

EMCMK-HF / EXQJ-EMC / FXQJ-EMC / IFSI-EMC-Cu

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. 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 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	1,5-6 mm ² circular solid copper, EN/IEC 60228 class 1 10-25 mm ² circular stranded copper, EN/IEC 60228 class 2
Insulation	Cross-linked polyethylene XLPE
Core Identification	Brown, black, grey Blue, brown, black, grey
Inner covering	Plastic tape
Metal screen	EMC-copper foil and copper wires
Oversheath	UV-protected polyolefin compound, Black
EMC-Shield	Copper foil with 100 % coverage

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	2x10/10	2x16/16	3x1,5/1,5	3x2,5/2,5	3x4/4	3x6/6
Product code	1146739	1146740	1146741	1146743	1146744	1146745	1146690	1146691	1146692	1146693
Nominal cross-sectional area of conductor mm ²	1,5	2,5	4	6	10	16	1,5	2,5	4	6
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	10	16	1,5	2,5	4	6
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	2,087	2,428	2,778	3,139	4,175	5,102	2,401	2,710	3,061	3,403
Fire load kWh/m	0,580	0,675	0,772	0,872	1,160	1,417	0,667	0,753	0,850	0,945
Nominal cable diameter mm	11,930	13,050	14,070	15,110	17,890	20,370	12,700	13,730	14,630	15,330
Nominal cable weight kg/km	199,258	254,884	324,394	404,655	594,674	831,480	228,986	285,202	362,894	461,070
Nominal weight of copper kg/m	0,051	0,075	0,119	0,170	0,277	0,438	0,065	0,100	0,155	0,230
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	0,2	0,3	0,4	0,6	1,0	1,6	0,2	0,4	0,6	0,9
Max. pulling force by pulling-stocking kN	0,1	0,1	0,1	0,2	0,3	0,5	0,1	0,1	0,2	0,3
Minimum bending radii										
During handling and installation, cable cm	14	16	17	18	21	24	15	16	18	18
In final installation, cable cm	10	11	12	13	15	17	11	12	12	13
Minimum bending radii										
During handling and installation, cable m	0,14	0,16	0,17	0,18	0,21	0,24	0,15	0,17	0,18	0,18
In final installation, cable m	0,10	0,11	0,12	0,13	0,15	0,17	0,11	0,12	0,12	0,13
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	12,1	7,41	4,61	3,08	1,83	1,15	12,1	7,41	4,61	3,08
Maximum DC resistance at 20 °C, metal screen Ω/km	12,1	7,41	4,61	3,08	1,83	1,15	12,1	7,41	4,61	3,08

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Technical information	2x1,5/1,5	2x2,5/2,5	2x4/4	2x6/6	2x10/10	2x16/16	3x1,5/1,5	3x2,5/2,5	3x4/4	3x6/6
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	23	31	42	53	73	98	23	31	42	53
three loaded conductor, conductor 70 °C A							19	26	35	45
two loaded conductor, conductor 90 °C A	27	37	51	66	89	120	27	37	51	66
three loaded conductor, conductor 90 °C A							24	33	44	56
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	22	30	40	51	70	94	22	30	40	51
three loaded conductor, conductor 70 °C A							18,5	25	34	43
two loaded conductor, conductor 90 °C A	26	36	49	63	86	115	26	36	49	63
three loaded conductor, conductor 90 °C A							23	32	42	54
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	77	100	26	35	46	57
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	77	100	23	30	39	49
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	0,2	0,3	0,6	0,9	1,6	2,5	0,2	0,3	0,6	0,9
Phase (initial 90 °C, final 250 °C) kA	0,2	0,3	0,5	0,8	1,4	2,3	0,2	0,3	0,5	0,8
Metal screen (initial 80 °C, final 250 °C) kA	0,2	0,4	0,6	0,9	1,5	2,4	0,2	0,4	0,6	0,9

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Technical information	3x10/10	3x16/16	3x25/16	4x1,5/1,5	4x2,5/2,5	4x4/4	4x6/6	4x10/10	4x16/16	4x25/16
Product code	1146694	1146695	1146696	1146710	1146711	1146712	1146713	1146714	1146715	1146716
Nominal cross-sectional area of conductor mm ²	10	16	25	1,5	2,5	4	6	10	16	25
Nominal thickness of insulation mm	0,7	0,7	0,9	0,7	0,7	0,7	0,7	0,7	0,7	0,9
Nominal size of metal screen mm ²	10	16	16	1,5	2,5	4	6	10	16	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	4,964	6,079	8,001	2,569	3,022	3,111	3,990	5,950	6,631	9,408
Fire load kWh/m	1,379	1,689	2,223	0,714	0,839	0,864	1,108	1,653	1,842	2,613
Nominal cable diameter mm	18,850	21,370	25,820	12,820	14,140	14,570	16,840	20,270	23,010	27,960
Nominal cable weight kg/km	689,779	968,651	1391,298	241,776	313,675	380,724	542,583	833,971	1149,498	1683,143
Nominal weight of copper kg/m	0,369	0,578	0,871	0,078	0,115	0,191	0,281	0,462	0,721	1,101
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	1,5	2,4	3,8	0,3	0,5	0,8	1,2	2,0	3,2	5,0
Max. pulling force by pulling-stocking kN	0,5	0,7	1,1	0,1	0,2	0,2	0,4	0,6	1,0	1,5
Minimum bending radii										
During handling and installation, cable cm	23	26	31	15	17	17	20	24	28	34
In final installation, cable cm	16	18	22	11	12	12	14	17	19	23
Minimum bending radii										
During handling and installation, cable m	0,23	0,26	0,31	0,15	0,17	0,17	0,20	0,24	0,28	0,34
In final installation, cable m	0,16	0,18	0,22	0,11	0,12	0,12	0,14	0,17	0,19	0,23
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	1,83	1,15	0,727	12,1	7,41	4,61	3,08	1,83	1,15	0,727
Maximum DC resistance at 20 °C, metal screen Ω/km	1,83	1,15	1,15	12,1	7,41	4,61	3,08	1,83	1,15	1,15

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Technical information	3x10/10	3x16/16	3x25/16	4x1,5/1,5	4x2,5/2,5	4x4/4	4x6/6	4x10/10	4x16/16	4x25/16
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	73	98	124	23	31	42	53	73	98	124
three loaded conductor, conductor 70 °C A	62	83	105	19	26	35	45	62	83	105
two loaded conductor, conductor 90 °C A	89	120	155	27	37	51	66	89	120	155
three loaded conductor, conductor 90 °C A	78	104	132	24	33	44	56	78	104	132
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	70	94	119	22	30	40	51	70	94	119
three loaded conductor, conductor 70 °C A	60	80	101	18,5	25	34	43	60	80	101
two loaded conductor, conductor 90 °C A	86	115	149	26	36	49	63	86	115	149
three loaded conductor, conductor 90 °C A	75	100	127	23	32	42	54	75	100	127
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	26	35	46	57	77	100	130
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	23	30	39	49	65	84	107
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	1,6	2,5	3,9	0,2	0,3	0,6	0,9	1,6	2,5	3,9
Phase (initial 90 °C, final 250 °C) kA	1,4	2,3	3,6	0,2	0,3	0,5	0,8	1,4	2,3	3,6
Metal screen (initial 80 °C, final 250 °C) kA	1,5	2,4	2,4	0,2	0,4	0,6	0,9	1,5	2,4	2,4