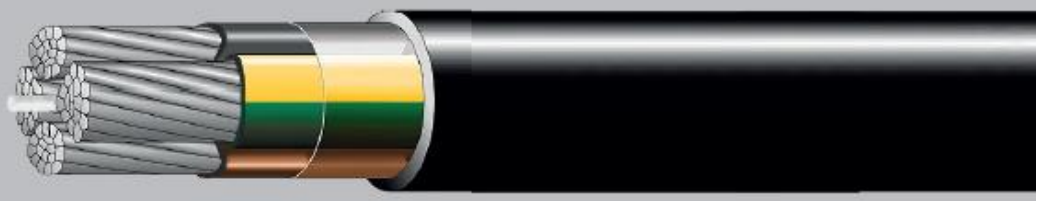
AXPK

1 kV power cable with XLPE insulated aluminium conductors



Application

Fixed indoor, outdoor and underground installations.

Standards

HD 603-5D S1, IEC 60502-1,
IEC 60332-1 Cat. B, HD 308 S2:2002

Certificate/approval

CE

Rated voltage

U_0/U = 0,6/1 kV
U_m = 1,2 kV

Temperature range

Highest permissible conductor temperature:
- in continuous operation ..... 90°C
- in a short circuit (duration up to 5 s) ..... 250°C

Lowest recommended temp. during laying ..... -15°C

Construction

Conductor ..... 16 mm² - solid round aluminium conductor;
25-300 mm² - stranded, compacted and annealed sector shaped aluminium conductor

Insulation ..... black XLPE compound

Laying up ..... four insulated conductors stranded together

Sheath ..... black PVC;
plastics are UV [1] resistible and they don't need extra protection against sunlight.

Identification of cores

Phase conductors.. brown, black, grey
PEN conductor ... yellow-green

Marking

Manufacturer, product name, date of manufacture, outer sheath material designation, meter marking.

Basic cable data			4G16	4G25	4G35	4G50	4G70	4G95
Construction data								
External cable diameter [1]		mm	20	21	23	27	30	34
Weight [1]	aluminium	kg/km	165	265	365	495	720	995
	cable	kg/km	380	500	670	830	1170	1500
Delivery data								
Standard delivery length		m	1000	1000	1000	1000	1000	1000
Drum			K12	K14	K16	K16	K18	K20
Total weight [1]	cable + drum	kg	470	615	865	1025	1400	1840
Mechanical data [2]								
Minimum permissible bending radius during laying		m	0,24	0,26	0,28	0,31	0,36	0,41
Minimum permissible bending radius at final installation [3]		m	0,17	0,19	0,20	0,23	0,26	0,29
Maximum permissible pulling force with a pulling grip		kN	0,9	1,5	2,1	3,0	4,2	5,7
Maximum permissible pulling force with a pulling eye		kN	3,2	5,0	7,0	10,0	14,0	19,0
Electrical data [2]								
Maximum DC resistance of	conductor 20°C	Ω/km	1,91	1,20	0,868	0,641	0,443	0,320
Maximum AC resistance of	conductor 70°C	Ω/km	2,3	1,5	1,0	0,77	0,53	0,39
Current ratings [2]								
In ground	conductor 70°C	A	78	100	125	150	185	220
In air	conductor 70°C	A	64	83	105	125	155	190
	conductor 90°C	A	75	105	130	165	205	245
Short circuit currents [2]								
Maximum permissible short circuit current for 1 second [4]		kA	1,5	2,3	3,3	4,7	6,6	8,9

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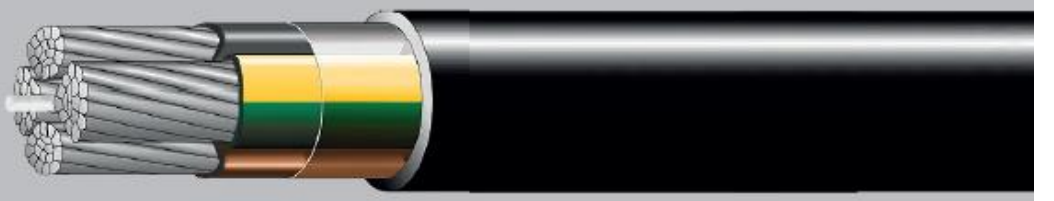

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Certificate/approval

EEI, FI, CE

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U_m = 1,2 kV

Temperature range

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Marking

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Basic cable data			4G120	4G150	4G185	4G240	4G300
Construction data							
External cable diameter [1]		mm	38	42	47	53	58
Weight [1]	aluminium	kg/km	1260	1550	1950	2550	3190
	cable	kg/km	1900	2300	2800	3700	4600
Delivery data							
Standard delivery length		m	1000	500	500	500	500
Drum			K22	K20	K20	K22	K24
Total weight [1]	cable + drum	kg	2310	1490	1740	2260	2750
Mechanical data [2]							
Minimum permissible bending radius during laying		m	0,46	0,51	0,57	0,64	0,70
Minimum permissible bending radius at final installation [3]		m	0,33	0,36	0,40	0,45	0,49
Maximum permissible pulling force with a pulling grip		kN	7,2	8,5	8,5	8,5	8,5
Maximum permissible pulling force with a pulling eye		kN	20,0	20,0	20,0	20,0	20,0
Electrical data [2]							
Maximum DC resistance of	conductor 20°C	Ω/km	0,253	0,206	0,164	0,125	0,100
Maximum AC resistance of	conductor 70°C	Ω/km	0,31	0,25	0,20	0,16	0,13
Current ratings [2]							
In ground	conductor 70°C	A	255	290	330	375	430
In air	conductor 70°C	A	220	250	285	330	380
	conductor 90°C	A	280	320	365	430	480
Short circuit currents [2]							
Maximum permissible short circuit current for 1 second [4]		kA	11,3	14,1	17,4	22,6	28,3

1) Approximate value.
2) See the basic assumptions at general information of products.
3) Final installation with careful single bending.
4) Initial temperature of conductor before short circuit 90°C, final temperature of conductor after short circuit 250°C.