

XCMK-HF / FXQJ / IFSI-Cu

Copper power cable

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	2,5-25 mm ² circular stranded copper, EN/IEC 60228 class 2 35-300 mm ² sector shaped stranded copper, EN/IEC 60228 class 2
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	2x4/4	2x10/10	2x16/16	2x25/16	2x25/16	2x35/16	3x2,5/2,5	3x6/6	3x10/10	3x16/16
Product code	1703352	1146109	1146110	1146111	1146120	1146112	1146263	1146265	1146229	1146230
Nominal cross-sectional area of conductor mm ²	4	10	16	25	25	35	2,5	6	10	16
Nominal thickness of insulation mm	0,7	0,7	0,7	0,9	0,9	0,9	0,7	0,7	0,7	0,7
Nominal size of metal screen mm ²	4	10	16	16	16	16	2,5	6	10	16
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	3,008	4,039	5,407	7,026	7,157	7,125	2,771	3,680	4,759	6,090
Fire load kWh/m	0,835	1,122	1,502	1,952	1,988	1,979	0,770	1,022	1,322	1,692
Nominal cable diameter mm	14,430	17,590	20,470	23,970	24,160	24,990	13,580	16,170	18,420	21,470
Nominal cable weight kg/km	323,293	565,967	825,402	1133,945	1135,740	1277,566	270,675	454,842	650,873	952,398
Nominal weight of copper kg/m	0,111	0,266	0,424	0,596	0,594	0,754	0,090	0,215	0,352	0,561
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	0,4	1,0	1,6	2,5	2,5	3,5	0,4	0,9	1,5	2,4
Max. pulling force by pulling-stocking kN	0,1	0,3	0,5	0,8	0,8	1,1	0,1	0,3	0,5	0,7
Minimum bending radii										
During handling and installation, cable cm	17	21	25	29	29	30	16	19	22	26
In final installation, cable cm	12	15	17	20	20	21	11	14	15	18
Minimum bending radii										
During handling and installation, cable m	0,17	0,21	0,25	0,29	0,29	0,30	0,16	0,19	0,22	0,26
In final installation, cable m	0,12	0,15	0,17	0,20	0,20	0,21	0,11	0,14	0,15	0,18
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	4,61	1,83	1,15	0,727	0,727	0,524	7,41	3,08	1,83	1,15
Maximum DC resistance at 20 °C, metal screen Ω/km	4,61	1,83	1,15	1,15	1,15	1,15	7,41	3,08	1,83	1,15

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Technical information	2x4/4	2x10/10	2x16/16	2x25/16	2x25/16	2x35/16	3x2,5/2,5	3x6/6	3x10/10	3x16/16
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	42	73	98	124	124	154	31	53	73	98
three loaded conductor, conductor 70 °C A							26	45	62	83
two loaded conductor, conductor 90 °C A	51	89	120	155	155	192	37	66	89	120
three loaded conductor, conductor 90 °C A							33	56	78	104
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	40	70	94	119	119	148	30	51	70	94
three loaded conductor, conductor 70 °C A							25	43	60	80
two loaded conductor, conductor 90 °C A	49	86	115	149	149	185	36	63	86	115
three loaded conductor, conductor 90 °C A							32	54	75	100
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	46	77	100	130	130	160	35	57	77	100
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	46	77	100	129	129	155	30	49	65	84
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	0,6	1,6	2,5	3,9	3,9	5,5	0,3	0,9	1,6	2,5
Phase (initial 90 °C, final 250 °C) kA	0,5	1,4	2,3	3,6	3,6	5,0	0,3	0,8	1,4	2,3
Metal screen (initial 80 °C, final 250 °C) kA	0,6	1,5	2,4	2,4	2,4	2,4	0,4	0,9	1,5	2,4

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Technical information	3x25/16	3x35/16	3x50/25	3x70/35	3x95/50	3x120/70	3x150/70	3x185/95	3x240/120	3x300/150
Product code	1146231	1146232	1146233	1146234	1146235	1146236	1146237	1146238	1146239	1146240
Nominal cross-sectional area of conductor mm ²	25	35	50	70	95	120	150	185	240	300
Nominal thickness of insulation mm	0,9	0,9	1,0	1,1	1,1	1,2	1,4	1,6	1,7	1,8
Nominal size of metal screen mm ²	16	16	25	35	50	70	70	95	120	150
Nominal thickness of oversheath mm	1,8	1,8	1,8	2,0	2,1	2,2	2,4	2,5	2,7	2,9
Fire load MJ/m	7,806	6,647	8,075	10,479	12,332	15,003	18,745	22,993	28,411	31,995
Fire load kWh/m	2,168	1,846	2,243	2,911	3,426	4,168	5,207	6,387	7,892	8,888
Nominal cable diameter mm	25,390	23,100	26,350	29,490	33,560	36,640	40,980	45,340	52,890	55,530
Nominal cable weight kg/km	1313,418	1327,918	1815,458	2512,552	3391,151	4303,726	5180,430	6539,907	8550,983	10588,514
Nominal weight of copper kg/m	0,816	1,056	1,493	2,102	2,903	3,725	4,473	5,692	7,481	9,384
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	3,8	5,3	7,5	10,5	14,3	18,0	20,0	20,0	20,0	20,0
Max. pulling force by pulling-stocking kN	1,1	1,6	2,3	3,2	4,3	5,4	6,8	8,3	8,5	8,5
Minimum bending radii										
During handling and installation, cable cm	30	28	32	35	40	44	49	54	63	67
In final installation, cable cm	21	19	22	25	28	31	34	38	44	47
Minimum bending radii										
During handling and installation, cable m	0,30	0,28	0,32	0,35	0,40	0,44	0,49	0,54	0,64	0,67
In final installation, cable m	0,21	0,19	0,22	0,25	0,28	0,31	0,34	0,38	0,44	0,47
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	0,727	0,524	0,387	0,268	0,193	0,153	0,124	0,0991	0,0754	0,0601
Maximum DC resistance at 20 °C, metal screen Ω/km	1,15	1,15	0,727	0,524	0,387	0,268	0,268	0,193	0,153	0,0601

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Technical information	3x25/16	3x35/16	3x50/25	3x70/35	3x95/50	3x120/70	3x150/70	3x185/95	3x240/120	3x300/150
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	124	154	187	241	293	341	394	451	535	617
three loaded conductor, conductor 70 °C A	105	131	159	204	248	287	332	379	447	517
two loaded conductor, conductor 90 °C A	155	192	234	301	366	426	492	564	667	771
three loaded conductor, conductor 90 °C A	132	164	200	256	310	360	415	474	560	646
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	119	148	180	232	282	328	379	434	514	593
three loaded conductor, conductor 70 °C A	101	126	153	196	238	276	319	364	430	497
two loaded conductor, conductor 90 °C A	149	185	225	289	352	410	473	542	641	741
three loaded conductor, conductor 90 °C A	127	158	192	246	298	346	399	456	538	621
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	130	160	190	240	285	325	370	420	480	550
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	107	129	153	188	226	257	287	324	375	419
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	3,9	5,5	7,8	10,9	14,9	18,8	23,5	28,9	37,5	46,9
Phase (initial 90 °C, final 250 °C) kA	3,6	5,0	7,2	10,0	13,6	17,2	21,5	26,5	34,3	43,1
Metal screen (initial 80 °C, final 250 °C) kA	2,4	2,4	3,7	5,2	7,4	10,4	10,4	14,1	17,8	22,2

Technical information	4x2,5/2,5	4x6/6	4x10/10	4x16/16	4x25/16	4x35/16	4x50/25	4x70/35	4x95/50	4x120/70
Product code	1146271	1146273	1146309	1146310	1146311	1146312	1146313	1146314	1146315	1146316
Nominal cross-sectional area of conductor mm ²	2,5	6	10	16	25	35	50	70	95	120
Nominal thickness of insulation mm	0,7	0,7	0,7	0,7	0,9	0,9	1,0	1,1	1,1	1,2
Nominal size of metal screen mm ²	2,5	6	10	16	16	16	25	35	50	70
Nominal thickness of oversheath mm	1,8	1,8	1,8	1,8	1,8	1,8	1,9	2,1	2,2	2,4
Fire load MJ/m	3,182	4,257	5,946	7,170	9,186	8,294	10,298	13,341	15,362	19,066
Fire load kWh/m	0,884	1,183	1,652	1,992	2,552	2,304	2,861	3,706	4,267	5,296
Nominal cable diameter mm	14,460	17,330	20,370	23,140	27,520	26,040	29,560	34,110	37,540	41,730
Nominal cable weight kg/km	316,039	534,889	801,420	1133,374	1594,142	1684,021	2312,449	3199,365	4319,228	5491,486
Nominal weight of copper kg/m	0,118	0,268	0,438	0,699	1,038	1,359	1,914	2,685	3,726	4,762
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	0,5	1,2	2,0	3,2	5,0	7,0	10,0	14,0	19,0	20,0
Max. pulling force by pulling-stocking kN	0,2	0,5	0,6	1,0	1,5	2,1	3,0	4,2	5,7	7,2
Minimum bending radii										
During handling and installation, cable cm	17	21	24	28	33	31	35	41	45	50
In final installation, cable cm	12	15	17	19	23	22	25	29	32	35
Minimum bending radii										
During handling and installation, cable m	0,17	0,21	0,24	0,28	0,33	0,31	0,35	0,41	0,45	0,50
In final installation, cable m	0,12	0,15	0,17	0,19	0,23	0,22	0,25	0,29	0,32	0,35
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	7,41	3,08	1,83	1,15	0,727	0,524	0,387	0,268	0,193	0,153
Maximum DC resistance at 20 °C, metal screen Ω/km	7,41	3,08	1,83	1,15	1,15	1,15	0,727	0,524	0,387	0,268

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Technical information	4x2,5/2,5	4x6/6	4x10/10	4x16/16	4x25/16	4x35/16	4x50/25	4x70/35	4x95/50	4x120/70
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	31	53	73	98	124	154	187	241	293	341
three loaded conductor, conductor 70 °C A	26	45	62	83	105	131	159	204	248	287
two loaded conductor, conductor 90 °C A	37	66	89	120	155	192	234	301	366	426
three loaded conductor, conductor 90 °C A	33	56	78	104	132	164	200	256	310	360
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	30	51	70	94	119	148	180	232	282	328
three loaded conductor, conductor 70 °C A	25	43	60	80	101	126	153	196	238	276
two loaded conductor, conductor 90 °C A	36	63	86	115	149	185	225	289	352	410
three loaded conductor, conductor 90 °C A	32	54	75	100	127	158	192	246	298	346
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	57	77	100	130	160	190	240	285	325
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	49	65	84	107	129	153	188	226	257
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	0,3	0,9	1,6	2,5	3,9	5,5	7,8	10,9	14,9	18,8
Phase (initial 90 °C, final 250 °C) kA	0,3	0,8	1,4	2,3	3,6	5,0	7,2	10,0	13,6	17,2
Metal screen (initial 80 °C, final 250 °C) kA	0,4	0,9	1,5	2,4	2,4	2,4	3,7	5,2	7,4	10,4

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Technical information	4x150/70	4x185/95	4x240/120	4x300/150
Product code	1146317	1146318	1146319	1146320
Nominal cross-sectional area of conductor mm ²	150	185	240	300
Nominal thickness of insulation mm	1,4	1,6	1,7	1,8
Nominal size of metal screen mm ²	70	95	120	150
Nominal thickness of oversheath mm	2,5	2,7	2,9	3,1
Fire load MJ/m	23,314	29,362	35,074	40,383
Fire load kWh/m	6,476	8,156	9,743	11,217
Nominal cable diameter mm	45,530	51,040	56,620	61,200
Nominal cable weight kg/km	6615,383	8353,453	10869,853	13514,040
Nominal weight of copper kg/m	5,759	7,291	9,601	12,051
Maximum forces during installation when pulling by				
Max. pulling force by pulling-eye kN	20,0	20,0	20,0	20,0
Max. pulling force by pulling-stocking kN	8,5	8,5	8,5	8,5
Minimum bending radii				
During handling and installation, cable cm	55	61	68	73
In final installation, cable cm	38	43	48	51
Minimum bending radii				
During handling and installation, cable m	0,55	0,61	0,68	0,73
In final installation, cable m	0,38	0,43	0,48	0,51
DC resistance				
Max. DC resistance of conductor at 20 °C Ω/km	0,124	0,0991	0,0754	0,0601
Maximum DC resistance at 20 °C, metal screen Ω/km	0,268	0,193	0,153	0,124

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Technical information	4x150/70	4x185/95	4x240/120	4x300/150
Current ratings				
Cables in air (25 °C)				
two loaded conductor, conductor 70 °C A	394	451	535	617
three loaded conductor, conductor 70 °C A	332	379	447	517
two loaded conductor, conductor 90 °C A	492	564	667	771
three loaded conductor, conductor 90 °C A	415	474	560	646
Cables in air (30 °C)				
two loaded conductor, conductor 70 °C A	379	434	514	593
three loaded conductor, conductor 70 °C A	319	364	430	497
two loaded conductor, conductor 90 °C A	473	542	641	741
three loaded conductor, conductor 90 °C A	399	456	538	621
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	370	420	480	550
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	287	324	375	419
Maximum thermal short circuit current during 1 s				
Phase (initial 65 °C, final 250 °C) kA	23,5	28,9	37,5	46,9
Phase (initial 90 °C, final 250 °C) kA	21,5	26,5	34,3	43,1
Metal screen (initial 80 °C, final 250 °C) kA	10,4	14,1	17,8	22,2