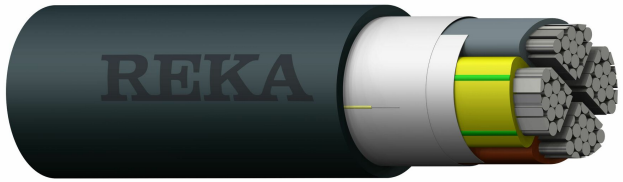
AXMK

Aluminium power cable

0,6/1 (1,2) kV



PoweRex

EN 50575 CPR E_{ca}

Application

Aluminium power cable for fixed installations indoors and outdoors. May be buried directly in soil. UV-protected oversheath and core insulation. Installations must be in accordance with national regulations and rules of installations. The cable is flame-retardant according to CPR-class Eca.

Design

Standards	SFS 4879, SS 424 14 18, HD 603 5 D & O
Reaction to fire	Eca; EN 13501-6, EN 50575:2014+A1:2016
Certificates	SGS Fimko FI 41548
Conductor	16-25 mm² circular stranded aluminium, EN/IEC 60228 class 2 35-300 mm² sector shaped, stranded aluminium, EN/IEC 60228 class 2
Insulation	UV-protected cross-linked polyethylene XLPE
Inner covering	Plastic tape
Oversheath	UV-protected PVC compound
Colour of the oversheath	Black

Temperature limits

Max. conductor temperature °C	90
Max. cond. temp. short circuit max. 5 s °C	250
Min. cable temperature during operation °C	-40
Min. cable temperature during handling °C	-20
Min. cable temperature during transport °C	-25

Technical information	4x16 S	4x25 S	4x35 S	4x50 S	4x70 S	4x95 S	4x120 S	4x150 S	4x185 S	4x240 S
Product code	**1116348**	**1701199**	**1116332**	**1116333**	**1116334**	**1116335**	**1116336**	**1116337**	**1116358**	**1116359**
Nominal diameter of complete cable mm	19	22	22	26	29	33	38	42	46	53
Nominal weight of cable kg/km	367	517	635	844	1148	1538	1878	2297	2798	3679
Nominal cross-sectional area of conductor mm²	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 thickness of oversheath mm	1,8	1,8	1,8	1,9	2,0	2,1	2,3	2,4	2,6	2,8
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	1,0	1,5	2,1	3,0	4,2	5,7	7,2	9,0	11,1	14,4
Max. pulling force by pulling-stocking kN	1,0	1,5	2,1	3,0	4,2	5,7	7,2	8,5	8,5	8,5
Minimum bending radii										
In final installation, phase conductor cm	7	8	11	13	16	18	20	23	26	30
Minimum bending radii										
During handling and installation, phase conductor cm	10	13	16	19	23	26	29	32	37	43
During handling and installation, cable cm	23	27	27	31	35	39	45	50	55	63
In final installation, phase conductor cm	7	8	11	13	16	18	20	23	26	30
In final installation, cable cm	16	19	19	22	25	28	32	35	39	44
Minimum bending radii										
During handling and installation, cable m	0,23	0,27	0,27	0,31	0,35	0,39	0,45	0,50	0,55	0,63
In final installation, cable m	0,16	0,19	0,19	0,22	0,25	0,28	0,32	0,35	0,39	0,44
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
Elecrical values										
Calculated operation capacitance µF/km	0,30	0,29	0,29	0,29	0,29	0,29	0,28	0,28	0,28	0,27
Calculated inductance mH/km	0,29	0,28	0,28	0,28	0,27	0,27	0,26	0,26	0,26	0,25

Technical information	4x16 S	4x25 S	4x35 S	4x50 S	4x70 S	4x95 S	4x120 S	4x150 S	4x185 S	4x240 S
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

Technical information	4x300 S	5x16 S
Product code	**1116360**	**1116340**
Nominal diameter of complete cable mm	57	21
Nominal weight of cable kg/km	4439	468
Nominal cross-sectional area of conductor mm²	300	16
Nominal thickness of insulation mm	1,8	0,7
Nominal thickness of oversheath mm	3,0	1,8
Maximum forces during installation when pulling by		
Max. pulling force by pulling-eye kN	18,0	1,2
Max. pulling force by pulling-stocking kN	8,5	1,2
Minimum bending radii		
In final installation, phase conductor cm	32	7
Minimum bending radii		
During handling and installation, phase conductor cm	46	10
During handling and installation, cable cm	68	25
In final installation, phase conductor cm	32	7
In final installation, cable cm	48	17
Minimum bending radii		
During handling and installation, cable m	0,68	0,25
In final installation, cable m	0,48	0,17
DC resistance		
Max. DC resistance of conductor at 20 °C Ω/km	0,100	1,91
Elecrical values		
Calculated operation capacitance µF/km	0,26	0,30
Calculated inductance mH/km	0,25	0,29

Technical information	4x300 S	5x16 S
Current ratings		
Cables in air (25 °C)		
two loaded conductor, conductor 70 °C A	457	76
three loaded conductor, conductor 70 °C A	396	63
two loaded conductor, conductor 90 °C A	565	95
three loaded conductor, conductor 90 °C A	490	80
Cables in air (30 °C)		
two loaded conductor, conductor 70 °C A	439	73
three loaded conductor, conductor 70 °C A	381	61
two loaded conductor, conductor 90 °C A	543	91
three loaded conductor, conductor 90 °C A	471	77
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
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
Maximum thermal short circuit current during 1 s		
Phase (initial 65 °C, final 250 °C) kA	31,1	1,7
Phase (initial 90 °C, final 250 °C) kA	28,2	1,5