

AXCMK-HF / AXQJ / IFSI-AI

Aluminum 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. 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, SS 424 14 18, 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	Halogen-free XLPE
Inner covering	Plastic tape
Metal screen	Copper wires and copper tape
Oversheath	UV-protected halogen-free polyolefin compound
Colour of the oversheath	Black
Rip cord	Aramid yarn



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

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 diameter of complete cable mm	18	22	22	24	28	32	36	40	45	48
Nominal weight of cable kg/km	390	591	678	817	1127	1480	1898	2223	2794	3563
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
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	22	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	0,29	0,33	0,39	0,43	0,47	0,54	0,58
In final installation, cable m	0,14	0,19	0,19	0,2	0,23	0,27	0,3	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

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)										
three loaded conductor, conductor temperature 70 °C A	63	81	100	122	156	190	220	255	291	343
three loaded conductor, conductor temperature 90 °C A	80	101	125	152	194	236	274	316	361	425
Cables in air (30 °C)										
two loaded conductor, conductor temperature 90 °C A	91	108	135	146	211	257	300	346	397	470
three loaded conductor, conductor temperature 90 °C A	77	97	120	164	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 temperature 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 temperature 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

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 diameter of complete cable mm	56	19	24	24	28	31	35	41	45	50
Nominal weight of cable kg/km	4424	455	695	811	1025	1394	1816	2341	2791	3456
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
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	0,43	0,49	0,54	0,60
In final installation, cable m	0,47	0,15	0,2	0,2	0,24	0,26	0,3	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

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)										
three loaded conductor, conductor temperature 70 °C A	396	63	81	100	122	156	190	220	255	291
three loaded conductor, conductor temperature 90 °C A	490	80	101	125	152	194	236	274	316	361
Cables in air (30 °C)										
two loaded conductor, conductor temperature 90 °C A	543	91	108	135	146	211	257	300	346	397
three loaded conductor, conductor temperature 90 °C A	471	77	97	120	164	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 temperature 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 temperature 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

Technical information	4x240/72	4x300/88
Product code	1256531	1256532
Nominal diameter of complete cable mm	57	60
Nominal weight of cable kg/km	4495	5425
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
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	0,48	0,51
DC resistance		
Max. DC resistance of conductor at 20 °C Ω/km	0,125	0,100

Technical information	4x240/72	4x300/88
Current ratings		
Cables in air (25 °C)		
three loaded conductor, conductor temperature 70 °C A	343	396
three loaded conductor, conductor temperature 90 °C A	425	490
Cables in air (30 °C)		
two loaded conductor, conductor temperature 90 °C A	470	543
three loaded conductor, conductor temperature 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 temperature 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 temperature 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