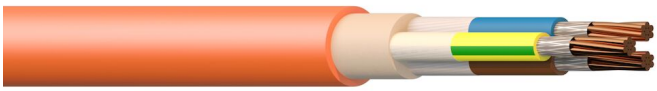
BFXI 1KV

Firetuf



GENERAL INFO

BFXI 1KV
Installations with up to 1kV operating voltage, in places where the electrical function is to maintain during fire. Allowed indoors, outdoors with extra protection against UV radiation / sunlight and in soil if given extra protection. Halogen-free cable is recommended used when it is important to avoid the formation of dense smoke and corrosive gases in the event of an overheating or fire.

Expected lifetime 50 years, provided proper installation, load and ambient temperature

Cenelec: N1XZ1-U, N1XZ1-R

Building Installations;Residential Installations;Industrial Installations;OEM;Sustainable Energy & Installations;Road Infrastructure;Railway Infrastructure

CABLE CONSTRUCTION

Conductor material	Copper
Conductor surface	Bare
Core insulation material	Mica + XLPE
Core identification (acc. HD 308 S2)	Yes
Material outer sheath	Halogenfree polymer
Cable shape	Round

MARKING TEXT ON OUTER SHEATH (EXAMPLE)

"metermarking" PRYSMIAN (F10) BFXI 1kV 5x 70 EN IEC 60331-1 "Production date"

Insulation colours:
3G = Yellow/Green -Blue - Brown
4G = Yellow/Green - Brown - Black - Grey
5G = Yellow/Green - Blue - Brown - Black - Grey

STANDARDS APPLIED

HD 604-5D	Construction
IEC 60502-1	Construction
IEC 60228 Class 1 or Class 2	Conductors
IEC 60331-1-2	Fire resistant properties (90min - 830°C)
IEC 60332-3-24 (Cat. C)	Flame retardant
EN 60754-1 and EN 60754-2	Halogen free properties: EN 60754-1 (pH ≥ 4,3, Conductivity ≤ 10µS), EN 60754-2 (< 0,5% Halogen)
IEC 61034-1, -2	Low smoke properties: IEC 61034-1, -2 (minimum 60% light transmittance)

APPLICATION PROPERTIES

Test voltage [kV]	3.5
Flame retardant	In accordance with EN/IEC 60332-3-24
Halogen free	acc. IEC/EN 60754-1/2
Low smoke	acc. IEC/EN 61034-2
Max. conductor temperature [°C]	90
Outdoor installation	Yes
Underground installation	Yes
Suitable as installation cable	Yes
Bending radius (rule)	8xD

PRODUCT RANGE / ORDER DATA

Basic construction	Colour outer sheath	Conductor category	DOP number	Packaging type	Standard packaging quantity	EAN-code (GTIN)	SAP	EL no.
3G1,5mm² ER	Orange	Class 1 = solid	n/a	Drum	500	6430010754169	20159279	1017000
3G2,5mm² ER	Orange	Class 1 = solid	n/a	Drum	500	6430010754190	20159276	1017001
2X6mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754541	20380922	1017032
3G6mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754213	20159280	1017003
2X10mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754534	20380921	1017033
2X16mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754527	20380923	1017034
3G4mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754206	20159275	1017002
3G10mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754176	20159291	1017004
3G16mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754183	20159292	1017005
4G1,5mm² ER	Orange	Class 1 = solid	n/a	Drum	500	6430010754220	20159293	1017006
4G2,5mm² ER	Orange	Class 1 = solid	n/a	Drum	500	6430010754251	20159294	1017007
4G4mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754268	20159295	1017008
5G4mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754329	20159274	1017014
4G6mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754275	20159296	1017009
5G6mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754336	20159273	1017015
4G10mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754237	20159297	1017010
5G10mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754299	20159277	1017016
4G16mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754244	20159298	1017011
5G16mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430010754305	20159278	1017017
4G25mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754473	20379192	1017035
4G35mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754480	20379193	1017036
4G50mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754497	20379130	1017037
4G70mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754503	20379191	1017038
4G95mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754510	20379194	1017039
5G1,5mm² ER	Orange	Class 1 = solid	n/a	Drum	500	6430010754282	20159299	1017012

PRODUCT RANGE / ORDER DATA

Basic construction	Colour outer sheath	Conductor category	DOP number	Packaging type	Standard packaging quantity	EAN-code (GTIN)	SAP	EL no.
5G2,5mm² ER	Orange	Class 1 = solid	n/a	Drum	500	6430010754312	20159300	1017013
5G25mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754398	20365843	1066094
5G35mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754312	20365844	1066095
5G50mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754329	20365846	1066096
5G70mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754336	20365847	1066097
5G95mm² FR	Orange	Class 2 = stranded	n/a	Drum	500	6430065754343	20365845	1066098

ER = Copper solid round
FR = Copper stranded round
FV = Copper stranded sectorshaped
AFR = Aluminium stranded round
AFV = Aluminium stranded sectorshaped

DIMENSIONAL DATA

Basic construction	Diameter conductor [mm]	Nominal thickness insulation [mm]	Nominal outer diameter [mm]	Tolerance diameter outer sheath [±mm]	Cable weight [kg/km]	Fire load [MJ/km]
3G1,5mm² ER	1.4	0.7	12	0.8	210	
3G2,5mm² ER	1.8	0.7	13	0.8	252	
2X6mm² FR	3.1	0.7	15	0.8	362	
3G6mm² FR	3.1	0.7	15.5	0.8	422	
2X10mm² FR	4	0.7	17.5	0.8	525	
2X16mm² FR	5	0.7	20	1	733	
3G4mm² FR	2.5	0.7	14.5	0.8	335	
3G10mm² FR	4	0.7	18.5	0.8	621	
3G16mm² FR	5	0.7	21	1	882	
4G1,5mm² ER	1.4	0.7	13	0.8	242	
4G2,5mm² ER	1.8	0.7	14	0.8	296	
4G4mm² FR	2.5	0.7	16	0.8	397	
5G4mm² FR	2.5	0.7	17	0.8	475	
4G6mm² FR	3.1	0.7	17	0.8	504	
5G6mm² FR	3.1	0.7	18.5	0.8	605	
4G10mm² FR	4	0.7	20	1	748	
5G10mm² FR	4	0.7	22	1	903	
4G16mm² FR	5	0.7	23	1	1,073	
5G16mm² FR	5	0.7	25.5	1	1,307	
4G25mm² FR	5.8	0.9	29	1	1,740	
4G35mm² FR	6.9	0.9	31.5	1.5	2,226	
4G50mm² FR	7.9	1	35	1.5	2,818	
4G70mm² FR	9.6	1.1	40	2	3,881	
4G95mm² FR	11.3	1.1	43.5	2	5,042	
5G1,5mm² ER	1.4	0.7	14.5	0.8	285	
5G2,5mm² ER	1.8	0.7	15	0.8	349	
5G25mm² FR	5.8	0.9	31.5	1.5	2,088	

DIMENSIONAL DATA

Basic construction	Diameter conductor [mm]	Nominal thickness insulation [mm]	Nominal outer diameter [mm]	Tolerance diameter outer sheath [±mm]	Cable weight [kg/km]	Fire load [MJ/km]
5G35mm² FR	6.9	0.9	34.5	1.5	2,673	
5G50mm² FR	7.9	1	38.5	1.5	3,454	
5G70mm² FR	9.6	1.1	44	2	4,696	
5G95mm² FR	11.3	1.1	48.5	2	6,197	

ER = Copper solid round
FR = Copper stranded round
FV = Copper stranded sectorshaped
AFR = Aluminium stranded round
AFV = Aluminium stranded sectorshaped

ELECTRICAL VALUES

Basic construction	Conductor resistance at 20° C [Ohm/km]	Current carrying capacity [A]	Short circuit current conductor (1sec) [kA]	Short circuit current conductor (5sec) [kA]
3G1,5mm² ER	12.1	26	0.21	0.09
3G2,5mm² ER	7.41	36	0.35	0.16
2X6mm² FR	3.08	54	0.84	0.38
3G6mm² FR	3.08	63	0.84	0.38
2X10mm² FR	1.83	75	1.4	0.63
2X16mm² FR	1.15	100	2.24	1
3G4mm² FR	4.61	49	0.56	0.25
3G10mm² FR	1.83	86	1.4	0.63
3G16mm² FR	1.15	115	2.24	1
4G1,5mm² ER	12.1	23	0.21	0.09
4G2,5mm² ER	7.41	32	0.35	0.16
4G4mm² FR	4.61	42	0.56	0.25
5G4mm² FR	4.61	42	0.56	0.25
4G6mm² FR	3.08	54	0.84	0.38
5G6mm² FR	3.08	54	0.84	0.38
4G10mm² FR	1.83	75	1.4	0.63
5G10mm² FR	1.83	75	1.4	0.63
4G16mm² FR	1.15	100	2.24	1
5G16mm² FR	1.15	100	2.24	1
4G25mm² FR	0.727	127	3.5	1.57
4G35mm² FR	0.524	158	4.9	2.19
4G50mm² FR	0.387	192	7	3.13
4G70mm² FR	0.268	246	9.8	4.38
4G95mm² FR	0.193	298	13.3	5.95
5G1,5mm² ER	12.1	23	0.21	0.09
5G2,5mm² ER	7.41	32	0.35	0.16
5G25mm² FR	0.727	127	3.5	1.57
5G35mm² FR	0.524	158	4.9	2.19
5G50mm² FR	0.387	192	7	3.13
5G70mm² FR	0.268	246	9.8	4.38

ELECTRICAL VALUES

Basic construction	Conductor resistance at 20° C [Ohm/km]	Current carrying capacity [A]	Short circuit current conductor (1sec) [kA]	Short circuit current conductor (5sec) [kA]
5G95mm² FR	0.193	298	13.3	5.95

Current rating NEK400:2022 Table 52B-10 Method E or F (Cu conductor+PVC), at 30° ambient temperature.
Current rating NEK400:2022 Table 52B-11 Method E or F (Al conductor+PVC), at 30° ambient temperature.
Current rating NEK400:2022 Table 52B-12 Method E or F (Cu conductor + XLPE or EPR), at 30° ambient temperature.
Current rating NEK400:2022 Table 52B-13 Method E or F (Al conductor + XLPE or EPR), at 30° ambient temperature.