

## EMCMK-HF C / FXQJ-EMC C / IFSI-EMC-Cu C

### Copper power cable EMC

### 0,6/1 (1,2) kV

#### Application

Copper power cable for fixed installations indoors and outdoors. May be buried directly in soil. Can also be used in medical facilities where higher fire class is required. EMC shielded cable gives an excellent protection against electromagnetic disturbances. 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 Cca-s1,d1,a1.



#### Design

<b>Standards</b>	SFS 5546, SEK TS 424 14 18-1, HD 604 5 I & D, IEC 60502-1
<b>Reaction to fire</b>	Cca-s1,d1,a1; EN 13501-6, EN 50575:2014+A1:2016
<b>Conductor</b>	Sector shaped, stranded copper, EN/IEC 60228 class 2
<b>Insulation</b>	Cross-linked polyethylene XLPE
<b>Core Identification</b>	Brown, black, grey Blue, brown, black, grey
<b>Inner covering</b>	Plastic tape
<b>Metal screen</b>	EMC-copper foil and copper wires
<b>Oversheath</b>	UV-protected polyolefin compound , Black
<b>EMC-Shield</b>	Copper foil with 100 % coverage

#### Temperature limits

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

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Technical information	3x35/16	3x50/25	3x70/35	3x95/50	3x120/70	3x150/70	3x185/95	3x240/120	3x300/150	4x35/16
<b>Product code</b>	<b>1146777</b>	<b>1146778</b>	<b>1146779</b>	<b>1146780</b>	<b>1146781</b>	<b>1146782</b>	<b>1146783</b>	<b>1146784</b>	<b>1146785</b>	<b>1146794</b>
Nominal cable diameter mm	23	26	30	34	37	40	45	51	54	26
Nominal cable weight kg/km	1378	1876	2587	3476	4409	5196	6650	8656	10695	1746
Nominal weight of copper kg/km	1102	1548	2160	2980	3804	4562	5791	7597	9496	1415
Nominal Insulation thickness mm	0,9	1,0	1,1	1,1	1,2	1,4	1,6	1,7	1,8	0,9
Nominal size of metal screen mm <sup>2</sup>	16	25	35	50	70	70	95	120	150	16
Nominal thickness of oversheath mm	1,8	1,8	2,0	2,1	2,3	2,4	2,5	2,7	2,9	1,8
<b>Fire load</b>										
Fire load MJ/m	6,584	8,003	10,550	12,221	15,114	18,388	22,790	27,731	31,326	8,223
Fire load kWh/m	1,829	2,223	2,931	3,395	4,198	5,108	6,331	7,703	8,702	2,284
<b>Maximum forces during installation when pulling by</b>										
Max. pulling force by pulling-eye kN	5,3	7,5	10,5	14,3	18,0	20,0	20,0	20,0	20,0	7,0
Max. pulling force by pulling-stocking kN	1,6	2,3	3,2	4,3	5,4	6,8	8,3	8,5	8,5	2,1
<b>Minimum bending radii</b>										
Minimum bending radius, handling mm	277	316	365	402	441	481	542	612	647	312
Minimum bending radius, final bending mm	194	221	255	282	309	336	379	428	453	219
<b>Minimum bending radii</b>										
During handling and installation, cable cm	28	32	36	40	44	48	54	61	65	31
In final installation, cable cm	19	22	26	28	31	34	38	43	45	22
<b>Minimum bending radii</b>										
During handling and installation, cable m	0,28	0,32	0,36	0,40	0,44	0,48	0,54	0,61	0,65	0,31
In final installation, cable m	0,19	0,22	0,26	0,28	0,31	0,34	0,38	0,43	0,45	0,22
<b>DC resistance</b>										
Max. DC resistance of conductor at 20 °C Ω/km	0,524	0,387	0,268	0,193	0,153	0,124	0,0991	0,0754	0,0601	0,524
Maximum DC resistance at 20 °C, metal screen Ω/km	1,15	0,727	0,524	0,387	0,268	0,268	0,193	0,153	0,124	1,15

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Technical information	3x35/16	3x50/25	3x70/35	3x95/50	3x120/70	3x150/70	3x185/95	3x240/120	3x300/150	4x35/16
<b>Current ratings</b>										
<b>Cables in air (25 °C)</b>										
two loaded conductor, conductor 70 °C A	154	187	241	293	341	394	451	535	617	154
three loaded conductor, conductor 70 °C A	131	159	204	248	287	332	379	447	517	131
two loaded conductor, conductor 90 °C A	192	234	301	366	426	492	564	667	771	192
three loaded conductor, conductor 90 °C A	164	200	256	310	360	415	474	560	646	164
<b>Cables in air (30 °C)</b>										
two loaded conductor, conductor 70 °C A	148	180	232	282	328	379	434	514	593	148
three loaded conductor, conductor 70 °C A	126	153	196	238	276	319	364	430	497	126
two loaded conductor, conductor 90 °C A	185	225	289	352	410	473	542	641	741	185
three loaded conductor, conductor 90 °C A	158	192	246	298	346	399	456	538	621	158
<b>Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m</b>										
Cables in the ground, conductor 65 °C A	160	190	240	285	325	370	420	480	550	160
<b>Cables in the ground (20 °C and 2,5 K.m/W), Installation depth 0,7 m</b>										
Cables in the ground, conductor 90 °C A	129	153	188	226	257	287	324	375	419	129
<b>Maximum thermal short circuit current during 1 s</b>										
Phase (initial 65 °C, final 250 °C) kA	5,5	7,8	10,9	14,9	18,8	23,5	28,9	37,5	46,9	5,5
Phase (initial 90 °C, final 250 °C) kA	5,0	7,2	10,0	13,6	17,2	21,5	26,5	34,3	43,1	5,0
Metal screen (initial 80 °C, final 250 °C) kA	2,4	3,7	5,2	7,4	10,4	10,4	14,1	17,8	22,2	2,4

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STANDARD PACKAGES	3x35/16	3x50/25	3x70/35	3x95/50	3x120/70	3x150/70	3x185/95	3x240/120	3x300/150	4x35/16
Product code	1146777	1146778	1146779	1146780	1146781	1146782	1146783	1146784	1146785	1146794
GTIN code	6438176303221	6438176303252	6438176303276	6438176303313	6438176303344	6438176303375	6438176303405	6438176303429	6438176303450	6438176303481
Package	1000 K16	1000 K18	500 K14	1000 K22	1000 K22	1000 K24	1000 K26	400 K20	400 K22	500 K12
Product code	1146777	1146778	1146779	1146780	1146781	1146782	1146783			1146794
GTIN code	6438176303214	6438176303245	6438176303283	6438176303306	6438176303337	6438176303368	6438176303399			6438176303498
Package	500 K12	500 K14	1000 K20	500 K16	500 K18	500 K20	500 K22			1000 K16

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Technical information	4x50/25	4x70/35	4x95/50	4x120/70	4x150/70	4x185/95	4x240/120	4x300/150
<b>Product code</b>	<b>1146795</b>	<b>1146796</b>	<b>1146797</b>	<b>1146798</b>	<b>1146799</b>	<b>1146800</b>	<b>1146801</b>	<b>1146802</b>
Nominal cable diameter mm	30	34	38	42	45	51	56	61
Nominal cable weight kg/km	2384	3286	4418	5596	6699	8508	11033	13688
Nominal weight of copper kg/km	1979	2764	3815	4856	5865	7417	9733	12185
Nominal Insulation thickness mm	1,0	1,1	1,1	1,2	1,4	1,6	1,7	1,8
Nominal size of metal screen mm <sup>2</sup>	25	35	50	70	70	95	120	150
Nominal thickness of oversheath mm	1,9	2,1	2,2	2,4	2,5	2,7	2,9	3,1
<b>Fire load</b>								
Fire load MJ/m	10,212	13,231	15,235	18,892	23,117	29,148	34,772	40,088
Fire load kWh/m	2,837	3,675	4,232	5,248	6,421	8,097	9,659	11,136
<b>Maximum forces during installation when pulling by</b>								
Max. pulling force by pulling-eye kN	10,0	14,0	19,0	20,0	20,0	20,0	20,0	20,0
Max. pulling force by pulling-stocking kN	3,0	4,2	5,7	7,2	8,5	8,5	8,5	8,5
<b>Minimum bending radii</b>								
Minimum bending radius, handling mm	355	409	450	500	545	612	677	734
Minimum bending radius, final bending mm	248	287	315	350	382	429	474	514
<b>Minimum bending radii</b>								
During handling and installation, cable cm	35	41	45	50	55	61	68	73
In final installation, cable cm	25	29	32	35	38	43	47	51
<b>Minimum bending radii</b>								
During handling and installation, cable m	0,35	0,41	0,45	0,50	0,55	0,61	0,68	0,73
In final installation, cable m	0,25	0,29	0,32	0,35	0,38	0,43	0,47	0,51
<b>DC resistance</b>								
Max. DC resistance of conductor at 20 °C Ω/km	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	0,727	0,524	0,387	0,268	0,268	0,193	0,153	0,124

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Technical information	4x50/25	4x70/35	4x95/50	4x120/70	4x150/70	4x185/95	4x240/120	4x300/150
<b>Current ratings</b>								
<b>Cables in air (25 °C)</b>								
two loaded conductor, conductor 70 °C A	187	241	293	341	394	451	535	617
three loaded conductor, conductor 70 °C A	159	204	248	287	332	379	447	517
two loaded conductor, conductor 90 °C A	234	301	366	426	492	564	667	771
three loaded conductor, conductor 90 °C A	200	256	310	360	415	474	560	646
<b>Cables in air (30 °C)</b>								
two loaded conductor, conductor 70 °C A	180	232	282	328	379	434	514	593
three loaded conductor, conductor 70 °C A	153	196	238	276	319	364	430	497
two loaded conductor, conductor 90 °C A	225	289	352	410	473	542	641	741
three loaded conductor, conductor 90 °C A	192	246	298	346	399	456	538	621
<b>Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m</b>								
Cables in the ground, conductor 65 °C A	190	240	285	325	370	420	480	550
<b>Cables in the ground (20 °C and 2,5 K.m/W), Installation depth 0,7 m</b>								
Cables in the ground, conductor 90 °C A	153	188	226	257	287	324	375	419
<b>Maximum thermal short circuit current during 1 s</b>								
Phase (initial 65 °C, final 250 °C) kA	7,8	10,9	14,9	18,8	23,5	28,9	37,5	46,9
Phase (initial 90 °C, final 250 °C) kA	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	3,7	5,2	7,4	10,4	10,4	14,1	17,8	22,2

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STANDARD PACKAGES	4x50/25	4x70/35	4x95/50	4x120/70	4x150/70	4x185/95	4x240/120	4x300/150
Product code	1146795	1146796	1146797	1146798	1146799	1146800	1146801	1146802
GTIN code	6438176303528	6438176303542	6438176303580	6438176303610	6438176303641	6438176303672	6438176303696	6438176303726
Package	1000 K18	500 K16	1000 K22	1000 K24	1000 K24	1000 K26	400 K26	400 K26
Product code	1146795	1146796	1146797	1146798	1146799	1146800		
GTIN code	6438176303511	6438176303559	6438176303573	6438176303603	6438176303634	6438176303665		
Package	500 K14	1000 K20	500 K18	500 K20	500 K20	500 K22		