

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

### 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. 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

<b>Standards</b>	SFS 5546, SEK TS 424 14 18-1, HD 604 5 I & D, IEC 60502-1
<b>Reaction to fire</b>	Dca-s2,d2,a2; EN 13501-6, EN 50575:2014+A1:2016
<b>Conductor</b>	35-300 mm <sup>2</sup> sector shaped stranded aluminium, EN/IEC 60228 class 2
<b>Insulation</b>	Cross-linked polyethylene XLPE
<b>Core</b>	Brown, black, grey
<b>Identification</b>	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>1149202</b>	<b>1149203</b>	<b>1149204</b>	<b>1149205</b>	<b>1149206</b>	<b>1149207</b>	<b>1149208</b>	<b>1149209</b>	<b>1149210</b>	<b>1149216</b>
Nominal cable diameter mm	22	24	27	31	36	39	44	48	56	24
Nominal cable weight kg/km	680	816	1115	1469	1906	2224	2791	3561	4413	813
Nominal weight of copper kg/km	139	139	187	249	360	360	501	636	794	139
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	6,157	7,255	9,301	11,271	14,642	18,004	22,907	26,540	32,076	7,462
Fire load kWh/m	1,710	2,015	2,584	3,131	4,067	5,001	6,363	7,372	8,910	2,073
<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	265	282	324	377	430	470	532	576	669	288
Minimum bending radius, final bending mm	185	198	227	264	301	329	373	403	469	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	26	28	32	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	26	30	33	37	40	47	20
<b>Minimum bending radii</b>										
During handling and installation, cable m	0,27	0,28	0,32	0,38	0,43	0,47	0,53	0,58	0,67	0,29
In final installation, cable m	0,18	0,20	0,23	0,26	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					1149206		1149208	1149209		1149216
GTIN code					6438176225776		6438176225813	6438176225837		6438176225912
Package					500 K18		500 K20	500 K22		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>1149217</b>	<b>1149218</b>	<b>1149219</b>	<b>1149220</b>	<b>1149221</b>	<b>1149222</b>	<b>1149223</b>	<b>1149224</b>
Nominal cable diameter mm	28	31	35	40	45	49	56	60
Nominal cable weight kg/km	1028	1400	1785	2342	2792	3455	4496	5428
Nominal weight of copper kg/km	139	187	249	360	360	501	636	794
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	9,535	12,208	14,319	18,382	22,951	28,335	35,053	39,711
Fire load kWh/m	2,648	3,391	3,978	5,106	6,375	7,871	9,737	11,031
<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	334	375	423	484	535	591	673	718
Minimum bending radius, final bending mm	234	262	296	339	375	414	471	502
<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	33	37	42	48	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	37	41	47	50
<b>Minimum bending radii</b>								
During handling and installation, cable m	0,33	0,38	0,42	0,48	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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STANDARD PACKAGES	4x50/16	4x70/21	4x95/29	4x120/41	4x150/41	4x185/57	4x240/72	4x300/88
Product code		1149218		1149220	1149221			1149224
GTIN code		6438176225950		6438176225998	6438176226018			6438176226070
Package		500 K16		500 K20	500 K22			500 K26