

## 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 cross-sectional area of conductor mm <sup>2</sup>	35	50	70	95	120	150	185	240	300	35
Nominal thickness of insulation 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
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
Nominal cable diameter mm	23,100	26,350	30,400	33,540	36,740	40,050	45,140	51,000	53,900	26,040
Nominal cable weight kg/km	1378,439	1876,406	2587,087	3475,856	4409,122	5196,273	6650,139	8656,209	10683,433	1745,557
Nominal weight of copper kg/m	1,102	1,548	2,160	2,980	3,804	4,562	5,791	7,597	9,496	1,415
<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>										
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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<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

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 cross-sectional area of conductor mm <sup>2</sup>	50	70	95	120	150	185	240	300
Nominal thickness of insulation 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
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
Nominal cable diameter mm	29,560	34,110	37,540	41,630	45,430	51,040	56,420	61,200
Nominal cable weight kg/km	2384,088	3286,081	4417,744	5596,079	6698,935	8522,675	11033,328	13688,311
Nominal weight of copper kg/m	1,979	2,764	3,815	4,856	5,865	7,417	9,733	12,185
<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>								
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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<b>Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m</b>								
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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