

## AXCMK-HF C / AXQJ C / IFSI-AI C

### Aluminium power cable HF

### 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. 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>	25 mm <sup>2</sup> circular stranded aluminium, EN/IEC 60228 class 2 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>	Copper wires and copper tape
<b>Oversheath</b>	UV-protected polyolefin compound, Black

#### 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	3x25/16	3x35/16	3x50/16	3x70/21	3x95/29	3x120/41	3x150/41	3x185/57	3x240/72	3x300/88
<b>Product code</b>	<b>1149241</b>	<b>1149242</b>	<b>1149243</b>	<b>1149244</b>	<b>1149245</b>	<b>1149246</b>	<b>1149247</b>	<b>1149248</b>	<b>1149249</b>	<b>1149250</b>
Nominal cross-sectional area of conductor mm <sup>2</sup>	25	35	50	70	95	120	150	185	240	300
Nominal thickness of insulation mm	0,9	0,9	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	16	16	21	29	41	41	57	72	88
Nominal thickness of oversheath mm	1,8	1,8	1,8	2,0	2,1	2,3	2,3	2,5	2,7	3,0
Fire load MJ/m	7,216	6,097	7,305	9,790	11,831	14,568	18,301	23,249	26,896	33,089
Fire load kWh/m	2,005	1,694	2,029	2,719	3,286	4,047	5,084	6,458	7,471	9,191
Nominal cable diameter mm	24,330	22,170	23,780	27,670	32,090	36,080	39,570	44,840	48,450	56,050
Nominal cable weight kg/km	819,196	682,464	821,313	1132,873	1487,160	1906,854	2233,347	2807,060	3577,944	4443,138
Nominal weight of copper kg/m	0,149	0,149	0,149	0,197	0,260	0,370	0,370	0,516	0,651	0,810
Nominal weight of aluminium kg/m	0,198	0,273	0,375	0,544	0,751	0,949	1,165	1,414	1,910	2,357
<b>Maximum forces during installation when pulling by</b>										
Max. pulling force by pulling-eye kN	1,1	1,6	2,3	3,2	4,3	5,4	6,8	8,3	10,8	13,5
Max. pulling force by pulling-stocking kN	1,1	1,6	2,3	3,2	4,3	5,4	6,8	8,3	8,5	8,5
<b>Minimum bending radii</b>										
During handling and installation, phase conductor cm	9	17	20	24	27	31	35	38	43	50
During handling and installation, cable cm	29	27	29	33	39	43	47	54	58	67
In final installation, phase conductor cm	6	12	14	17	19	22	24	27	30	35
In final installation, cable cm	20	19	20	23	27	30	33	38	41	47
<b>Minimum bending radii</b>										
During handling and installation, cable m	0,29	0,27	0,28	0,33	0,39	0,43	0,47	0,54	0,58	0,67
In final installation, cable m	0,20	0,19	0,20	0,23	0,27	0,30	0,33	0,38	0,41	0,47
<b>DC resistance</b>										
Max. DC resistance of conductor at 20 °C Ω/km	1,20	0,868	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	1,15	1,15	0,868	0,641	0,443	0,443	0,320	0,253	0,206

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<b>Current ratings</b>										
<b>Cables in air (25 °C)</b>										
two loaded conductor, conductor 70 °C A	93	115	140	180	218	254	293	335	395	457
three loaded conductor, conductor 70 °C A	81	100	122	156	190	220	255	291	343	396
two loaded conductor, conductor 90 °C A	112	140	171	219	267	312	360	413	489	565
three loaded conductor, conductor 90 °C A	101	125	152	194	236	274	316	361	425	490
<b>Cables in air (30 °C)</b>										
two loaded conductor, conductor 70 °C A	89	111	135	173	210	244	282	322	380	439
three loaded conductor, conductor 70 °C A	78	96	117	150	183	212	245	280	330	381
two loaded conductor, conductor 90 °C A	108	135	164	211	257	300	346	397	470	543
three loaded conductor, conductor 90 °C A	97	120	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	100	125	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	82	98	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	2,6	3,6	5,2	7,3	9,8	12,4	15,5	19,2	24,9	31,1
Phase (initial 90 °C, final 250 °C) kA	2,4	3,4	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	2,4	2,4	3,1	4,3	6,1	6,1	8,5	10,7	13,0

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<b>Product code</b>	<b>1149253</b>	<b>1149254</b>	<b>1149255</b>	<b>1149256</b>	<b>1149257</b>	<b>1149258</b>	<b>1149259</b>	<b>1149260</b>	<b>1149261</b>	<b>1149262</b>
Nominal cross-sectional area of conductor mm <sup>2</sup>	25	35	50	70	95	120	150	185	240	300
Nominal thickness of insulation mm	0,9	0,9	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	16	16	21	29	41	41	57	72	88
Nominal thickness of oversheath mm	1,8	1,8	1,9	2,1	2,2	2,3	2,5	2,7	2,9	3,1
Fire load MJ/m	8,493	7,438	9,524	12,147	14,205	18,687	23,278	28,701	35,455	40,122
Fire load kWh/m	2,359	2,066	2,646	3,374	3,946	5,191	6,466	7,972	9,849	11,145
Nominal cable diameter mm	26,330	24,230	28,060	31,460	35,450	40,740	44,980	49,740	56,550	60,300
Nominal cable weight kg/km	936,461	816,013	1030,268	1401,382	1824,647	2351,125	2801,866	3471,493	4513,816	5446,703
Nominal weight of copper kg/m	0,149	0,149	0,149	0,197	0,259	0,370	0,370	0,516	0,651	0,809
Nominal weight of aluminium kg/m	0,264	0,364	0,501	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	1,5	2,1	3,0	4,2	5,7	7,2	9,0	11,1	14,4	18,0
Max. pulling force by pulling-stocking kN	1,5	2,1	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	9	16	19	23	26	29	32	37	43	46
During handling and installation, cable cm	32	29	34	38	43	49	54	60	68	72
In final installation, phase conductor cm	6	11	13	16	18	20	23	26	30	32
In final installation, cable cm	22	20	24	26	30	34	38	42	48	51
<b>Minimum bending radii</b>										
During handling and installation, cable m	0,32	0,29	0,34	0,38	0,42	0,49	0,54	0,60	0,68	0,72
In final installation, cable m	0,22	0,20	0,24	0,26	0,30	0,34	0,38	0,42	0,47	0,51
<b>DC resistance</b>										
Max. DC resistance of conductor at 20 °C Ω/km	1,20	0,868	0,641	0,443	0,320	0,253	0,206	0,164	0,125	0,100
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