

AXCMK-HF / AXQJ / IFSI-AI

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. 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	16 mm ² circular solid aluminium, EN/IEC 60228 class 1 25 mm ² circular stranded aluminium, EN/IEC 60228 class 2 35-300 mm ² sector shaped, stranded aluminium, 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	Copper wires and copper tape
Oversheath	UV-protected polyolefin compound, Black
Rip cord	Aramid cord

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	3x16/10	3x25/16	3x35/16	3x50/16	3x70/21	3x95/29	3x120/41	3x150/41	3x185/57	3x240/72
Product code	1256511	1256512	1256513	1256514	1256515	1256516	1256517	1256518	1256519	1256520
Nominal cross-sectional area of conductor mm ²	16	25	35	50	70	95	120	150	185	240
Nominal thickness of insulation mm	0,7	0,9	0,9	1,0	1,1	1,1	1,2	1,4	1,6	1,7
Nominal size of metal screen mm ²	10	16	16	16	21	29	41	41	57	72
Nominal thickness of oversheath mm	1,8	1,8	1,8	1,8	2,0	2,1	2,3	2,3	2,5	2,7
Fire load MJ/m	3,586	5,554	6,181	7,393	9,898	11,958	14,718	18,465	23,446	27,122
Fire load kWh/m	0,996	1,543	1,717	2,054	2,749	3,322	4,088	5,129	6,513	7,534
Nominal cable diameter mm	17,750	22,220	22,170	23,780	27,670	32,090	36,080	39,570	44,840	48,450
Nominal cable weight kg/km	387,051	587,266	678,386	816,870	1126,951	1479,776	1897,622	2223,105	2794,289	3562,952
Nominal weight of copper kg/m	0,093	0,149	0,149	0,149	0,197	0,260	0,370	0,370	0,516	0,651
Nominal weight of aluminium kg/m	0,124	0,199	0,273	0,375	0,544	0,751	0,949	1,165	1,414	1,910
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	1,4	1,1	1,6	2,3	3,2	4,3	5,4	6,8	8,3	10,8
Max. pulling force by pulling-stocking kN	0,7	1,1	1,6	2,3	3,2	4,3	5,4	6,8	8,3	8,5
Minimum bending radii										
During handling and installation, phase conductor cm	9	9	17	20	24	27	31	35	38	43
During handling and installation, cable cm	21	27	27	29	33	39	43	47	54	58
In final installation, phase conductor cm	6	6	12	14	17	19	22	24	27	30
In final installation, cable cm	15	19	19	20	23	27	30	33	38	41
Minimum bending radii										
During handling and installation, cable m	0,21	0,27	0,27	0,28	0,33	0,39	0,43	0,47	0,54	0,58
In final installation, cable m	0,15	0,19	0,19	0,20	0,23	0,27	0,30	0,33	0,38	0,41
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	1,91	1,20	0,868	0,641	0,443	0,320	0,253	0,206	0,164	0,125
Maximum DC resistance at 20 °C, metal screen Ω/km	1,83	1,83	1,15	1,15	0,868	0,641	0,443	0,443	0,320	0,253

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Technical information	3x16/10	3x25/16	3x35/16	3x50/16	3x70/21	3x95/29	3x120/41	3x150/41	3x185/57	3x240/72
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	76	93	115	140	180	218	254	293	335	395
three loaded conductor, conductor 70 °C A	63	81	100	122	156	190	220	255	291	343
two loaded conductor, conductor 90 °C A	95	112	140	171	219	267	312	360	413	489
three loaded conductor, conductor 90 °C A	80	101	125	152	194	236	274	316	361	425
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	73	89	111	135	173	210	244	282	322	380
three loaded conductor, conductor 70 °C A	61	78	96	117	150	183	212	245	280	330
two loaded conductor, conductor 90 °C A	91	108	135	164	211	257	300	346	397	470
three loaded conductor, conductor 90 °C A	77	97	120	146	187	227	263	304	347	409
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	78	100	125	150	185	220	255	280	330	375
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	64	82	98	117	144	172	197	220	250	290
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	1,7	2,6	3,6	5,2	7,3	9,8	12,4	15,5	19,2	24,9
Phase (initial 90 °C, final 250 °C) kA	1,5	2,4	3,4	4,8	6,7	9,0	11,4	14,2	17,5	22,6
Metal screen (initial 80 °C, final 250 °C) kA	1,5	2,4	2,4	2,4	3,1	4,3	6,1	6,1	8,5	10,7

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Technical information	3x300/88	4x16/10	4x25/16	4x35/16	4x50/16	4x70/21	4x95/29	4x120/41	4x150/41	4x185/57
Product code	1256521	1256522	1256523	1256524	1256525	1256526	1256527	1256528	1256529	1256530
Nominal cross-sectional area of conductor mm ²	300	16	25	35	50	70	95	120	150	185
Nominal thickness of insulation mm	1,8	0,7	0,9	0,9	1,0	1,1	1,1	1,2	1,4	1,6
Nominal size of metal screen mm ²	88	10	16	16	16	21	29	41	41	57
Nominal thickness of oversheath mm	3,0	1,8	1,8	1,8	1,9	2,1	2,2	2,3	2,5	2,7
Fire load MJ/m	33,373	4,265	6,748	7,528	9,629	12,271	14,348	18,855	23,489	28,932
Fire load kWh/m	9,270	1,185	1,875	2,091	2,675	3,409	3,986	5,238	6,525	8,037
Nominal cable diameter mm	56,050	19,260	24,220	24,230	28,060	31,460	35,450	40,740	44,980	49,740
Nominal cable weight kg/km	4423,668	452,317	695,053	811,469	1024,552	1394,163	1815,985	2340,544	2790,899	3456,061
Nominal weight of copper kg/m	0,810	0,093	0,149	0,149	0,149	0,197	0,259	0,370	0,370	0,516
Nominal weight of aluminium kg/m	2,357	0,166	0,265	0,364	0,500	0,725	1,001	1,265	1,555	1,886
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	13,5	1,9	1,5	2,1	3,0	4,2	5,7	7,2	9,0	11,1
Max. pulling force by pulling-stocking kN	8,5	0,9	1,5	2,1	3,0	4,2	5,7	7,2	8,5	8,5
Minimum bending radii										
During handling and installation, phase conductor cm	50	9	9	16	19	23	26	29	32	37
During handling and installation, cable cm	67	23	29	29	34	38	43	49	54	60
In final installation, phase conductor cm	35	6	6	11	13	16	18	20	23	26
In final installation, cable cm	47	16	20	20	24	26	30	34	38	42
Minimum bending radii										
During handling and installation, cable m	0,67	0,23	0,29	0,29	0,34	0,38	0,42	0,49	0,54	0,60
In final installation, cable m	0,47	0,16	0,20	0,20	0,24	0,26	0,30	0,34	0,38	0,42
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	0,100	1,91	1,20	0,868	0,641	0,443	0,320	0,253	0,206	0,164
Maximum DC resistance at 20 °C, metal screen Ω/km	0,206	1,83	1,15	1,15	1,15	0,868	0,641	0,443	0,443	0,320

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Technical information	3x300/88	4x16/10	4x25/16	4x35/16	4x50/16	4x70/21	4x95/29	4x120/41	4x150/41	4x185/57
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	457	76	93	115	140	180	218	254	293	335
three loaded conductor, conductor 70 °C A	396	63	81	100	122	156	190	220	255	291
two loaded conductor, conductor 90 °C A	565	95	112	140	171	219	267	312	360	413
three loaded conductor, conductor 90 °C A	490	80	101	125	152	194	236	274	316	361
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	439	73	89	111	135	173	210	244	282	322
three loaded conductor, conductor 70 °C A	381	61	78	96	117	150	183	212	245	280
two loaded conductor, conductor 90 °C A	543	91	108	135	164	211	257	300	346	397
three loaded conductor, conductor 90 °C A	471	77	97	120	146	187	227	263	304	347
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	430	78	100	125	150	185	220	255	280	330
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	326	64	82	98	117	144	172	197	220	250
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	31,1	1,7	2,6	3,6	5,2	7,3	9,8	12,4	15,5	19,2
Phase (initial 90 °C, final 250 °C) kA	28,2	1,5	2,4	3,4	4,8	6,7	9,0	11,4	14,2	17,5
Metal screen (initial 80 °C, final 250 °C) kA	13,0	1,5	2,4	2,4	2,4	3,1	4,3	6,1	6,1	8,5

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Technical information	4x240/72	4x300/88
Product code	1256531	1256532
Nominal cross-sectional area of conductor mm ²	240	300
Nominal thickness of insulation mm	1,7	1,8
Nominal size of metal screen mm ²	72	88
Nominal thickness of oversheath mm	2,9	3,1
Fire load MJ/m	35,733	40,436
Fire load kWh/m	9,926	11,232
Nominal cable diameter mm	56,550	60,300
Nominal cable weight kg/km	4494,793	5424,951
Nominal weight of copper kg/m	0,651	0,809
Nominal weight of aluminium kg/m	2,547	3,143
Maximum forces during installation when pulling by		
Max. pulling force by pulling-eye kN	14,4	18,0
Max. pulling force by pulling-stocking kN	8,5	8,5
Minimum bending radii		
During handling and installation, phase conductor cm	43	46
During handling and installation, cable cm	68	72
In final installation, phase conductor cm	30	32
In final installation, cable cm	48	51
Minimum bending radii		
During handling and installation, cable m	0,68	0,72
In final installation, cable m	0,47	0,51
DC resistance		
Max. DC resistance of conductor at 20 °C Ω/km	0,125	0,100
Maximum DC resistance at 20 °C, metal screen Ω/km	0,253	0,206

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Technical information	4x240/72	4x300/88
Current ratings		
Cables in air (25 °C)		
two loaded conductor, conductor 70 °C A	395	457
three loaded conductor, conductor 70 °C A	343	396
two loaded conductor, conductor 90 °C A	489	565
three loaded conductor, conductor 90 °C A	425	490
Cables in air (30 °C)		
two loaded conductor, conductor 70 °C A	380	439
three loaded conductor, conductor 70 °C A	330	381
two loaded conductor, conductor 90 °C A	470	543
three loaded conductor, conductor 90 °C A	409	471
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	375	430
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	290	326
Maximum thermal short circuit current during 1 s		
Phase (initial 65 °C, final 250 °C) kA	24,9	31,1
Phase (initial 90 °C, final 250 °C) kA	22,6	28,2
Metal screen (initial 80 °C, final 250 °C) kA	10,7	13,0