

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

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	35-300 mm ² sector shaped stranded copper, EN/IEC 60228 class 2
Insulation	Cross-linked polyethylene XLPE
Core	Brown, black, grey
Identification	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	3x35/16	3x50/25	3x70/35	3x95/50	3x120/70	3x150/70	3x185/95	3x240/120	3x300/150	4x35/16
Product code	1256647	1256648	1256649	1256650	1256651	1256652	1256653	1256654	1256655	1256664
Nominal cross-sectional area of conductor mm ²	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 ²	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	6,647	8,075	10,643	12,329	15,243	18,536	22,964	27,944	31,568	8,294
Fire load kWh/m	1,846	2,243	2,956	3,425	4,234	5,149	6,379	7,762	8,769	2,304
Nominal cable diameter mm	23,000	26,250	30,300	33,440	36,640	39,950	45,040	50,900	53,800	25,940
Nominal cable weight kg/km	1329,500	1820,076	2520,229	3400,549	4326,354	5185,724	6554,604	8534,885	10566,151	1688,729
Nominal weight of copper kg/m	1,045	1,483	2,083	2,893	3,710	4,458	5,672	7,461	9,353	1,348
Maximum forces during installation when pulling by										
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
Minimum bending radii										
During handling and installation, cable cm	28	32	36	40	44	48	54	61	65	31
In final installation, cable cm	19	22	25	28	31	34	38	43	45	22
Minimum bending radii										
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
DC resistance										
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
Current ratings										
Cables in air (25 °C)										
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
Cables in air (30 °C)										
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
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	160	190	240	285	325	370	420	480	550	160
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	129	153	188	226	257	287	324	375	419	129
Maximum thermal short circuit current during 1 s										
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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Technical information	4x50/25	4x70/35	4x95/50	4x120/70	4x150/70	4x185/95	4x240/120	4x300/150
Product code	1256665	1256666	1256667	1256668	1256669	1256670	1256671	1256672
Nominal cross-sectional area of conductor mm ²	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 ²	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	10,298	13,341	15,362	19,046	23,292	29,362	35,026	40,383
Fire load kWh/m	2,861	3,706	4,267	5,291	6,470	8,156	9,729	11,217
Nominal cable diameter mm	29,460	34,010	37,440	41,530	45,330	50,940	56,320	61,100
Nominal cable weight kg/km	2319,259	3209,220	4331,590	5499,853	6636,563	8386,898	10896,445	13538,672
Nominal weight of copper kg/m	1,903	2,675	3,716	4,747	5,744	7,281	9,581	12,021
Maximum forces during installation when pulling by								
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
Minimum bending radii								
During handling and installation, cable cm	35	41	45	50	54	61	68	73
In final installation, cable cm	25	29	31	35	38	43	47	51
Minimum bending radii								
During handling and installation, cable m	0,35	0,41	0,45	0,50	0,54	0,61	0,68	0,73
In final installation, cable m	0,25	0,29	0,31	0,35	0,38	0,43	0,47	0,51
DC resistance								
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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Maximum thermal short circuit current during 1 s								
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