AXCMK-HF / AXQJ / IFSI-Al

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
Product Environmental Profile (PEP/EPD)	PEP NXNS-00560-V01.01-EN
Conductor	16 mm² circular solid aluminium, EN/IEC 60228 class 1 25 mm² circular stranded aluminium, EN/IEC 60228 class 2 35-300 mm² 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
Rip cord	Aramid cord

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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 cable diameter mm	18	22	22	24	28	32	36	40	45	48
Nominal cable weight kg/km	390	587	678	817	1127	1480	1898	2223	2794	3563
Nominal weight of copper kg/km	93	149	149	149	197	260	370	370	516	651
Nominal weight of Aluminium kg/km	124	199	273	375	544	751	949	1165	1414	1910
Nominal Insulation thicness 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 mm²	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										
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
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										
Minimum bending radius, handling mm	213	267	266	285	332	385	433	475	538	581
Minimum bending radius, final bending mm	149	187	186	200	232	270	303	332	377	407
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
Environmental information										
The product is a declared item in the Supply Chain Declaration Portal (or short ”SCDP”) for New Buildings generation 4				Yes	Yes	Yes	Yes	Yes	Yes	Yes
(A1-A3) GWP emission kgCO2e/km	2340	3978	4723	5862	8401	11292	14715	17377	22053	28351
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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STANDARD PACKAGES	3x16/10	3x25/16	3x35/16	3x50/16	3x70/21	3x95/29	3x120/41	3x150/41	3x185/57	3x240/72
Product code		1256512	1256513	1256514	1256515	1256516	1256517	1256518	1256519	1256520
GTIN code		6438176114124	6438176114148	6438176114179	6438176114193	6438176114209	6438176114223	6438176114247	6438176114261	6438176114285
Package		500 K12	500 K12	1000 K16	1000 K18	500 K16	500 K18	500 K18	500 K20	500 K22
Product code			1256513	1256514	1256515					
GTIN code			6438176114155	6438176114162	6438176114186					
Package			1000 K16	500 K12	500 K14					

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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 cable diameter mm	56	19	24	24	28	31	35	41	45	50
Nominal cable weight kg/km	4424	452	695	811	1025	1394	1776	2341	2811	3479
Nominal weight of copper kg/km	810	93	149	149	149	197	259	370	370	516
Nominal weight of Aluminium kg/km	2357	166	265	364	500	725	961	1265	1575	1909
Nominal Insulation thicness 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 mm²	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										
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
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										
Minimum bending radius, handling mm	673	231	291	291	337	378	425	489	540	597
Minimum bending radius, final bending mm	471	162	203	204	236	264	298	342	378	418
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
Environmental information										
The product is a declared item in the Supply Chain Declaration Portal (or short ”SCDP”) for New Buildings generation 4	Yes				Yes	Yes	Yes	Yes	Yes	Yes
(A1-A3) GWP emission kgCO2e/km	35402	2872	4863	5813	7565	10587	14043	18343	22028	27475
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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STANDARD PACKAGES	3x300/88	4x16/10	4x25/16	4x35/16	4x50/16	4x70/21	4x95/29	4x120/41	4x150/41	4x185/57
Product code	1256521		1256523	1256524	1256525	1256526	1256527	1256528	1256529	1256530
GTIN code	6438176114308		6438176114407	6438176114438	6438176114445	6438176114476	6438176114483	6438176114506	6438176114520	6438176114544
Package	500 K24		500 K12	1000 K16	500 K14	1000 K20	500 K18	500 K20	500 K20	500 K22
Product code			1256523	1256524	1256525					
GTIN code			6438176114414	6438176114421	6438176114452					
Package			1000 K16	500 K12	1000 K18					

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Technical information	4x240/72	4x300/88
Product code	**1256531**	**1256532**
Nominal cable diameter mm	57	60
Nominal cable weight kg/km	4551	5378
Nominal weight of copper kg/km	651	809
Nominal weight of Aluminium kg/km	2603	3096
Nominal Insulation thicness mm	1,7	1,8
Nominal size of metal screen mm²	72	88
Nominal thickness of oversheath mm	2,9	3,1
Fire load		
Fire load MJ/m	35,733	40,436
Fire load kWh/m	9,926	11,232
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		
Minimum bending radius, handling mm	679	724
Minimum bending radius, final bending mm	475	507
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
Environmental information		
The product is a declared item in the Supply Chain Declaration Portal (or short ”SCDP”) for New Buildings generation 4	Yes	Yes
(A1-A3) GWP emission kgCO2e/km		
GWP emissions calculation standard	34956	43600
	EN15804:2012 + A2:2019	EN15804:2012 + A2:2019

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STANDARD PACKAGES	4x240/72	4x300/88
Product code	1256531	1256532
GTIN code	6438176114568	6438176114582
Package	500 K24	500 K26

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