

AXMK/PE PowerRex PE

Aluminium power cable

0,6/1 (1,2) kV

Application

Aluminium power cable for fixed installations outdoors. May be buried directly in soil, also by ploughing. Installations must be in accordance with national regulations and rules of installations. The cable is halogen-free, but without fire protection. The cable is not CPR-classified.



Design

Standards	SFS 5800, SEK TS 424 14 18-1, HD 603 5 E & O
Certificates	SGS Fimko FI 41546
Product Environmental Profile	PEP NXNS-00450-V01.01-EN
Conductor	16-25 mm ² circular stranded aluminium, EN/IEC 60228 class 2 35-300 mm ² sector shaped, stranded aluminium, EN/IEC 60228 class 2
Insulation	UV-protected cross-linked polyethylene XLPE
Core Identification	Yellow-green, brown, black, grey
Inner covering	Plastic tape
Oversheath	UV-protected polyethylene compound PELLD, 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	-20
Min. cable temperature during transport °C	-40

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Technical information	4x16 S PoweRex PE	4x25 S PoweRex PE	4x35 S PoweRex PE	4x50 S PoweRex PE	4x70 S PoweRex PE	4x95 S PoweRex PE	4x120 S PoweRex PE	4x150 S PoweRex PE	4x185 S PoweRex PE	4x240 S PoweRex PE
Product code	1116040	1116041	1116042	1116043	1116044	1116045	1116046	1116047	1116048	1116049
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 thickness of oversheath mm	1,8	1,8	1,8	1,9	2,0	2,1	2,3	2,4	2,6	2,8
(A1-A3) GWP figure kgCO ₂ e/km	1843	2868	3696	5110	7229	9648	12233	15150	18580	24698
Nominal cable diameter mm	18,810	22,240	22,170	26,000	29,400	32,800	37,740	41,780	46,100	52,910
Nominal cable weight kg/km	317,481	458,029	571,688	764,864	1056,288	1384,916	1742,810	2143,196	2613,647	3453,008
Nominal weight of aluminium kg/m	0,173	0,266	0,364	0,501	0,725	1,001	1,265	1,554	1,886	2,547
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										
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	0,64
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
Electrical values										
Calculated inductance mH/km	0,29	0,28	0,28	0,28	0,27	0,27	0,26	0,26	0,26	0,25
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

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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

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Product code	1116050
Nominal cross-sectional area of conductor mm ²	300
Nominal thickness of insulation mm	1,8
Nominal thickness of oversheath mm	3,0
(A1-A3) GWP figure kgCO ₂ e/km	29975
Nominal cable diameter mm	56,660
Nominal cable weight kg/km	4176,804
Nominal weight of aluminium kg/m	3,143
Maximum forces during installation when pulling by	
Max. pulling force by pulling-eye kN	18,0
Max. pulling force by pulling-stocking kN	8,5
Minimum bending radii	
During handling and installation, phase conductor cm	46
During handling and installation, cable cm	68
In final installation, phase conductor cm	32
In final installation, cable cm	48
Minimum bending radii	
During handling and installation, cable m	0,68
In final installation, cable m	0,48
DC resistance	
Max. DC resistance of conductor at 20 °C Ω/km	0,100
Electrical values	
Calculated inductance mH/km	0,25
Calculated operation capacitance μF/km	0,26

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Current ratings	
Cables in air (25 °C)	
two loaded conductor, conductor 70 °C A	457
three loaded conductor, conductor 70 °C A	396
two loaded conductor, conductor 90 °C A	565
three loaded conductor, conductor 90 °C A	490
Cables in air (30 °C)	
two loaded conductor, conductor 70 °C A	439
three loaded conductor, conductor 70 °C A	381
two loaded conductor, conductor 90 °C A	543
three loaded conductor, conductor 90 °C A	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	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	326
Maximum thermal short circuit current during 1 s	
Phase (initial 65 °C, final 250 °C) kA	31,1
Phase (initial 90 °C, final 250 °C) kA	28,2