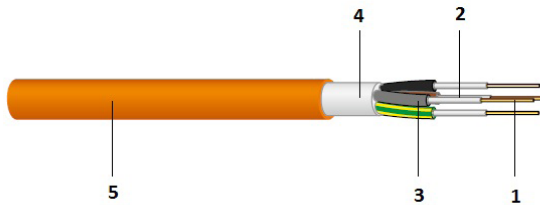


(N)HXH FE180 E30-E60

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"
Core colours	CENELEC HD 308 S2, VDE 0293
Filler	Flame retardant, halogen-free thermoplastic compound
Outer sheath material	Flame retardant Polyolefin compound, CENELEC HD 604 S1 and VDE 0276-604 "HM4"
Outer sheath colour	orange

General properties

Circuit Integrity	E30-E60*
Insulation integrity	FE 180
Installation temperature	-5 °C - +50 °C
Operating temperature	-45 °C - +90 °C

Electrical properties

Nominal voltage	0.6/1kV
Test voltage at 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
Remarks bending radius	50% reduction if installation at 30°C and with a template

Standards

Insulation Integrity (FE180)	IEC 60331-11/-21 (180 minutes), VDE 0472-814 (FE180), BS 6387 C/W/Z, IEC 60331-1 (120 minutes), IEC 60331-2 (120 minutes), EN 50200 (PH120 minutes), NBN 713-020 (Rf1), VDE 0482-200 (PH120), AREI-RGIE Art.104-FR1
System circuit integrity	DIN 4102-12, AREI-RGIE Art.104-FR2, NBN 713-020 (Rf1)
Smoke density	IEC 61034-1/-2, EN 61034-1/-2, VDE 0482-1034-1/-2, AREI-RGIE Art.104-SD
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, SEV TP 20B/3C 3.4.1.1
Flame spread	IEC 60332-3-24, EN 60332-3-24, VDE 0482-332-3-24, AREI-RGIE Art.104-F2, SEV TP 20B/3C 3.4.1.3

Note

* System Circuit Integrity is dependent on installation method

Versions

Material number	Product	Outer sheath diameter [mm]	CU rate [kg/km]	Weight [kg/km]	Fire load [kWh/m]	Conductor	Construction	Weight [kg]	Packing unit	GTIN / EAN
171290	(N)HXH-0 FE180 E30-E60 1 x 6	7.6	58.6	112	0.23	solid	L		by the metre	40393910078862
171291	(N)HXH-0 FE180 E30-E60 1 x 10	8.4	96	156	0.27	solid	L		by the metre	40393910078855
171370	(N)HXH-0 FE180 E30-E60 1 x 16	9.8	154	227	0.34	stranded	L		by the metre	40393910078756
171377	(N)HXH-0 FE180 E30-E60 1 x 25	11.3	240	329	0.43	stranded	L		by the metre	40393910078749
171386	(N)HXH-0 FE180 E30-E60 1 x 35	12.4	336	428	0.48	stranded	L		by the metre	40393910078725
171394	(N)HXH-0 FE180 E30-E60 1 x 50	13.9	480	565	0.58	stranded	L		by the metre	40393910078701
171429	(N)HXH-0 FE180 E30-E60 1 x 70	15.7	672	773	0.68	stranded	L		by the metre	40393910078671
170842	(N)HXH-0 FE180 E30-E60 1 x 95	18.1	912	1,035	0.91	stranded	L		by the metre	40393910079135
170845	(N)HXH-0 FE180 E30-E60 1 x 120	19.2	1,152	1,270	0.97	stranded	L		by the metre	40393910079128
170850	(N)HXH FE180 E30-E60 1 x 150	21.4	1,440	1,590	1.20	stranded	L		by the metre	40393910079098
170855	(N)HXH-0 FE180 E30-E60 1 x 185	23.6	1,776	1,961	1.46	stranded	L		by the metre	40393910079074
170858	(N)HXH-0 FE180 E30-E60 1 x 240	26.8	2,304	2,563	1.81	stranded	L		by the metre	40393910079067
170860	(N)HXH FE180 E30-E60 1x300	29.2	2,880	3,051	2.13	stranded	L		by the metre	40393910079050
192572	(N)HXH FE180 E30-E60 2 x 1.5	11	29	177	0.48	solid	2L		by the metre	40393910067101

Material number	Product	Outer sheath diameter [mm]	CU rate [kg/km]	Weight [kg/km]	Fire load [kWh/m]	Conductor	Construction	Weight [kg]	Packing unit	GTIN / EAN
186280	(N)HXH FE180 E30-E60 2 x 1.5	11	29	177	0.48	solid	LN		by the metre	40393910076134
192582	(N)HXH FE180 E30-E60 2 x 2.5	11.8	48	216	0.54	solid	2L		by the metre	40393910067057
186921	(N)HXH FE180 E30-E60 2 x 2.5	11.8	48	216	0.54	solid	LN		by the metre	40393910075588
186922	(N)HXH FE180 E30-E60 2 x 4	12.8	77	271	0.62	solid	LN		by the metre	40393910075571
186923	(N)HXH FE180 E30-E60 2 x 6	13.8	115	335	0.70	solid	LN		by the metre	40393910075564
186924	(N)HXH FE180 E30-E60 2 x 10	15.4	192	455	0.83	solid	LN		by the metre	40393910075557
186952	(N)HXH FE180 E30-E60 2 x 16	18.2	307	660	1.09	solid	LN		by the metre	40393910075274
190404	(N)HXH FE180 E30-E60 2 x 25	21.2	480	950	1.42	stranded	LN		by the metre	40393910070989
18692500ZZ	(N)HXH-J FE180 E30-E60 3 x 1.5	11.5	43	199	0.53	solid	LNPE		by the metre	40393910038088
18692500ZL	(N)HXH-J FE180 E30-E60 3 x 1.5	11.5	43	200	0.53	solid	LNPE		500 m drum	40393910038125
18692500ZK	(N)HXH-J FE180 E30-E60 3 x 1.5	11.5	43	200	0.53	solid	LNPE		1000 m drum	40393910038132
18692600ZZ	(N)HXH-J FE180 E30-E60 3 x 2.5	12.4	72		0.60	solid	LNPE	0.25 kg	by the metre	40393910038026
18692600ZL	(N)HXH-J FE180 E30-E60 3 x 2.5	12.4	72	250	0.60	solid	LNPE		500 m drum	40393910038057
18692600ZK	(N)HXH-J FE180 E30-E60 3 x 2.5	12.4	72	250	0.60	solid	LNPE		1000 m drum	40393910038064
186927	(N)HXH-J FE180 E30-E60 3 x 4	13.5	115	319	0.68	solid	LNPE		by the metre	40393910075526
186928	(N)HXH-J FE180 E30-E60 3 x 6	14.6	173	400	0.77	solid	LNPE		by the metre	40393910075519
186929	(N)HXH-J FE180 E30-E60 3 x 10	16.3	288	554	0.91	solid	LNPE		by the metre	40393910075502
186953	(N)HXH FE180 E30-E60 3 x 16	19.3	461	809	1.19	stranded	LNPE		by the metre	40393910075267
186955	(N)HXH FE180 E30-E60 3 x 25	22.6	720	1,182	1.56	stranded	LNPE		by the metre	40393910075243
186954	(N)HXH FE180 E30-E60 3 x 25 + 1 x 16	23.9	874	1,357	1.73	stranded	3LPE		by the metre	40393910075250
186957	(N)HXH FE180 E30-E60 3 x 35	24.9	1,008	1,529	1.80	stranded	LNPE		by the metre	40393910075229
186956	(N)HXH FE180 E30-E60 3 x 35 + 1 x 16	25.9	1,162	1,693	1.93	stranded	3LPE		by the metre	40393910075236
186959	(N)HXH FE180 E30-E60 3 x 50	28.2	1,440	2,026	2.24	stranded	LNPE		by the metre	40393910075205
186958	(N)HXH FE180 E30-E60 3 x 50 + 1 x 25	29.9	1,680	2,311	2.52	stranded	3LPE		by the metre	40393910075212
186961	(N)HXH FE180 E30-E60 3 x 70	32.7	2,016	2,814	32.7	stranded	LNPE		by the metre	40393910075182
186960	(N)HXH FE180 E30-E60 3 x 70 + 1 x 35	34	2,352	3,146	3.07	stranded	3LPE		by the metre	40393910075199
186962	(N)HXH FE180 E30-E60 3 x 95 + 1 x 20	39.3	3,216	4,222	4.18	stranded	3LPE		by the metre	40393910075175
186963	(N)HXH FE180 E30-E60 3 x 120 + 1 x 70	42.6	4,098.28	5,255	4.74	stranded	3LPE		by the metre	40393910075168

Material number	Product	Outer sheath diameter [mm]	CU rate [kg/km]	Weight [kg/km]	Fire load [kWh/m]	Conductor	Construction	Weight [kg]	Packing unit	GTIN / EAN
186964	(N)HXH FE180 E30-E60 3 x 150 + 1 x 70	46.6	4,992	6,361	5.63	stranded	3LPE		by the metre	40393910075141
186965	(N)HXH FE180 E30-E60 3 x 185 + 1 x 90	52	6,240	7,954	6.99	stranded	3LPE		by the metre	40393910075144
186930	(N)HXH-J FE180 E30-E60 4 x 1.5	12.4	58	233	0.61	solid	3LPE		by the metre	40393910075496
186931	(N)HXH-J FE180 E30-E60 4 x 2.5	13.4	96	290	0.69	solid	3LPE		by the metre	40393910075489
186932	(N)HXH-J FE180 E30-E60 4 x 4	14.6	154	381	0.78	solid	3LPE		by the metre	40393910075472
186933	(N)HXH-J FE180 E30-E60 4 x 6	15.8	230	486	0.90	solid	3LPE		by the metre	40393910075465
186934	(N)HXH-J FE180 E30-E60 4 x 10	17.8	384	688	1.07	solid	3LPE		by the metre	40393910075458
186967	(N)HXH FE180 E30-E60 4 x 16	21.1	614	1,005	1.40	stranded	3LPE		by the metre	40393910075120
186968	(N)HXH FE180 E30-E60 4 x 25	24.8	960	1,479	1.86	stranded	3LPE		by the metre	40393910075113
186969	(N)HXH FE180 E30-E60 4 x 35	27.4	1,344	1,929	2.15	stranded	3LPE		by the metre	40393910075106
186970	(N)HXH FE180 E30-E60 4 x 50	31.5	1,920	2,598	2.79	stranded	3LPE		by the metre	40393910075090
186971	(N)HXH FE180 E30-E60 4 x 70	36.2	2,688	3,578	3.38	stranded	3LPE		by the metre	40393910075083
186972	(N)HXH FE180 E30-E60 4 x 95	41.7	3,648	4,785	4.68	stranded	3LPE		by the metre	40393910075076
187532	(N)HXH FE180 E30-E60 4x95	41.7	3,648	4,785	4.68	stranded	3LN		by the metre	40393910073713
186973	(N)HXH FE180 E30-E60 4 x 120	44.6	4,608	5,837	5.19	stranded	3LPE		by the metre	40393910075069
186974	(N)HXH FE180 E30-E60 4 x 150	50	5,760	7,361	6.52	stranded	3LPE		by the metre	40393910075052
187548	(N)HXH-J FE180 E30-E60 4 x 185	55.3	7,104	9,066	7.98	stranded	3LPE		by the metre	40393910073652
187077	(N)HXH FE180 E30-E60 4 x 240	62.9	9,216	11,863	10.05	stranded	3LPE		by the metre	40393910074727
186935	(N)HXH-J FE180 E30-E60 5 x 1.5	13.4	72	276	0.71	solid	3LNPE		by the metre	40393910075441
186936	(N)HXH-J FE180 E30-E60 5 x 2.5	14.5	120	346	0.81	solid	3LNPE		by the metre	40393910075434
186937	(N)HXH-J FE180 E30-E60 5 x 4	15.8	192	457	0.93	solid	3LNPE		by the metre	40393910075427
186938	(N)HXH-J FE180 E30-E60 5 x 6	17.2	288	584	1.05	solid	3LNPE		by the metre	40393910075410
186939	(N)HXH-J FE180 E30-E60 5 x 10	19.3	480	824	1.25	solid	3LNPE		by the metre	40393910075403
186975	(N)HXH FE180 E30-E60 5 x 16	23.1	768	1,220	1.67	stranded	3LNPE		by the metre	40393910075045
186976	(N)HXH FE180 E30-E60 5 x 25	27.2	1,200	1,803	2.22	stranded	3LNPE		by the metre	40393910075038
186977	(N)HXH FE180 E30-E60 5 x 35	30.5	1,680	2,385	2.66	stranded	3LNPE		by the metre	40393910075021
186978	(N)HXH FE180 E30-E60 5 x 50	34.8	2,400	3,191	3.41	stranded	3LNPE		by the metre	40393910075014
186979	(N)HXH FE180 E30-E60 5 x 70	40	3,360	4,391	4.26	stranded	3LNPE		by the metre	40393910075007
190587	(N)HXH FE180 E30-E60 5 x 95	46.6	4,560	5,925	5.89	stranded	3LNPE		by the metre	40393910070613
196283	(N)HXH FE180 E30-E60 6x10	21	576	973	1,434	solid	5LPE		by the metre	40393910061512

Material number	Product	Outer sheath diameter [mm]	CU rate [kg/km]	Weight [kg/km]	Fire load [kWh/m]	Conductor	Construction	Weight [kg]	Packing unit	GTIN / EAN
171272	(N)HXH-J FE180 E30-E60 7 x 1.5	14.4	101	329	0.81	solid	6LPE		by the metre	40393910079036
171273	(N)HXH-J FE180 E30-E60 7 x 2.5	15.6	168	419	0.92	solid	6LPE		by the metre	40393910079029
191080	(N)HXH-J FE180 E30-E60 7 x 6	18.6	403	725	1.17	solid	5LNPE		by the metre	40393910069914
171279	(N)HXH-J FE180 E30-E60 12 x 1.5	18.3	173	512	1.20	solid	11LPE		by the metre	40393910078961
171280	(N)HXH-J FE180 E30-E60 12 x 2.5	20	288	671	1.37	solid	11LPE		by the metre	40393910078954
171283	(N)HXH-J FE180 E30-E60 19 x 1.5	21.2	274	714	1.63	solid	18LPE		by the metre	40393910078923
171284	(N)HXH-J FE180 E30-E60 19 x 2.5	23.2	456	947	1.83	solid	18LPE		by the metre	40393910078916
171285	(N)HXH-J FE180 E30-E60 24 x 1.5	24.6	346	900	1.99	solid	23LPE		by the metre	40393910078909
171286	(N)HXH-J FE180 E30-E60 24 x 2.5	27	576	1,199	2.27	solid	23LPE		by the metre	40393910078893
171287	(N)HXH-J FE180 E30-E60 30 x 1.5	26	432	1,056	2.28	solid	29LPE		by the metre	40393910078886
171288	(N)HXH-J FE180 E30-E60 30 x 2.5	28.8	720	1,430	2.68	solid	29LPE		by the metre	40393910078879

Subject to technical modification

As of 2023-10-30 08:22:38