

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

Standards	SFS 5546, SEK TS 424 14 18-1, HD 604 5 I & D, IEC 60502-1
Reaction to fire	Cca-s1,d1,a1; EN 13501-6, EN 50575:2014+A1:2016
Product Environmental Profile (PEP/EPD)	PEP NXNS-00560-V01.01-EN
Conductor	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 Identification	Brown, black, grey Blue, brown, black, grey
Inner covering	Plastic tape
Metal screen	Copper wires and copper tape

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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Oversheath

UV-protected polyolefin compound , Black

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Technical information	3x35/16	3x50/16	3x70/21	3x95/29	3x120/41	3x150/41	3x185/57	3x240/72	3x300/88	4x25/16
Product code	1149242	1149243	1149244	1149245	1149246	1149247	1149248	1149249	1149250	1149253
Nominal cable diameter mm	22	24	28	32	36	40	45	48	56	26
Nominal cable weight kg/km	682	821	1133	1487	1907	2233	2807	3578	4443	936
Nominal weight of copper kg/km	149	149	197	260	370	370	516	651	810	149
Nominal weight of Aluminium kg/km	273	375	544	751	949	1165	1414	1910	2357	264
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 ²	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										
Fire load MJ/m	6,097	7,305	9,790	11,831	14,568	18,301	23,249	26,896	33,089	8,493
Fire load kWh/m	1,694	2,029	2,719	3,286	4,046	5,084	6,458	7,471	9,191	2,359
Maximum forces during installation when pulling by										
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	1,5
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	1,5
Minimum bending radii										
Minimum bending radius, handling mm	266	285	332	385	433	475	538	581	673	316
Minimum bending radius, final bending mm	186	200	232	270	303	332	377	407	471	221
Minimum bending radii										
During handling and installation, phase conductor cm	17	20	24	27	31	35	38	43	50	9
During handling and installation, cable cm	27	29	33	39	43	47	54	58	67	32
In final installation, phase conductor cm	12	14	17	19	22	24	27	30	35	6
In final installation, cable cm	19	20	23	27	30	33	38	41	47	22
Minimum bending radii										
During handling and installation, cable m	0,27	0,28	0,33	0,39	0,43	0,47	0,54	0,58	0,67	0,32
In final installation, cable m	0,19	0,20	0,23	0,27	0,30	0,33	0,38	0,41	0,47	0,22
DC resistance										
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	1,20
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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Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	115	140	180	218	254	293	335	395	457	93
three loaded conductor, conductor 70 °C A	100	122	156	190	220	255	291	343	396	81
two loaded conductor, conductor 90 °C A	140	171	219	267	312	360	413	489	565	112
three loaded conductor, conductor 90 °C A	125	152	194	236	274	316	361	425	490	101
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	111	135	173	210	244	282	322	380	439	89
three loaded conductor, conductor 70 °C A	96	117	150	183	212	245	280	330	381	78
two loaded conductor, conductor 90 °C A	135	164	211	257	300	346	397	470	543	108
three loaded conductor, conductor 90 °C A	120	146	187	227	263	304	347	409	471	97
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	125	150	185	220	255	280	330	375	430	100
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	98	117	144	172	197	220	250	290	326	82
Maximum thermal short circuit current during 1 s										
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	2,6
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	2,4
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
Environmental information										
(A1-A3) GWP emission kgCO2e/km	4756	5895	8450	11349	14789	17459	22160	28474	35558	6836
GWP emissions calculation standard	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019

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Product code	1149242	1149243	1149244	1149245	1149246	1149247	1149248	1149249	1149250	1149253
GTIN code	6438176300756	6438176300770	6438176300794	6438176300800	6438176300817	6438176300824	6438176300831	6438176300848	6438176300855	6438176300879
Package	1000 K16	1000 K16	1000 K18	500 K16	500 K18	500 K18	500 K20	500 K22	500 K24	1000 K18
Product code	1149242	1149243	1149244							1149253
GTIN code	6438176300749	6438176300763	6438176300787							6438176300862
Package	500 K12	500 K12	500 K14							500 K14

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Technical information	4x35/16	4x50/16	4x70/21	4x95/29	4x120/41	4x150/41	4x185/57	4x240/72	4x300/88
Product code	1149254	1149255	1149256	1149257	1149258	1149259	1149260	1149261	1149262
Nominal cable diameter mm	24	28	31	35	41	45	50	57	60
Nominal cable weight kg/km	816	1030	1401	1785	2351	2822	3494	4570	5400
Nominal weight of copper kg/km	149	149	197	259	370	370	516	651	809
Nominal weight of Aluminium kg/km	364	500	725	961	1265	1574	1909	2603	3096
Nominal Insulation thickness mm	0,9	1,0	1,1	1,1	1,2	1,4	1,6	1,7	1,8
Nominal size of metal screen mm ²	16	16	21	29	41	41	57	72	88
Nominal thickness of oversheath mm	1,8	1,9	2,1	2,2	2,3	2,5	2,7	2,9	3,1
Fire load									
Fire load MJ/m	7,438	9,524	12,147	14,205	18,687	23,278	28,701	35,455	40,122
Fire load kWh/m	2,066	2,646	3,374	3,946	5,191	6,466	7,972	9,848	11,145
Maximum forces during installation when pulling by									
Max. pulling force by pulling-eye kN	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	2,1	3,0	4,2	5,7	7,2	8,5	8,5	8,5	8,5
Minimum bending radii									
Minimum bending radius, handling mm	291	337	378	425	489	540	597	679	724
Minimum bending radius, final bending mm	204	236	264	298	342	378	418	475	507
Minimum bending radii									
During handling and installation, phase conductor cm	16	19	23	26	29	32	37	43	46
During handling and installation, cable cm	29	34	38	43	49	54	60	68	72
In final installation, phase conductor cm	11	13	16	18	20	23	26	30	32
In final installation, cable cm	20	24	26	30	34	38	42	48	51
Minimum bending radii									
During handling and installation, cable m	0,29	0,34	0,38	0,42	0,49	0,54	0,60	0,68	0,72
In final installation, cable m	0,20	0,24	0,26	0,30	0,34	0,38	0,42	0,47	0,51
DC resistance									
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
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

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Cables in air (25 °C)									
two loaded conductor, conductor 70 °C A	115	140	180	218	254	293	335	395	457
three loaded conductor, conductor 70 °C A	100	122	156	190	220	255	291	343	396
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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	125	150	185	220	255	280	330	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	98	117	144	172	197	220	250	290	326
Maximum thermal short circuit current during 1 s									
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
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
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
Environmental information									
(A1-A3) GWP emission kgCO2e/km	5854	7606	10645	14117	18425	22119	27598	36140	43781
GWP emissions calculation standard	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019

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Product code	1149254	1149255	1149256	1149257	1149258	1149259	1149260	1149261	1149262
GTIN code	6438176300886	6438176300916	6438176300930	6438176300947	6438176300954	6438176300961	6438176300978	6438176300985	6438176300992
Package	500 K12	1000 K18	1000 K20	500 K18	500 K20	500 K20	500 K22	500 K24	500 K26
Product code	1149254	1149255	1149256						
GTIN code	6438176300893	6438176300909	6438176300923						
Package	1000 K16	500 K14	500 K16						