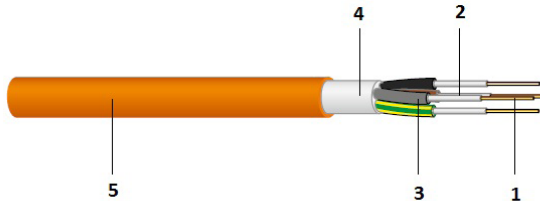


(N)HXH FE180 E30-E60 B2_{ca}

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
Reaction to fire according to EN 13501-6



- 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.

Suitable according to VKF fire protection guideline in escape routes and in tunnels according to Astra guideline 13022.

Application

For use in critical fire safety infrastructure (in compliance with VKF, ASTRA, Tunnels Directive, etc.), particularly in escape routes and emergency lines.

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), IEC 60331-1 (120 minutes), IEC 60331-2 (120 minutes), EN 50200 (PH120 minutes), VDE 0482-200 (PH120), VDE 0482-331-1 (PH120), AREI-RGIE Art.104-FR1
System circuit integrity	DIN 4102-12, AREI-RGIE Art.104-FR2
Reaction to fire (Euroclasses)	EN 13501-6: B2 _{ca} , EN 50399
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, SEV TPV11
Flame propagation	IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2, AREI-RGIE Art.104-F1
Flame spread	IEC 60332-3-24, EN 60332-3-24, VDE 0482-332-3-24, AREI-RGIE Art.104-F2

Note

* System Circuit Integrity is dependent on installation method

Versions

Material number	Product	Reaction to fire	Outer sheath colour	Outer sheath diameter [mm]	CU rate [kg/km]	Weight [kg/km]	Fire load [kWh/m]	Conductor	Construction	Packing unit	GTIN / EAN
1862800BZ	(N)HXH FE180 E30-E60 2 x 1.5	B2ca-s1a,d1,a1	orange	11	29	175	0.441	solid	LN	by the metre	
18692100BZ	(N)HXH FE180 E30-E60 2 x 2.5	B2ca-s1a,d1,a1	orange	11.8	48	212	0.495	solid	LN	by the metre	
19257200BZ	(N)HXH FE180 E30-E60 2 x 1.5	B2ca-s1a,d1,a1	orange	11	29	174	0.441	solid	2L	by the metre	
19258200BZ	(N)HXH FE180 E30-E60 2 x 2.5	B2ca-s1a,d1,a1	orange	11.8	48	212	0.495	solid	2L	by the metre	
18692200BZ	(N)HXH FE180 E30-E60 2 x 4	B2ca-s1a,d1,a1	orange	12.8	77	267	0.565	solid	LN	by the metre	
18692300BZ	(N)HXH FE180 E30-E60 2 x 6	B2ca-s1a,d1,a1	orange	13.8	115	329	0.636	solid	LN	by the metre	
18692400BZ	(N)HXH FE180 E30-E60 2 x 10	B2ca-s1a,d1,a1	orange	15.4	192	449	0.754	solid	LN	by the metre	
18695200BZ	(N)HXH FE180 E30-E60 2 x 16	B2ca-s1a,d1,a1	orange	18.2	307	652	0.98	solid	LN	by the metre	
19040400BZ	(N)HXH FE180 E30-E60 2 x 25	B2ca-s1a,d1,a1	orange	21.2	480	937	1.281	stranded	LN	by the metre	
18692500BZ	(N)HXH-J FE180 E30-E60 3 x 1.5	B2ca-s1a,d1,a1	orange	11.5	43	196	0.488	solid	LNPE	by the metre	
18692600BZ	(N)HXH-J FE180 E30-E60 3 x 2.5	B2ca-s1a,d1,a1	orange	12.4	72	245	0.551	solid	LNPE	by the metre	

Material number	Product	Reaction to fire	Outer sheath colour	Outer sheath diameter [mm]	CU rate [kg/km]	Weight [kg/km]	Fire load [kWh/m]	Conductor	Construction	Packing unit	GTIN / EAN
18692700BZ	(N)HXH-J FE180 E30-E60 3 x 4	B2ca-s1a,d1,a1	orange	13.5	115	315	0.63	solid	LNPE	by the metre	
18692800BZ	(N)HXH-J FE180 E30-E60 3 x 6	B2ca-s1a,d1,a1	orange	14.6	173	395	0.71	solid	LNPE	by the metre	
18692900BZ	(N)HXH-J FE180 E30-E60 3 x 10	B2ca-s1a,d1,a1	orange	16.3	288	549	0.836	solid	LNPE	by the metre	
18695300BZ	(N)HXH FE180 E30-E60 3 x 16	B2ca-s1a,d1,a1	orange	19.3	461	804	1.076	stranded	LNPE	by the metre	
18695500BZ	(N)HXH FE180 E30-E60 3 x 25	B2ca-s1a,d1,a1	orange	22.6	720	1,174	1.634	stranded	LNPE	by the metre	
18695400BZ	(N)HXH FE180 E30-E60 3 x 25 + 1 x 16	B2ca-s1a,d1,a1	orange	23.9	874	1,352	1.576	stranded	3LPE	by the metre	
18695700BZ	(N)HXH FE180 E30-E60 3 x 35	B2ca-s1a,d1,a1	orange	24.9	1,008	1,516	1.634	stranded	LNPE	by the metre	
18695600BZ	(N)HXH FE180 E30-E60 3 x 35 + 1 x 16	B2ca-s1a,d1,a1	orange	25.9	1,162	1,681	1.787	stranded	3LPE	by the metre	
18695900BZ	(N)HXH FE180 E30-E60 3 x 50	B2ca-s1a,d1,a1	orange	28.2	1,440	2,009	2.081	stranded	LNPE	by the metre	
18695800BZ	(N)HXH FE180 E30-E60 3 x 50 + 1 x 25	B2ca-s1a,d1,a1	orange	29.9	1,680	2,295	2.312	stranded	3LPE	by the metre	
18696100BZ	(N)HXH FE180 E30-E60 3 x 70	B2ca-s1a,d1,a1	orange	32.7	2,016	2,789	2.613	stranded	LNPE	by the metre	
18696000BZ	(N)HXH FE180 E30-E60 3 x 70 + 1 x 35	B2ca-s1a,d1,a1	orange	34	2,352	3,120	2.807	stranded	3LPE	by the metre	
18696200BZ	(N)HXH FE180 E30-E60 3 x 95 + 1 x 20	B2ca-s1a,d1,a1	orange	39.3	3,216	4,193	3.893	stranded	3LPE	by the metre	
18696300BZ	(N)HXH FE180 E30-E60 3 x 120 + 1 x 70	B2ca-s1a,d1,a1	orange	42.6	4,098.28	5,222	4.419	stranded	3LPE	by the metre	
18696400BZ	(N)HXH FE180 E30-E60 3 x 150 + 1 x 70	B2ca-s1a,d1,a1	orange	46.6	4,992	6,320	5.244	stranded	3LPE	by the metre	
18696500BZ	(N)HXH FE180 E30-E60 3 x 185 + 1 x 90	B2ca-s1a,d1,a1	orange	52	6,240	7,903	6.505	stranded	3LPE	by the metre	
18693000BZ	(N)HXH-J FE180 E30-E60 4 x 1.5	B2ca-s1a,d1,a1	orange	12.4	58	230	0.572	solid	3LPE	by the metre	
18693100BZ	(N)HXH-J FE180 E30-E60 4 x 2.5	B2ca-s1a,d1,a1	orange	13.4	96	290	0.634	solid	3LPE	by the metre	
18693200BZ	(N)HXH-J FE180 E30-E60 4 x 4	B2ca-s1a,d1,a1	orange	14.6	154	377	0.724	solid	3LPE	by the metre	
18693300BZ	(N)HXH-J FE180 E30-E60 4 x 6	B2ca-s1a,d1,a1	orange	15.8	230	481	0.831	solid	3LPE	by the metre	
18693400BZ	(N)HXH-J FE180 E30-E60 4 x 10	B2ca-s1a,d1,a1	orange	17.8	384	682	0.992	solid	3LPE	by the metre	
18696700BZ	(N)HXH FE180 E30-E60 4 x 16	B2ca-s1a,d1,a1	orange	21.1	614	1,001	1.277	stranded	3LPE	by the metre	
18696800BZ	(N)HXH FE180 E30-E60 4 x 25	B2ca-s1a,d1,a1	orange	24.8	960	1,473	1.695	stranded	3LPE	by the metre	
18696900BZ	(N)HXH FE180 E30-E60 4 x 35	B2ca-s1a,d1,a1	orange	27.4	1,344	1,916	1.951	stranded	3LPE	by the metre	
18697000BZ	(N)HXH FE180 E30-E60 4 x 50	B2ca-s1a,d1,a1	orange	31.5	1,920	2,580	2.604	stranded	3LPE	by the metre	
18697100BZ	(N)HXH FE180 E30-E60 4 x 70	B2ca-s1a,d1,a1	orange	36.2	2,688	3,554	3.199	stranded	3LPE	by the metre	
18697200BZ	(N)HXH FE180 E30-E60 4 x 95	B2ca-s1a,d1,a1	orange	41.7	3,648	4,752	4.357	stranded	3LPE	by the metre	

Material number	Product	Reaction to fire	Outer sheath colour	Outer sheath diameter [mm]	CU rate [kg/km]	Weight [kg/km]	Fire load [kWh/m]	Conductor	Construction	Packing unit	GTIN / EAN
18753200BZ	(N)HXH FE180 E30-E60 4 x 95	B2ca-s1a,d1,a1	orange	41.7	3,648	4,752	4.357	stranded	3LN	by the metre	
18697300BZ	(N)HXH FE180 E30-E60 4 x 120	B2ca-s1a,d1,a1	orange	44.6	4,608	5,800	4.831	stranded	3LPE	by the metre	
18697400BZ	(N)HXH FE180 E30-E60 4 x 150	B2ca-s1a,d1,a1	orange	50	5,760	7,313	6.103	stranded	3LPE	by the metre	
18754800BZ	(N)HXH-J FE180 E30-E60 4 x 185	B2ca-s1a,d1,a1	orange	55.3	7,104	9,008	7.404	stranded	3LPE	by the metre	
18707700BZ	(N)HXH FE180 E30-E60 4 x 240	B2ca-s1a,d1,a1	orange	62.9	9,216	11,787	9.4	stranded	3LPE	by the metre	
18693500BZ	(N)HXH-J FE180 E30-E60 5 x 1.5	B2ca-s1a,d1,a1	orange	13.4	72	273	0.665	solid	3LNPE	by the metre	
18693600BZ	(N)HXH-J FE180 E30-E60 5 x 2.5	B2ca-s1a,d1,a1	orange	14.5	120	346	0.754	solid	3LNPE	by the metre	
18693700BZ	(N)HXH-J FE180 E30-E60 5 x 4	B2ca-s1a,d1,a1	orange	15.8	192	453	0.863	solid	3LNPE	by the metre	
18693800BZ	(N)HXH-J FE180 E30-E60 5 x 6	B2ca-s1a,d1,a1	orange	17.2	288	579	0.983	solid	3LNPE	by the metre	
18693900BZ	(N)HXH-J FE180 E30-E60 5 x 10	B2ca-s1a,d1,a1	orange	19.3	480	819	1.164	solid	3LNPE	by the metre	
18697500BZ	(N)HXH FE180 E30-E60 5 x 16	B2ca-s1a,d1,a1	orange	23.1	768	1,216	1.525	stranded	3LNPE	by the metre	
18697600BZ	(N)HXH FE180 E30-E60 5 x 25	B2ca-s1a,d1,a1	orange	27.2	1,200	1,800	2.055	stranded	3LNPE	by the metre	
18697700BZ	(N)HXH FE180 E30-E60 5 x 35	B2ca-s1a,d1,a1	orange	30.5	1,680	2,371	2.45	stranded	3LNPE	by the metre	
18697800BZ	(N)HXH FE180 E30-E60 5 x 50	B2ca-s1a,d1,a1	orange	34.8	2,400	3,173	2.974	stranded	3LNPE	by the metre	
18697900BZ	(N)HXH FE180 E30-E60 5 x 70	B2ca-s1a,d1,a1	orange	40	3,360	4,366	3.65	stranded	3LNPE	by the metre	
19058700BZ	(N)HXH FE180 E30-E60 5 x 95	B2ca-s1a,d1,a1	orange	46.6	4,560	5,890	5.035	stranded	3LNPE	by the metre	
17127200BZ	(N)HXH-J FE180 E30-E60 7 x 1.5	B2ca-s1a,d1,a1	orange	14.4	101	327	0.758	solid	6LPE	by the metre	
17127300BZ	(N)HXH-J FE180 E30-E60 7 x 2.5	B2ca-s1a,d1,a1	orange	15.6	168	419	0.857	solid	6LPE	by the metre	
17127900BZ	(N)HXH-J FE180 E30-E60 12 x 1.5	B2ca-s1a,d1,a1	orange	18.3	173	506	1.128	solid	11LPE	by the metre	
17128000BZ	(N)HXH-J FE180 E30-E60 12 x 2.5	B2ca-s1a,d1,a1	orange	20	288	663	1.288	solid	11LPE	by the metre	

Additional dimensions available on request.

Subject to technical modification

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