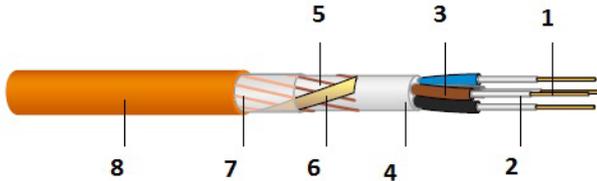


(N)HXCH FE180 E30-E60 B2_{ca}

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 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.

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 "HX11"
Core colours	CENELEC HD 308 S2, VDE 0293
Separator	Plastic tape
Filler	Flame retardant, halogen-free thermoplastic compound
Concentric conductor	Bare copper wires with reinforced helix
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
Screened	no

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), 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
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, EN 60332-3-22/-24, VDE 0482-332-3-22/-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
18694300BZ	(N)HXCH FE180 E30-E60 2 x 1.5/1.5	B2ca-s1a,d1,a1	orange	12.7	52	221	0.551	solid	LN	by the metre	
18694400BZ	(N)HXCH FE180 E30-E60 2 x 2.5/2.5	B2ca-s1a,d1,a1	orange	13.5	80	269	0.612	solid	LN	by the metre	
18723200BZ	(N)HXCH FE180 E30-E60 2 x 4/4	B2ca-s1a,d1,a1	orange	14.9	123	350	0.706	solid	LN	by the metre	
18723400BZ	(N)HXCH FE180 E30-E60 2 x 6/6	B2ca-s1a,d1,a1	orange	16	182	428	0.79	solid	LN	by the metre	
18694500BZ	(N)HXCH FE180 E30-E60 3 x 1.5/1.5	B2ca-s1a,d1,a1	orange	13.2	66	246	0.599	solid	3L	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
18694600BZ	(N)HXCH FE180 E30-E60 3 x 2.5/2.5	B2ca-s1a,d1,a1	orange	14.1	104	303	0.784	solid	3L	by the metre	
18723800BZ	(N)HXCH FE180 E30-E60 3 x 16/16	B2ca-s1a,d1,a1	orange	21.3	624.7	1,027	1.348	stranded	3L	by the metre	
18723900BZ	(N)HXCH FE180 E30-E60 3 x 25/16	B2ca-s1a,d1,a1	orange	25	902	1,433	1.799	stranded	3L	by the metre	
18724000BZ	(N)HXCH FE180 E30-E60 3 x 35/16	B2ca-s1a,d1,a1	orange	37.3	1,190	1,799	2.096	stranded	3L	by the metre	
18724100BZ	(N)HXCH FE180 E30-E60 3 x 50/25	B2ca-s1a,d1,a1	orange	31.7	1,723	2,450	2.689	stranded	3L	by the metre	
18724200BZ	(N)HXCH FE180 E30-E60 3 x 70/35	B2ca-s1a,d1,a1	orange	36	2,410	3,342	3.32	stranded	3L	by the metre	
18698500BZ	(N)HXCH FE180 E30-E60 3 x 95/50	B2ca-s1a,d1,a1	orange	41.1	3,296	4,445	4.416	stranded	3L	by the metre	
18698600BZ	(N)HXCH FE180 E30-E60 3 x 120/70	B2ca-s1a,d1,a1	orange	44.5	4,236	5,524	5.002	stranded	3L	by the metre	
18698700BZ	(N)HXCH FE180 E30-E60 3 x 150/70	B2ca-s1a,d1,a1	orange	49.2	5,100	6,730	6.114	stranded	3L	by the metre	
18698800BZ	(N)HXCH FE180 E30-E60 3 x 240/120	B2ca-s1a,d1,a1	orange	61.5	8,242	10,908	9.391	stranded	3L	by the metre	
18694700BZ	(N)HXCH FE180 E30-E60 4 x 1.5/1.5	B2ca-s1a,d1,a1	orange	14.1	81	280	0.677	solid	3LN	by the metre	
18694800BZ	(N)HXCH FE180 E30-E60 4 x 2.5/2.5	B2ca-s1a,d1,a1	orange	15.1	128	350	0.754	solid	3LN	by the metre	
18694900BZ	(N)HXCH FE180 E30-E60 4 x 4/4	B2ca-s1a,d1,a1	orange	16.7	200	464	0.87	solid	3LN	by the metre	
18695000BZ	(N)HXCH FE180 E30-E60 4 x 6/6	B2ca-s1a,d1,a1	orange	18.1	297	612	1.051	solid	3LN	by the metre	
18695100BZ	(N)HXCH FE180 E30-E60 4 x 10/10	B2ca-s1a,d1,a1	orange	20.1	504	858	1.25	solid	3LN	by the metre	
18698900BZ	(N)HXCH FE180 E30-E60 4 x 16/16	B2ca-s1a,d1,a1	orange	23.4	796	1,245	1.494	stranded	3LN	by the metre	
18699000BZ	(N)HXCH FE180 E30-E60 4 x 25/16	B2ca-s1a,d1,a1	orange	27.2	1,142	1,742	2.106	stranded	3LN	by the metre	
18699100BZ	(N)HXCH FE180 E30-E60 4 x 35/16	B2ca-s1a,d1,a1	orange	29.8	1,526	2,197	2.432	stranded	3LN	by the metre	
18699200BZ	(N)HXCH FE180 E30-E60 4 x 50/25	B2ca-s1a,d1,a1	orange	34.8	2,203	3,026	3.298	stranded	3LN	by the metre	
18699300BZ	(N)HXCH FE180 E30-E60 4 x 70/35	B2ca-s1a,d1,a1	orange	39.5	3,082	4,128	3.968	stranded	3LN	by the metre	
18699400BZ	(N)HXCH FE180 E30-E60 4 x 95/50	B2ca-s1a,d1,a1	orange	45.2	4,208	5,503	5.298	stranded	3LN	by the metre	
18699500BZ	(N)HXCH FE180 E30-E60 4 x 120/70	B2ca-s1a,d1,a1	orange	49.1	5,388	6,863	6.051	stranded	3LN	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
18699600BZ	(N)HXCH FE180 E30-E60 4 x 150/70	B2ca-s1a,d1,a1	orange	54.3	6,540	8,399	6.971	stranded	3LN	by the metre	
18699700BZ	(N)HXCH FE180 E30-E60 4 x 185/95	B2ca-s1a,d1,a1	orange	59.8	8,159	10,470	9.075	stranded	3LN	by the metre	
18699800BZ	(N)HXCH FE180 E30-E60 4 x 240/120	B2ca-s1a,d1,a1	orange	67.9	10,546	13,600	11.41	stranded	3LN	by the metre	
18724402BZ	(N)HXCH FE180 E30-E60 7 x 1.5/2.5	B2ca-s1b,d1,a1	orange	16.1	133	390	0.884	solid	7L	by the metre	

Additional dimensions available on request.

Subject to technical modification

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