

XCMK-HF / EXQJ / IFSI-Cu

Copper power cable HF

0,6/1 (1,2) kV

Application

Copper power cable for fixed installations indoors and outdoors. May be buried directly in soil. The conductor insulation must be protected against UV-radiation. Installations must be in accordance with national regulations and rules of installations. The cable is halogen-free and flame-retardant according to CPR-class Dca-s2,d2,a2.



Design

Standards	SFS 5546, SEK TS 424 14 18-1, HD 604 5 I & D, IEC 60502-1
Reaction to fire	Dca-s2,d2,a2; EN 13501-6, EN 50575:2014+A1:2016
Conductor	Circular solid copper, EN/IEC 60228 class 1
Insulation	Cross-linked polyethylene XLPE
Core Identification	Blue, brown Brown, black, grey Blue, brown, black, grey
Inner covering	Extruded filling compound
Metal screen	Copper wires and copper tape
Oversheath	UV-protected polyolefin compound, Black

Temperature limits

Max. conductor temperature °C	90
Max. cond. temp. short circuit max. 5 s °C	250
Min. cable temperature during operation °C	-50
Min. cable temperature during handling °C	-15
Min. cable temperature during transport °C	-25

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Technical information	2x1,5/1,5	2x2,5/2,5	2x4/4	2x6/6	3x1,5/1,5	3x2,5/2,5	3x4/4	3x6/6	3x10/10	4x1,5/1,5
Product code	1146105	1146106	1146107	1146108	1146225	1146226	1146227	1146228	1256169	1146305
Nominal cross-sectional area of conductor mm ²	1,5	2,5	4	6	1,5	2,5	4	6	10	1,5
Nominal thickness of insulation mm	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,7
Nominal size of metal screen mm ²	1,5	2,5	4	6	1,5	2,5	4	6	10	1,5
Nominal thickness of oversheath mm	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8
Fire load MJ/m	2,073	2,303	2,665	3,016	2,273	2,545	2,941	3,330	3,963	2,582
Fire load kWh/m	0,576	0,640	0,740	0,838	0,631	0,707	0,817	0,925	1,101	0,717
Nominal cable diameter mm	11,830	12,550	13,770	14,810	12,220	13,030	14,330	15,450	17,450	12,920
Nominal cable weight kg/km	190,157	236,790	301,802	386,203	202,833	254,075	337,927	437,061	621,830	231,441
Nominal weight of copper kg/m	0,041	0,070	0,110	0,164	0,053	0,087	0,144	0,217	0,358	0,066
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	0,2	0,3	0,4	0,6	0,2	0,4	0,6	0,9	1,5	0,3
Max. pulling force by pulling-stocking kN	0,1	0,1	0,1	0,2	0,1	0,1	0,2	0,3	0,5	0,1
Minimum bending radii										
During handling and installation, cable cm	14	15	17	18	15	16	17	19	21	16
In final installation, cable cm	10	11	12	12	10	11	12	13	15	11
Minimum bending radii										
During handling and installation, cable m	0,14	0,15	0,17	0,18	0,15	0,16	0,17	0,18	0,21	0,15
In final installation, cable m	0,10	0,10	0,12	0,12	0,10	0,11	0,12	0,13	0,15	0,11
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	12,1	7,41	4,61	3,08	12,1	7,41	4,61	3,08	1,83	12,1
Maximum DC resistance at 20 °C, metal screen Ω/km	12,1	7,41	4,61	3,08	12,1	7,41	4,61	3,08	1,83	12,1

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Technical information	2x1,5/1,5	2x2,5/2,5	2x4/4	2x6/6	3x1,5/1,5	3x2,5/2,5	3x4/4	3x6/6	3x10/10	4x1,5/1,5
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	23	31	42	53	23	31	42	53	73	23
three loaded conductor, conductor 70 °C A					19	26	35	45	62	19
two loaded conductor, conductor 90 °C A	27	37	51	66	27	37	51	66	89	27
three loaded conductor, conductor 90 °C A					24	33	44	56	78	24
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	22	30	40	51	22	30	40	51	70	22
three loaded conductor, conductor 70 °C A					18,5	25	34	43	60	18,5
two loaded conductor, conductor 90 °C A	26	36	49	63	26	36	49	63	86	26
three loaded conductor, conductor 90 °C A					23	32	42	54	75	23
Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m										
Cables in the ground, conductor 65 °C A	26	35	46	57	26	35	46	57	77	26
Cables in the ground (20 °C and 2,5 K.m/W), Installation depth 0,7 m										
Cables in the ground, conductor 90 °C A	27	35	46	58	23	30	39	49	65	23
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	0,2	0,3	0,6	0,9	0,2	0,3	0,6	0,9	1,6	0,2
Phase (initial 90 °C, final 250 °C) kA	0,2	0,3	0,5	0,8	0,2	0,3	0,5	0,8	1,4	0,2
Metal screen (initial 80 °C, final 250 °C) kA	0,2	0,4	0,6	0,9	0,2	0,4	0,6	0,9	1,5	0,2

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Technical information	4x2,5/2,5	4x4/4	4x6/6	4x10/10
Product code	1146306	1146307	1146308	1256269
Nominal cross-sectional area of conductor mm ²	2,5	4	6	10
Nominal thickness of insulation mm	0,7	0,7	0,7	0,7
Nominal size of metal screen mm ²	2,5	4	6	10
Nominal thickness of oversheath mm	1,8	1,8	1,8	1,8
Fire load MJ/m	2,909	3,380	3,883	4,578
Fire load kWh/m	0,808	0,939	1,079	1,272
Nominal cable diameter mm	13,850	15,280	16,520	18,730
Nominal cable weight kg/km	291,667	393,060	520,970	738,077
Nominal weight of copper kg/m	0,108	0,180	0,272	0,448
Maximum forces during installation when pulling by				
Max. pulling force by pulling-eye kN	0,5	0,8	1,2	2,0
Max. pulling force by pulling-stocking kN	0,2	0,2	0,4	0,6
Minimum bending radii				
During handling and installation, cable cm	17	18	20	22
In final installation, cable cm	12	13	14	16
Minimum bending radii				
During handling and installation, cable m	0,17	0,18	0,20	0,23
In final installation, cable m	0,12	0,13	0,14	0,16
DC resistance				
Max. DC resistance of conductor at 20 °C Ω/km	7,41	4,61	3,08	1,83
Maximum DC resistance at 20 °C, metal screen Ω/km	7,41	4,61	3,08	1,83

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Technical information	4x2,5/2,5	4x4/4	4x6/6	4x10/10
Current ratings				
Cables in air (25 °C)				
two loaded conductor, conductor 70 °C A	31	42	53	73
three loaded conductor, conductor 70 °C A	26	35	45	62
two loaded conductor, conductor 90 °C A	37	51	66	89
three loaded conductor, conductor 90 °C A	33	44	56	78
Cables in air (30 °C)				
two loaded conductor, conductor 70 °C A	30	40	51	70
three loaded conductor, conductor 70 °C A	25	34	43	60
two loaded conductor, conductor 90 °C A	36	49	63	86
three loaded conductor, conductor 90 °C A	32	42	54	75
Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m				
Cables in the ground, conductor 65 °C A	35	46	57	77
Cables in the ground (20 °C and 2,5 K.m/W), Installation depth 0,7 m				
Cables in the ground, conductor 90 °C A	30	39	49	65
Maximum thermal short circuit current during 1 s				
Phase (initial 65 °C, final 250 °C) kA	0,3	0,6	0,9	1,6
Phase (initial 90 °C, final 250 °C) kA	0,3	0,5	0,8	1,4
Metal screen (initial 80 °C, final 250 °C) kA	0,4	0,6	0,9	1,5