

## AEMCMK-HF C / AXQJ C / IFSI- EMC-AI C

### Aluminium power cable EMC

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

#### Application

Aluminium 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 aluminium, 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	3x50/16	3x70/21	3x95/29	3x120/41	3x150/41	3x185/57	3x240/72	3x300/88	4x35/16
<b>Product code</b>	<b>1149282</b>	<b>1149283</b>	<b>1149284</b>	<b>1149285</b>	<b>1149286</b>	<b>1149287</b>	<b>1149288</b>	<b>1149289</b>	<b>1149290</b>	<b>1149294</b>
Nominal cable diameter mm	22	24	27	32	36	39	44	48	56	24
Nominal cable weight kg/km	726	866	1175	1539	1987	2315	2895	3675	4560	864
Nominal weight of copper kg/km	193	198	256	330	453	464	619	764	945	199
Nominal weight of Aluminium kg/km	273	375	544	751	949	1165	1414	1910	2357	364
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	16	21	29	41	41	57	72	88	16
Nominal thickness of oversheath mm	1,8	1,8	2,0	2,1	2,3	2,3	2,5	2,7	3,0	1,8
<b>Fire load</b>										
Fire load MJ/m	6,098	7,191	9,219	11,170	14,516	17,865	22,736	26,340	32,441	7,396
Fire load kWh/m	1,694	1,997	2,561	3,103	4,032	4,963	6,316	7,317	9,011	2,055
<b>Maximum forces during installation when pulling by</b>										
Max. pulling force by pulling-eye kN	1,6	2,3	3,2	4,3	5,4	6,8	8,3	10,8	13,5	2,1
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	266	284	326	379	431	471	534	577	668	289
Minimum bending radius, final bending mm	186	199	228	265	302	330	373	404	468	202
<b>Minimum bending radii</b>										
During handling and installation, phase conductor cm	17	20	24	27	31	35	38	43	50	16
During handling and installation, cable cm	27	28	33	38	43	47	53	58	67	29
In final installation, phase conductor cm	12	14	17	19	22	24	27	30	35	11
In final installation, cable cm	19	20	23	27	30	33	37	40	47	20
<b>Minimum bending radii</b>										
During handling and installation, cable m	0,27	0,28	0,33	0,38	0,43	0,47	0,53	0,58	0,67	0,29
In final installation, cable m	0,19	0,20	0,23	0,27	0,30	0,33	0,37	0,40	0,47	0,20
<b>DC resistance</b>										
Max. DC resistance of conductor at 20 °C Ω/km	0,868	0,641	0,443	0,320	0,253	0,206	0,164	0,125	0,100	0,868
Maximum DC resistance at 20 °C, metal screen Ω/km	1,15	1,15	0,868	0,641	0,443	0,443	0,320	0,253	0,206	1,15

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Technical information	3x35/16	3x50/16	3x70/21	3x95/29	3x120/41	3x150/41	3x185/57	3x240/72	3x300/88	4x35/16
<b>Current ratings</b>										
<b>Cables in air (25 °C)</b>										
two loaded conductor, conductor 70 °C A	115	140	180	218	254	293	335	395	457	115
three loaded conductor, conductor 70 °C A	100	122	156	190	220	255	291	343	396	100
two loaded conductor, conductor 90 °C A	140	171	219	267	312	360	413	489	565	140
three loaded conductor, conductor 90 °C A	125	152	194	236	274	316	361	425	490	125
<b>Cables in air (30 °C)</b>										
two loaded conductor, conductor 70 °C A	111	135	173	210	244	282	322	380	439	111
three loaded conductor, conductor 70 °C A	96	117	150	183	212	245	280	330	381	96
two loaded conductor, conductor 90 °C A	135	164	211	257	300	346	397	470	543	135
three loaded conductor, conductor 90 °C A	120	146	187	227	263	304	347	409	471	120
<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	125	150	185	220	255	280	330	375	430	125
<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	98	117	144	172	197	220	250	290	326	98
<b>Maximum thermal short circuit current during 1 s</b>										
Phase (initial 65 °C, final 250 °C) kA	3,6	5,2	7,3	9,8	12,4	15,5	19,2	24,9	31,1	3,6
Phase (initial 90 °C, final 250 °C) kA	3,4	4,8	6,7	9,0	11,4	14,2	17,5	22,6	28,2	3,4
Metal screen (initial 80 °C, final 250 °C) kA	2,4	2,4	3,1	4,3	6,1	6,1	8,5	10,7	13,0	2,4

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STANDARD PACKAGES	3x35/16	3x50/16	3x70/21	3x95/29	3x120/41	3x150/41	3x185/57	3x240/72	3x300/88	4x35/16
Product code	1149282	1149283	1149284	1149285	1149286	1149287	1149288	1149289	1149290	1149294
GTIN code	6438176302682	6438176302712	6438176302736	6438176302774	6438176302798	6438176302835	6438176302859	6438176302897	6438176302927	6438176302958
Package	1000 K16	1000 K16	500 K14	1000 K20	500 K18	1000 K24	500 K20	1000 K26	1000 K28	1000 K16
Product code	1149282	1149283	1149284	1149285	1149286	1149287	1149288	1149289	1149290	1149294
GTIN code	6438176302675	6438176302705	6438176302743	6438176302767	6438176302804	6438176302828	6438176302866	6438176302880	6438176302910	6438176302941
Package	500 K12	500 K12	1000 K18	500 K16	1000 K22	500 K18	1000 K26	500 K22	500 K24	500 K12

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Technical information	4x50/16	4x70/21	4x95/29	4x120/41	4x150/41	4x185/57	4x240/72	4x300/88
<b>Product code</b>	<b>1149295</b>	<b>1149296</b>	<b>1149297</b>	<b>1149298</b>	<b>1149299</b>	<b>1149300</b>	<b>1149301</b>	<b>1149302</b>
Nominal cable diameter mm	28	31	35	40	45	49	56	60
Nominal cable weight kg/km	1089	1471	1865	2436	2898	3572	4633	5576
Nominal weight of copper kg/km	211	269	341	467	480	633	789	958
Nominal weight of Aluminium kg/km	500	725	961	1265	1554	1886	2547	3143
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>	16	21	29	41	41	57	72	88
Nominal thickness of oversheath mm	1,9	2,1	2,2	2,3	2,5	2,7	2,9	3,1
<b>Fire load</b>								
Fire load MJ/m	9,454	12,107	14,201	18,239	22,779	28,129	34,801	39,423
Fire load kWh/m	2,626	3,363	3,945	5,066	6,327	7,814	9,667	10,951
<b>Maximum forces during installation when pulling by</b>								
Max. pulling force by pulling-eye kN	3,0	4,2	5,7	7,2	9,0	11,1	14,4	18,0
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	335	376	424	486	536	592	674	719
Minimum bending radius, final bending mm	235	263	297	340	375	415	472	503
<b>Minimum bending radii</b>								
During handling and installation, phase conductor cm	19	23	26	29	32	37	43	46
During handling and installation, cable cm	34	38	42	49	54	59	67	72
In final installation, phase conductor cm	13	16	18	20	23	26	30	32
In final installation, cable cm	23	26	30	34	38	41	47	50
<b>Minimum bending radii</b>								
During handling and installation, cable m	0,34	0,38	0,42	0,49	0,54	0,59	0,67	0,72
In final installation, cable m	0,23	0,26	0,30	0,34	0,38	0,41	0,47	0,50
<b>DC resistance</b>								
Max. DC resistance of conductor at 20 °C Ω/km	0,641	0,443	0,320	0,253	0,206	0,164	0,125	0,100
Maximum DC resistance at 20 °C, metal screen Ω/km	1,15	0,868	0,641	0,443	0,443	0,320	0,253	0,206

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Technical information	4x50/16	4x70/21	4x95/29	4x120/41	4x150/41	4x185/57	4x240/72	4x300/88
<b>Current ratings</b>								
<b>Cables in air (25 °C)</b>								
two loaded conductor, conductor 70 °C A	140	180	218	254	293	335	395	457
three loaded conductor, conductor 70 °C A	122	156	190	220	255	291	343	396
two loaded conductor, conductor 90 °C A	171	219	267	312	360	413	489	565
three loaded conductor, conductor 90 °C A	152	194	236	274	316	361	425	490
<b>Cables in air (30 °C)</b>								
two loaded conductor, conductor 70 °C A	135	173	210	244	282	322	380	439
three loaded conductor, conductor 70 °C A	117	150	183	212	245	280	330	381
two loaded conductor, conductor 90 °C A	164	211	257	300	346	397	470	543
three loaded conductor, conductor 90 °C A	146	187	227	263	304	347	409	471
<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	150	185	220	255	280	330	375	430
<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	117	144	172	197	220	250	290	326
<b>Maximum thermal short circuit current during 1 s</b>								
Phase (initial 65 °C, final 250 °C) kA	5,2	7,3	9,8	12,4	15,5	19,2	24,9	31,1
Phase (initial 90 °C, final 250 °C) kA	4,8	6,7	9,0	11,4	14,2	17,5	22,6	28,2
Metal screen (initial 80 °C, final 250 °C) kA	2,4	3,1	4,3	6,1	6,1	8,5	10,7	13,0

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Product code	1149295	1149296	1149297	1149298	1149299	1149300	1149301	1149302
GTIN code	6438176302989	6438176303016	6438176303030	6438176303078	6438176303108	6438176303139	6438176303160	6438176303191
Package	1000 K18	1000 K20	500 K18	1000 K24	1000 K26	1000 K26	1000 K28	1000 K28
Product code	1149295	1149296	1149297	1149298	1149299	1149300	1149301	1149302
GTIN code	6438176302972	6438176303009	6438176303047	6438176303061	6438176303092	6438176303122	6438176303153	6438176303184
Package	500 K14	500 K16	1000 K22	500 K20	500 K20	500 K22	500 K26	500 K26