

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	Blue, brown
Identification	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 cable diameter mm	14	18	20	24	24	25	14	16	18	21
Nominal cable weight kg/km	323	566	825	1134	1136	1278	271	455	651	952
Nominal weight of copper kg/km	111	266	424	596	594	754	90	215	352	561
Nominal Insulation thickness 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										
Fire load MJ/m	3,008	4,038	5,407	7,026	7,157	7,125	2,771	3,680	4,758	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
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										
Minimum bending radius, handling mm	173	211	246	288	290	300	163	194	221	258
Minimum bending radius, final bending mm	121	148	172	201	203	210	114	136	155	180
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
Environmental information										
(A1-A3) GWP emission kgCO2e/km		2067	3131	4397	4404	4986			2415	3652
GWP emissions calculation standard		EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019			EN15804:2012 + A2:2019	EN15804:2012 + A2:2019

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STANDARD PACKAGES	2x4/4	2x10/10	2x16/16	2x25/16	2x25/16	2x35/16	3x2,5/2,5	3x6/6	3x10/10	3x16/16
Product code		1146109	1146110	1146111		1146112			1146229	1146230
GTIN code		6410006029914	6438176011652	6438176011669		6438176011676			6410006023325	6410006023387
Package		500 K10	1000 K14	1000 K16		1000 K16			500 K11	500 K10
Product code		1146109	1146110						1146229	1146230
GTIN code		6438176011645	6410006029921						6410006023349	6410006023394
Package		1000 K12	500 K11						1000 K12	1000 K14

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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 cable diameter mm	25	23	26	29	34	37	41	45	53	56
Nominal cable weight kg/km	1313	1328	1815	2513	3391	4304	5180	6540	8551	10589
Nominal weight of copper kg/km	816	1056	1493	2102	2903	3725	4473	5692	7481	9384
Nominal Insulation thickness 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										
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	3,425	4,168	5,207	6,387	7,892	8,888
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										
Minimum bending radius, handling mm	305	277	316	354	403	440	492	544	635	666
Minimum bending radius, final bending mm	213	194	221	248	282	308	344	381	444	466
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
Environmental information										
(A1-A3) GWP emission kgCO2e/km	5133	5192	7956	11180	15244	19464	23519	29806	39107	48531
GWP emissions calculation standard	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019

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STANDARD PACKAGES	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			1146236	1146237	1146238	1146239	
GTIN code	6410006023400	6410006023424	6410006023448			6410006023509	6410006023561	6410006023585	6410006023608	
Package	500 K11	500 K10	500 K12			500 K18	1000 K24	1000 K26	1000 K26	
Product code	1146231	1146232	1146233			1146236	1146237	1146238	1146239	
GTIN code	6410006023417	6410006023431	6410006023455			6410006023516	6410006023523	6410006023578	6410006023592	
Package	1000 K16	1000 K16	1000 K18			1000 K22	500 K20	500 K22	500 K22	

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Technical information	4x10/10	4x16/16	4x25/16	4x35/16	4x50/25	4x70/35	4x95/50	4x120/70	4x150/70	4x185/95
Product code	1146309	1146310	1146311	1146312	1146313	1146314	1146315	1146316	1146317	1146318
Nominal cable diameter mm	20	23	28	26	30	34	38	42	46	51
Nominal cable weight kg/km	801	1133	1594	1684	2312	3199	4319	5491	6615	8366
Nominal weight of copper kg/km	438	699	1038	1359	1914	2685	3726	4762	5759	7291
Nominal Insulation thickness mm	0,7	0,7	0,9	0,9	1,0	1,1	1,1	1,2	1,4	1,6
Nominal size of metal screen mm ²	10	16	16	16	25	35	50	70	70	95
Nominal thickness of oversheath mm	1,8	1,8	1,8	1,8	1,9	2,1	2,2	2,4	2,5	2,7
Fire load										
Fire load MJ/m	5,946	7,170	9,186	8,294	10,298	13,341	15,362	19,066	23,314	29,361
Fire load kWh/m	1,652	1,992	2,552	2,304	2,861	3,706	4,267	5,296	6,476	8,156
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	2,0	3,2	5,0	7,0	10,0	14,0	19,0	20,0	20,0	20,0
Max. pulling force by pulling-stocking kN	0,6	1,0	1,5	2,1	3,0	4,2	5,7	7,2	8,5	8,5
Minimum bending radii										
Minimum bending radius, handling mm	244	278	330	312	355	409	450	501	546	612
Minimum bending radius, final bending mm	171	194	231	219	248	287	315	351	382	429
Minimum bending radii										
During handling and installation, cable cm	24	28	33	31	35	41	45	50	55	61
In final installation, cable cm	17	19	23	22	25	29	32	35	38	43
Minimum bending radii										
During handling and installation, cable m	0,24	0,28	0,33	0,31	0,35	0,41	0,45	0,50	0,55	0,61
In final installation, cable m	0,17	0,19	0,23	0,22	0,25	0,29	0,32	0,35	0,38	0,43
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	1,83	1,15	0,727	0,524	0,387	0,268	0,193	0,153	0,124	0,0991
Maximum DC resistance at 20 °C, metal screen Ω/km	1,83	1,15	1,15	1,15	0,727	0,524	0,387	0,268	0,268	0,193

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Technical information	4x10/10	4x16/16	4x25/16	4x35/16	4x50/25	4x70/35	4x95/50	4x120/70	4x150/70	4x185/95
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	73	98	124	154	187	241	293	341	394	451
three loaded conductor, conductor 70 °C A	62	83	105	131	159	204	248	287	332	379
two loaded conductor, conductor 90 °C A	89	120	155	192	234	301	366	426	492	564
three loaded conductor, conductor 90 °C A	78	104	132	164	200	256	310	360	415	474
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	70	94	119	148	180	232	282	328	379	434
three loaded conductor, conductor 70 °C A	60	80	101	126	153	196	238	276	319	364
two loaded conductor, conductor 90 °C A	86	115	149	185	225	289	352	410	473	542
three loaded conductor, conductor 90 °C A	75	100	127	158	192	246	298	346	399	456
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	77	100	130	160	190	240	285	325	370	420
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	65	84	107	129	153	188	226	257	287	324
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	1,6	2,5	3,9	5,5	7,8	10,9	14,9	18,8	23,5	28,9
Phase (initial 90 °C, final 250 °C) kA	1,4	2,3	3,6	5,0	7,2	10,0	13,6	17,2	21,5	26,5
Metal screen (initial 80 °C, final 250 °C) kA	1,5	2,4	2,4	2,4	3,7	5,2	7,4	10,4	10,4	14,1
Environmental information										
(A1-A3) GWP emission kgCO2e/km	3033	4383	6284	7349	10255	14357	19536	24958	30155	38119
GWP emissions calculation standard	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019

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STANDARD PACKAGES	4x10/10	4x16/16	4x25/16	4x35/16	4x50/25	4x70/35	4x95/50	4x120/70	4x150/70	4x185/95
Product code	1146309	1146310	1146311	1146312	1146313	1146314	1146315	1146316	1146317	1146318
GTIN code	6410006023226	6410006023271	6410006023264	6438176219775	6410006023677	6410006023318	6410006023325	6410006023332	6410006023714	6410006023356
Package	500 K11	1000 K16	500 K12	500 K12	1000 K18	1000 K20	500 K18	500 K20	1000 K26	500 K22
Product code	1146309	1146310	1146311	1146312	1146313	1146314	1146315		1146317	
GTIN code	6410006023233	6410006023240	6410006023288	6410006023295	6410006023660	6438176219812	6410006023691		6410006023707	
Package	1000 K14	500 K11	1000 K18	1000 K16	500 K16	500 K16	1000 K22		500 K20	

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Technical information	4x240/120	4x300/150
Product code	1146319	1146320
Nominal cable diameter mm	57	61
Nominal cable weight kg/km	10885	13514
Nominal weight of copper kg/km	9601	12051
Nominal Insulation thickness mm	1,7	1,8
Nominal size of metal screen mm ²	120	150
Nominal thickness of oversheath mm	2,9	3,1
Fire load		
Fire load MJ/m	35,074	40,383
Fire load kWh/m	9,743	11,217
Maximum forces during installation when pulling by		
Max. pulling force by pulling-eye kN	20,0	20,0
Max. pulling force by pulling-stocking kN	8,5	8,5
Minimum bending radii		
Minimum bending radius, handling mm	679	734
Minimum bending radius, final bending mm	476	514
Minimum bending radii		
During handling and installation, cable cm	68	73
In final installation, cable cm	48	51
Minimum bending radii		
During handling and installation, cable m	0,68	0,73
In final installation, cable m	0,48	0,51
DC resistance		
Max. DC resistance of conductor at 20 °C Ω/km	0,0754	0,0601
Maximum DC resistance at 20 °C, metal screen Ω/km	0,153	0,124

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Technical information	4x240/120	4x300/150
Current ratings		
Cables in air (25 °C)		
two loaded conductor, conductor 70 °C A	535	617
three loaded conductor, conductor 70 °C A	447	517
two loaded conductor, conductor 90 °C A	667	771
three loaded conductor, conductor 90 °C A	560	646
Cables in air (30 °C)		
two loaded conductor, conductor 70 °C A	514	593
three loaded conductor, conductor 70 °C A	430	497
two loaded conductor, conductor 90 °C A	641	741
three loaded conductor, conductor 90 °C A	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	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	375	419
Maximum thermal short circuit current during 1 s		
Phase (initial 65 °C, final 250 °C) kA	37,5	46,9
Phase (initial 90 °C, final 250 °C) kA	34,3	43,1
Metal screen (initial 80 °C, final 250 °C) kA	17,8	22,2
Environmental information		
(A1-A3) GWP emission kgCO ₂ e/km	49900	62139
GWP emissions calculation standard	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019

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STANDARD PACKAGES	4x240/120	4x300/150
Product code	1146319	
GTIN code	6410006023363	
Package	400 K26	
Product code	1146319	
GTIN code	6438176011973	
Package	500 K26	