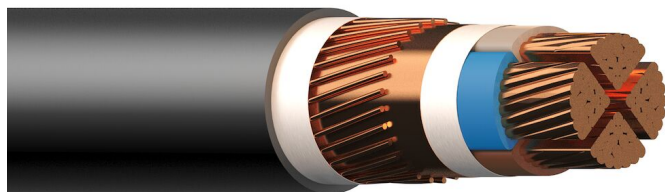


## IFSI-EMC PURE 1KV CU

### Safetycable



### GENERAL INFO

#### IFSI-EMC PURE 1KV CU

Power cable with up to 1 kV operating voltage. Allowed indoors, outdoors and as a ground cable without extra protection. The Cu screen is 100% tight, has low coupling impedance and meets the EMC directive. The 3-conductor is symmetrically constructed and has a cu screen from 1.5mm<sup>2</sup>. 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. This cable is well suited as a sea cable down to 20m if it is protected against mechanical stress. The insulation material is PEX, with good seawater resistance.

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

Cenelec: N1ZA5Z1-U, N1ZC7Z1-R, N1ZC7Z1-S

Building Installations;Industrial Installations;OEM;Sustainable Energy & Installations;Road Infra;Rail Infra;Power Distribution

### CABLE CONSTRUCTION

Conductor material	Copper
Conductor surface	Bare
Core insulation material	XLPE
Armouring/reinforcement material	Copper, bare
Screen construction	Metallised foil
Screen	Yes
Screen material	Copper, bare
Concentric conductor	Copper
Material inner sheath	Halogenfree polymer
Material outer sheath	Halogenfree polymer
Cable shape	Round

### MARKING TEXT ON OUTER SHEATH (EXAMPLE)

FXQJ-EMC Pure IFSI-EMC MCCMK-HF D 0,6/1kV 3x 25 FR/16 D-s2d2a1 DRAKA 11 "dato og tid" "meter"

Core colours:

2X: Blue, brown

3X: Brown, black, grey

4X: Blue, brown, black, grey

Core colours in acc. with HD 308 S2

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## STANDARDS APPLIED

HD 604-5D	Construction
IEC 60502-1	Construction
IEC 60228 Class 1 or Class 2	Conductors
EN 50575:2014 + A1:2016	CPR standard - Fire properties
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)

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## APPLICATION PROPERTIES

Test voltage [kV]	3.5
Flame retardant	Other
Halogen free	acc. IEC/EN 60754-1/2
Low smoke	acc. IEC/EN 61034-2
Reaction-to-fire class (acc. EN 13501-6)	Dca
Smoke development class (acc. EN 13501-6)	s2
Euro class flaming droplets/particles (acc. EN 13501-6)	d2
Euro class acidity (acc. EN 13501-6)	a2
Max. conductor temperature [°C]	90
Outdoor installation	Yes
Suitable as installation cable	Yes
Bending radius (rule)	8xD

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## PRODUCT RANGE / ORDER DATA

Basic construction	Colour outer sheath	Conductor category	DOP number	Packaging type	EAN-code (GTIN)	SAP	EL no.
2x1,5ER/1.5mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6430065751397	20216054	1003800
2x2,5ER/2.5mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6430065751403	20216055	1003801
2x4ER/4mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6430065751410	20216056	1003802
2x6ER/6mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6430065751427	20216057	1003803
2x10FR/10mm <sup>2</sup>	Black	Class 2 = stranded	1003352	Drum	6430065751373	20216060	1003804
2x16FR/16mm <sup>2</sup>	Black	Class 2 = stranded	1003352	Drum	6430065751380	20216061	1003805
3x1,5ER/1.5mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6430065751458	20216062	1003806
3x2,5ER/2.5mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6410006019977	20216067	1003807
3x4ER/4mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6430065751434	20216058	1003808
3x6ER/6mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6410006019991	20216069	1003809
3x10FR/10mm <sup>2</sup>	Black	Class 2 = stranded	1003352	Drum	6430065751465	20216064	1003811
3x10FR/10mm <sup>2</sup>	Black	Class 2 = stranded	1003352	Drum	6410006019953	20216065	1003812
3x16FR/16mm <sup>2</sup>	Black	Class 2 = stranded	1003352	Drum	6410006019960	20216066	1003815
3x25FR/16mm <sup>2</sup>	Black	Class 2 = stranded	1000194	Drum	7330384719612	20193394	1003816
3x35FR/16mm <sup>2</sup>	Black	Class 2 = stranded	1000195	Drum	7330384719629	20193395	1003817
3x50FV/25mm <sup>2</sup>	Black	Class 2 = stranded	1000207	Drum	7330384719636	20193396	1003818
3x70FV/35mm <sup>2</sup>	Black	Class 2 = stranded	1000208	Drum	7330384719643	20193397	1003819
3x95FV/50mm <sup>2</sup>	Black	Class 2 = stranded	1000209	Drum	7330384719650	20193398	1003820
3x120FV/70mm <sup>2</sup>	Black	Class 2 = stranded	1000210	Drum	7330384719667	20193399	1003821
3x150FV/70mm <sup>2</sup>	Black	Class 2 = stranded	1000211	Drum	7330384719674	20193400	1003822
3x185FV/95mm <sup>2</sup>	Black	Class 2 = stranded	1000212	Drum	7330384719681	20193401	1003823
3x240FV/120mm <sup>2</sup>	Black	Class 2 = stranded	1000213	Drum	7330384719698	20193402	1003824
4x1,5ER/1.5mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6410006020041	20216070	1003825
4x2,5ER/2.5mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6410006020089	20216074	1003826
4x4ER/4mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6430065751441	20216059	1003827

## PRODUCT RANGE / ORDER DATA

Basic construction	Colour outer sheath	Conductor category	DOP number	Packaging type	EAN-code (GTIN)	SAP	EL no.
4x6ER/6mm <sup>2</sup>	Black	Class 1 = solid	1003352	Drum	6410006020096	20216075	1003829
4x10FR/10mm <sup>2</sup>	Black	Class 2 = stranded	1003352	Drum	6410006020058	20216071	1003831
4x10FR/10mm <sup>2</sup>	Black	Class 2 = stranded	1003352	Drum	6430065751472	20216072	1003832
4x16FR/16mm <sup>2</sup>	Black	Class 2 = stranded	1003352	Drum	6410006020065	20216073	1003834
4x25FR/16mm <sup>2</sup>	Black	Class 2 = stranded	1000197	Drum	7330384719711	20193404	1003836
4x35FR/16mm <sup>2</sup>	Black	Class 2 = stranded	1000198	Drum	7330384719728	20193405	1003837
4x50FV/25mm <sup>2</sup>	Black	Class 2 = stranded	1000214	Drum	7330384719735	20193406	1003838
4x70FV/35mm <sup>2</sup>	Black	Class 2 = stranded	1000215	Drum	7330384719742	20193407	1003839
4x95FV/50mm <sup>2</sup>	Black	Class 2 = stranded	1000216	Drum	7330384719766	20193408	1003840
4x120FV/70mm <sup>2</sup>	Black	Class 2 = stranded	1000217	Drum	7330384719773	20193409	1003841
4x150FV/70mm <sup>2</sup>	Black	Class 2 = stranded	1000218	Drum	7330384719780	20193410	1003842
4x185FV/95mm <sup>2</sup>	Black	Class 2 = stranded	1000219	Drum	7330384719797	20193411	1003843
4x240FV/120mm <sup>2</sup>	Black	Class 2 = stranded	1000220	Drum	7330384719803	20193412	1003844

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]
2x1,5ER/1.5mm <sup>2</sup>	1.35	0.7	11	0.8	175	1,720
2x2,5ER/2.5mm <sup>2</sup>	1.75	0.7	12	0.8	215	2,040
2x4ER/4mm <sup>2</sup>	2.2	0.7	13.5	0.8	290	2,220
2x6ER/6mm <sup>2</sup>	2.7	0.7	14.5	0.8	360	2,590
2x10FR/10mm <sup>2</sup>	4	0.7	17.5	0.8	555	4,380
2x16FR/16mm <sup>2</sup>	5	0.7	20	1	795	5,590
3x1,5ER/1.5mm <sup>2</sup>	1.35	0.7	11.5	0.8	195	1,940
3x2,5ER/2.5mm <sup>2</sup>	1.75	0.7	12.5	0.8	240	2,240
3x4ER/4mm <sup>2</sup>	2.2	0.7	14	0.8	330	2,440
3x6ER/6mm <sup>2</sup>	2.7	0.7	15	0.8	415	2,850
3x10FR/10mm <sup>2</sup>	4	0.7	18.5	0.8	650	4,780
3x16FR/16mm <sup>2</sup>	5	0.7	21	1	940	6,070
3x25FR/16mm <sup>2</sup>	5.9	0.9	23	1	1,055	4,440
3x35FR/16mm <sup>2</sup>	7	0.9	25.5	1	1,330	4,920
3x50FV/25mm <sup>2</sup>		1	26	1	1,800	6,350
3x70FV/35mm <sup>2</sup>		1.1	29.5	1	2,485	7,700
3x95FV/50mm <sup>2</sup>		1.1	33	1.5	3,395	9,580
3x120FV/70mm <sup>2</sup>		1.2	36.5	1.5	4,265	11,240
3x150FV/70mm <sup>2</sup>		1.4	39.5	1.5	5,130	14,050
3x185FV/95mm <sup>2</sup>		1.6	45.5	2	6,470	16,370
3x240FV/120mm <sup>2</sup>		1.7	50	2.5	8,390	20,880
4x1,5ER/1.5mm <sup>2</sup>	1.35	0.7	12.5	0.8	220	2,220
4x2,5ER/2.5mm <sup>2</sup>	1.75	0.7	13.5	0.8	280	2,560
4x4ER/4mm <sup>2</sup>	2.2	0.7	15	0.8	380	2,830
4x6ER/6mm <sup>2</sup>	2.7	0.7	16	0.8	485	3,280
4x10FR/10mm <sup>2</sup>	4	0.7	20	1	770	5,210
4x16FR/16mm <sup>2</sup>	5	0.7	22.5	1	1,125	6,980

## 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]
4x25FR/16mm <sup>2</sup>	5.9	0.9	25	1	1,340	5,770
4x35FR/16mm <sup>2</sup>	7	0.9	27.5	1	1,715	6,420
4x50FV/25mm <sup>2</sup>		1	28.5	1	2,270	7,990
4x70FV/35mm <sup>2</sup>		1.1	32	1.5	3,150	9,700
4x95FV/50mm <sup>2</sup>		1.1	37	1.5	4,320	12,130
4x120FV/70mm <sup>2</sup>		1.2	40	2	5,390	14,420
4x150FV/70mm <sup>2</sup>		1.4	43.5	2	6,540	17,470
4x185FV/95mm <sup>2</sup>		1.6	49.5	2	8,210	22,700
4x240FV/120mm <sup>2</sup>		1.7	55.5	2.5	10,700	26,530

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]
2x1,5ER/1.5mm <sup>2</sup>	12.1	26	0.21	0.09
2x2,5ER/2.5mm <sup>2</sup>	7.41	36	0.35	0.16
2x4ER/4mm <sup>2</sup>	4.61	49	0.56	0.25
2x6ER/6mm <sup>2</sup>	3.08	63	0.84	0.38
2x10FR/10mm <sup>2</sup>	1.83	86	1.4	0.63
2x16FR/16mm <sup>2</sup>	1.15	115	2.24	1
3x1,5ER/1.5mm <sup>2</sup>	12.1	23	0.21	0.09
3x2,5ER/2.5mm <sup>2</sup>	7.41	32	0.35	0.16
3x4ER/4mm <sup>2</sup>	4.61	42	0.56	0.25
3x6ER/6mm <sup>2</sup>	3.08	54	0.84	0.38
3x10FR/10mm <sup>2</sup>	1.83	75	1.4	0.63
3x16FR/16mm <sup>2</sup>	1.15	100	2.24	1
3x25FR/16mm <sup>2</sup>	0.727	127	3.5	1.57
3x35FR/16mm <sup>2</sup>	0.524	158	4.9	2.19
3x50FV/25mm <sup>2</sup>	0.387	192	7	3.13
3x70FV/35mm <sup>2</sup>	0.268	246	9.8	4.38
3x95FV/50mm <sup>2</sup>	0.193	298	13.3	5.95
3x120FV/70mm <sup>2</sup>	0.153	346	16.8	7.51
3x150FV/70mm <sup>2</sup>	0.124	399	21	9.39
3x185FV/95mm <sup>2</sup>	0.0991	456	25.9	1.16
3x240FV/120mm <sup>2</sup>	0.0754	538	33.6	15.03
4x1,5ER/1.5mm <sup>2</sup>	12.1	23	0.21	0.09
4x2,5ER/2.5mm <sup>2</sup>	7.41	32	0.35	0.16
4x4ER/4mm <sup>2</sup>	4.61	42	0.56	0.25
4x6ER/6mm <sup>2</sup>	3.08	54	0.84	0.38
4x10FR/10mm <sup>2</sup>	1.83	75	1.4	0.63
4x16FR/16mm <sup>2</sup>	1.15	100	2.24	1
4x25FR/16mm <sup>2</sup>	0.727	127	3.5	1.57
4x35FR/16mm <sup>2</sup>	0.524	158	4.9	2.19
4x50FV/25mm <sup>2</sup>	0.387	192	7	3.13

## 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]
4x70FV/35mm <sup>2</sup>	0.268	246	9.8	4.38
4x95FV/50mm <sup>2</sup>	0.193	298	13.3	5.95
4x120FV/70mm <sup>2</sup>	0.153	346	16.8	7.51
4x150FV/70mm <sup>2</sup>	0.124	399	21	9.39
4x185FV/95mm <sup>2</sup>	0.0991	456	25.9	1.16
4x240FV/120mm <sup>2</sup>	0.0754	538	33.6	15.03

Current rating NEK400:2018 Table 52B-10 Method E or F (Cu conductor+PVC), at 30° ambient temperature.

Current rating NEK400:2018 Table 52B-11 Method E or F (Al conductor+PVC), at 30° ambient temperature.

Current rating NEK400:2018 Table 52B-12 Method E or F (Cu conductor + XLPE or EPR), at 30° ambient temperature.

Current rating NEK400:2018 Table 52B-13 Method E or F (Al conductor + XLPE or EPR), at 30° ambient temperature.

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