

## 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

2024-11-21 17:54:40

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 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	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
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	9,012	2,055
Nominal cable diameter mm	22,180	23,640	27,130	31,550	35,930	39,290	44,460	48,070	55,670	24,090
Nominal cable weight kg/km	726,262	866,357	1174,929	1538,668	1987,120	2314,870	2894,954	3675,127	4560,378	864,139
Metall weight Cu kg/m	0,193	0,198	0,256	0,330	0,453	0,464	0,619	0,764	0,945	0,199
Metall weight Al kg/m	0,273	0,375	0,544	0,751	0,949	1,165	1,414	1,910	2,357	0,364
<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>										
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

2024-11-21 17:54:40

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

2024-11-21 17:54:40

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 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>	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
Fire load MJ/m	9,454	12,108	14,201	18,239	22,779	28,129	34,801	39,423
Fire load kWh/m	2,626	3,363	3,945	5,066	6,328	7,814	9,667	10,951
Nominal cable diameter mm	27,920	31,320	35,320	40,470	44,700	49,360	56,170	59,920
Nominal cable weight kg/km	1089,344	1470,928	1905,209	2428,013	2897,958	3572,498	4633,412	5575,963
Metall weight Cu kg/m	0,211	0,269	0,341	0,467	0,480	0,633	0,789	0,958
Metall weight Al kg/m	0,500	0,725	1,001	1,265	1,554	1,886	2,547	3,143
<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>								
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

2024-11-21 17:54:40

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