 FE180 E30-E60 1 x 10	1	10	orange	8.4	158	96	0.27	L	solid	by the metre
171370	(N)HXH-0 FE180 E30-E60 1 x 16	1	16	orange	9.8	227	154	0.34	L	stranded	by the metre
171377	(N)HXH-0 FE180 E30-E60 1 x 25	1	25	orange	11.3	329	240	0.43	L	stranded	by the metre
171386	(N)HXH-0 FE180 E30-E60 1 x 35	1	35	orange	12.4	428	336	0.48	L	stranded	by the metre
171394	(N)HXH-0 FE180 E30-E60 1 x 50	1	50	orange	13.9	565	480	0.58	L	stranded	by the metre
171429	(N)HXH-0 FE180 E30-E60 1 x 70	1	70	orange	15.7	773	672	0.68	L	stranded	by the metre
170842	(N)HXH-0 FE180 E30-E60 1 x 95	1	95	orange	18.1	1035	912	0.91	L	stranded	by the metre
170845	(N)HXH-0 FE180 E30-E60 1 x 120	1	120	orange	19.2	1270	1152	0.97	L	stranded	by the metre
170850	(N)HXH FE180 E30-E60 1 x 150	1	150	orange	21.4	1590	1440	1.20	L	stranded	by the metre
170855	(N)HXH-0 FE180 E30-E60 1 x 185	1	185	orange	23.6	1961	1776	1.46	L	stranded	by the metre
170858	(N)HXH-0 FE180 E30-E60 1 x 240	1	240	orange	26.8	2563	2304	1.81	L	stranded	by the metre
170860	(N)HXH FE180 E30-E60 1x300	1	300	orange	29.2	3051	2880	2.13	L	stranded	by the metre
186280	(N)HXH FE180 E30-E60 2 x 1.5	2	1.5	orange	11	178	29	0.48	LN	solid	by the metre
186921	(N)HXH FE180 E30-E60 2 x 2.5	2	2.5	orange	11.8	217	48	0.54	LN	solid	by the metre
186922	(N)HXH FE180 E30-E60 2 x 4	2	4	orange	12.8	271	77	0.62	LN	solid	by the metre
186923	(N)HXH FE180 E30-E60 2 x 6	2	6	orange	13.8	337	115	0.70	LN	solid	by the metre
186924	(N)HXH FE180 E30-E60 2 x 10	2	10	orange	15.4	459	192	0.83	LN	solid	by the metre
186952	(N)HXH FE180 E30-E60 2 x 16	2	16	orange	18.2	660	307	1.09	LN	solid	by the metre
190404	(N)HXH FE180 E30-E60 2 x 25	2	25	orange	21.2	950	480	1.42	LN	stranded	by the metre
18692500ZZ	(N)HXH-J FE180 E30-E60 3 x 1.5	3	1.5	orange	11.5	199	43	0.53	LNPE	solid	by the metre
18692500ZL	(N)HXH-J FE180 E30-E60 3 x 1.5	3	1.5	orange	11.5	200	43	0.53	LNPE	solid	500 m drum
18692500ZK	(N)HXH-J FE180 E30-E60 3 x 1.5	3	1.5	orange	11.5	200	43	0.53	LNPE	solid	1000 m drum
18692600ZZ	(N)HXH-J FE180 E30-E60 3 x 2.5	3	2.5	orange	12.4	250	72	0.60	LNPE	solid	by the metre
18692600ZL	(N)HXH-J FE180 E30-E60 3 x 2.5	3	2.5	orange	12.4	250	72	0.60	LNPE	solid	500 m drum
18692600ZK	(N)HXH-J FE180 E30-E60 3 x 2.5	3	2.5	orange	12.4	250	72	0.60	LNPE	solid	1000 m drum
186927	(N)HXH-J FE180 E30-E60 3 x 4	3	4	orange	13.5	319	115	0.68	LNPE	solid	by the metre
186928	(N)HXH-J FE180 E30-E60 3 x 6	3	6	orange	14.6	403	173	0.77	LNPE	solid	by the metre
186929	(N)HXH-J FE180 E30-E60 3 x 10	3	10	orange	16.3	560	288	0.91	LNPE	solid	by the metre
186953	(N)HXH FE180 E30-E60 3 x 16	3	16	orange	19.3	809	461	1.19	LNPE	stranded	by the metre
186955	(N)HXH FE180 E30-E60 3 x 25	3	25	orange	22.6	1182	720	1.56	LNPE	stranded	by the metre
186954	(N)HXH FE180 E30-E60 3 x 25 + 1 x 16	3	25+16	orange	23.9	1357	874	1.73	3LPE	stranded	by the metre
186957	(N)HXH FE180 E30-E60 3 x 35	3	35	orange	24.9	1529	1008	1.80	LNPE	stranded	by the metre
186956	(N)HXH FE180 E30-E60 3 x 35 + 1 x 16	3	35+16	orange	25.9	1693	1162	1.93	3LPE	stranded	by the metre
186959	(N)HXH FE180 E30-E60 3 x 50	3	50	orange	28.2	2026	1440	2.24	LNPE	stranded	by the metre
186958	(N)HXH FE180 E30-E60 3 x 50 + 1 x 25	3	50+25	orange	29.9	2311	1680	2.52	3LPE	stranded	by the metre
186961	(N)HXH FE180 E30-E60 3 x 70	3	70	orange	32.7	2814	2016	32.7	LNPE	stranded	by the metre
186960	(N)HXH FE180 E30-E60 3 x 70 + 1 x 35	3	70+35	orange	34	3146	2352	3.07	3LPE	stranded	by the metre
186962	(N)HXH FE180 E30-E60 3 x 95 + 1 x 20	3	95+50	orange	39.3	4222	3216	4.18	3LPE	stranded	by the metre

(N)HXH FE180 E30-E60



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186963	(N)HXH FE180 E30-E60 3 x 120 + 1 3 x 70	120+70	orange	42.6	5255	4098.28	4.74	3LPE	stranded	by the metre
186964	(N)HXH FE180 E30-E60 3 x 150 + 1 3 x 70	150+70	orange	46.6	6361	4992	5.63	3LPE	stranded	by the metre
186965	(N)HXH FE180 E30-E60 3 x 185 + 1 3 x 90	185+95	orange	52	7954	6240	6.99	3LPE	stranded	by the metre
186930	(N)HXH-J FE180 E30-E60 4 x 1.5 4	1.5	orange	12.4	233	58	0.61	3LPE	solid	by the metre
186931	(N)HXH-J FE180 E30-E60 4 x 2.5 4	2.5	orange	13.4	290	96	0.69	3LPE	solid	by the metre
186932	(N)HXH-J FE180 E30-E60 4 x 4 4	4	orange	14.6	381	154	0.78	3LPE	solid	by the metre
186933	(N)HXH-J FE180 E30-E60 4 x 6 4	6	orange	15.8	492	230	0.90	3LPE	solid	by the metre
186934	(N)HXH-J FE180 E30-E60 4 x 10 4	10	orange	17.8	695	384	1.07	3LPE	solid	by the metre
186967	(N)HXH FE180 E30-E60 4 x 16 4	16	orange	21.1	1005	614	1.40	3LPE	stranded	by the metre
186968	(N)HXH FE180 E30-E60 4 x 25 4	25	orange	24.8	1479	960	1.86	3LPE	stranded	by the metre
186969	(N)HXH FE180 E30-E60 4 x 35 4	35	orange	27.4	1929	1344	2.15	3LPE	stranded	by the metre
186970	(N)HXH FE180 E30-E60 4 x 50 4	50	orange	31.5	2598	1920	2.79	3LPE	stranded	by the metre
186971	(N)HXH FE180 E30-E60 4 x 70 4	70	orange	36.2	3578	2688	3.38	3LPE	stranded	by the metre
186972	(N)HXH FE180 E30-E60 4 x 95 4	95	orange	41.7	4785	3648	4.68	3LPE	stranded	by the metre
186973	(N)HXH FE180 E30-E60 4 x 120 4	120	orange	44.6	5837	4608	5.19	3LPE	stranded	by the metre
186974	(N)HXH FE180 E30-E60 4 x 150 4	150	orange	50	7361	5760	6.52	3LPE	stranded	by the metre
187548	(N)HXH-J FE180 E30-E60 4 x 185 4	185	orange	55.3	9066	7104	7.98	3LPE	stranded	by the metre
187077	(N)HXH FE180 E30-E60 4 x 240 4	240	orange	62.9	11863	9216	10.05	3LPE	stranded	by the metre
186935	(N)HXH-J FE180 E30-E60 5 x 1.5 5	1.5	orange	13.4	276	72	0.71	3LNPE	solid	by the metre
186936	(N)HXH-J FE180 E30-E60 5 x 2.5 5	2.5	orange	14.5	346	120	0.81	3LNPE	solid	by the metre
186937	(N)HXH-J FE180 E30-E60 5 x 4 5	4	orange	15.8	457	192	0.93	3LNPE	solid	by the metre
186938	(N)HXH-J FE180 E30-E60 5 x 6 5	6	orange	17.2	589	288	1.05	3LNPE	solid	by the metre
186939	(N)HXH-J FE180 E30-E60 5 x 10 5	10	orange	19.3	833	480	1.25	3LNPE	solid	by the metre
186975	(N)HXH FE180 E30-E60 5 x 16 5	16	orange	23.1	1220	768	1.67	3LNPE	stranded	by the metre
186976	(N)HXH FE180 E30-E60 5 x 25 5	25	orange	27.2	1803	1200	2.22	3LNPE	stranded	by the metre
186977	(N)HXH FE180 E30-E60 5 x 35 5	35	orange	30.5	2385	1680	2.66	3LNPE	stranded	by the metre
186978	(N)HXH FE180 E30-E60 5 x 50 5	50	orange	34.8	3191	2400	3.41	3LNPE	stranded	by the metre
186979	(N)HXH FE180 E30-E60 5 x 70 5	70	orange	40	4391	3360	4.26	3LNPE	stranded	by the metre
190587	(N)HXH FE180 E30-E60 5 x 95 5	95	orange	46.6	5925	4560	5.89	3LNPE	stranded	by the metre
196283	(N)HXH FE180 E30-E60 6x10 6	10	orange	21	983	576	1434	5LPE	solid	by the metre
171272	(N)HXH-J FE180 E30-E60 7 x 1.5 7	1.5	orange	14.4	329	101	0.81	6LPE	solid	by the metre
171273	(N)HXH-J FE180 E30-E60 7 x 2.5 7	2.5	orange	15.6	419	168	0.92	6LPE	solid	by the metre
191080	(N)HXH-J FE180 E30-E60 7 x 6 7	6	orange	18.6	730	403	1.17	5LNPE	solid	by the metre
171279	(N)HXH-J FE180 E30-E60 12 x 1.5 12	1.5	orange	18.3	513	173	1.20	11LPE	solid	by the metre
171280	(N)HXH-J FE180 E30-E60 12 x 2.5 12	2.5	orange	20	672	288	1.37	11LPE	solid	by the metre
171283	(N)HXH-J FE180 E30-E60 19 x 1.5 19	1.5	orange	21.2	715	274	1.63	18LPE	solid	by the metre
171284	(N)HXH-J FE180 E30-E60 19 x 2.5 19	2.5	orange	23.2	948	456	1.83	18LPE	solid	by the metre
171285	(N)HXH-J FE180 E30-E60 24 x 1.5 24	1.5	orange	24.6	901	346	1.99	23LPE	solid	by the

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												metre
171286	(N)HXH-J FE180 E30-E60 24 x 2.5	24	2.5	orange	27	1198	576	2.27	23LPE	solid	by the metre	
171287	(N)HXH-J FE180 E30-E60 30 x 1.5	30	1.5	orange	26	1052	432	2.28	29LPE	solid	by the metre	
171288	(N)HXH-J FE180 E30-E60 30 x 2.5	30	2.5	orange	28.8	1438	720	2.68	29LPE	solid	by the metre	