AXMK

Power cable 0,6/1 kV with Al conductors, XLPE insulated and PVC sheathed

APPLICATION

In earth, ducts, on support brackets, in dry and wet conditions etc., where one does not expect mechanical damages and the cables are not exposed to the mechanical tensile strain. In urban networks, industrial plants, electric power plants and other electricity consumers and for connection of control devices in industry, traffic etc.

CONSTRUCTION

Conductors: Al, class 1 or class 2 according to EN 60228, annealed
Insulation: XLPE compound
Bedding: Extruded elastomere or plastomere compound or plastic tape
Sheath: PVC compound, UV resistant, black or by customer request

TECHNICAL CHARACTERISTICS

CPR class: Eca
Test voltage: 4 kV
Rated voltage: 0,6/1/1,2 kV
Bending radius (min): multicore- 10D
Min. laying temperature: -15°C
Max. conductor temperature: 90°C
Max. short-circuit temperature: 250°C
Enviroment working temp:-35°C - +35°C

Core marking: acc. to HD 308 S2
4-core: Green/Yellow, Brown, Black, Gray or
Blue, Brown, Black, Gray
5-core: Green/Yellow, Blue, Brown, Black, Gray or
Blue, Brown, Black, Gray, Black
Or by customer request

STANDARD

HD 603 S1, SFS 4879

CERTIFICATION

CE
IEC International Electrotechnical Commission
CPR
REACH
RoHS compliant
SGS FI

NOMINAL CROSS-SECTION	CONDUCTOR CONSTRUCTION	MAX. RESISTANCE AT 20°c	NOM. THICKNESS OF INSULATION	OUTER DIAM. (APPROX.)	METAL WEIGHT	CABLE WEIGHT (APPROX.)
mm2		Ω/km		mm	kg/km	kg/km
1x16	RE	1,910	0,7	9,5	46	122
1x25	RE	1,200	0,9	11,9	73	175
1x35	RM	0,868	0,9	13	102	206
1x50	RM	0,641	1	14,9	145	267
1x70	RM	0,443	1,1	17	203	358
1x95	RM	0,320	1,1	18,9	276	451
1x120	RM	0,253	1,2	20,7	348	546
1x150	RM	0,206	1,4	22,7	435	655
1x185	RM	0,164	1,6	25,1	537	800
1x240	RM	0,125	1,7	27,6	696	987
1x300	RM	0,100	1,8	31,9	870	1324
1x400	RM	0,0778	2	34,9	1160	1640
1x500	RM	0,0605	2,2	39,3	1450	2030
1x630	RM	0,0469	2,4	44,1	1827	2400
1x800	RM	0,0367	2,6	49	2320	2974
1x1000	RM	0,0291	2,8	54	2900	3315
4x10	RE	3,08	0,7	16,5	116	277
4x16	RE	1,910	0,7	18,3	185	377
4x25	SM	1,200	0,9	21,1	290	509
4x35	SM	0,868	0,9	23,4	406	653
4x50	SM	0,641	1	26,4	580	832
4x70	SM	0,443	1,1	30,4	812	1118
4x95	SM	0,320	1,1	34,1	1102	1465
4x120	SM	0,253	1,2	38,1	1392	1837
4x150	SM	0,206	1,4	42,1	1740	2250
4x185	SM	0,164	1,6	46,6	2146	2807
4x240	SM	0,125	1,7	52,2	2784	3603
4x300	SM	0,100	1,8	55,9	3480	4223
5x10	RE	3,08	0,7	17,8	145	422
5x16	RE	1,91	0,7	20	232	544
5x25	SM	1,200	0,9	22,9	363	606
5x35	SM	0,868	0,9	25,7	507,8	807
5x50	SM	0,641	1	30,1	725	1032
5x70	SM	0,443	1,1	35,1	1015	1404
5x95	SM	0,320	1,1	38,1	1380	1800
5x120	SM	0,253	1,2	40,3	1740	2320
5x150	SM	0,206	1,4	47,4	2175	2900
5x185	SM	0,164	1,6	52,7	2682,5	3352,5
5x240	SM	0,125	1,7	59,4	3480	4350

Basic assumptions for current carrying capacity

The maximum permissible conductor temperature in continuous operation is:

XLPE insulated power cables in ground: +65°C

XLPE insulated power cables in air: +70°C

XLPE insulated power cables in air +90°C in special conditions that the surface of the cables does not exceed the temperature of +90°C in fire risky conditions

In ground installations the basic assumptions are:

Temperature of ground: +15°C

Depth of laying: 0,7 m

Thermal resistivity of soil: 1,0 K.m/W

In air installations the ambient temperature is +25°C

Current carrying capacity of 2 or more core 0,6/1 kV Aluminium power cables (maximum conductor temperature: +70°C)

Cross-section of Al conductor	Permissible current rating (A)		
	In air / Method of installation		In ground
	A	C	
16	43	62	78
25	56	77	100
35	69	95	125
50	83	117	150
70	104	148	185
95	125	180	220
120	143	209	255
150	164	240	280
185	185	274	330
240	219	323	375
300	257	372	430

Method A of installation: a cable in a cunduit in thermally insulated wall (see reference method A of HD 60364-5-52)
Method C of installation: a cable in a wooden wall (see reference method C of HD 60364-5-52)
In ground: a single cable laid directly into ground, see basic assumptions above.

Current carrying capacity of 3 single-core 0,6/1 kV power cables in air

Cross-section of Al conductor (mm2)	Permissible current rating (A) in free air			
	Conductor at +70°C		Conductor at +90°C	
	Method F	Method G	Method F	Method G
16				
25				
35	111	147	134	179
50	136	179	165	218
70	176	230	214	282
95	215	281	263	345
120	251	326	308	402
150	290	377	357	466
185	334	431	411	536
240	397	511	490	635
300	460	590	569	736

Method F of installation: cables in threefoil formation touching each other (see reference method F of HD 60364-5-52)
Method G of installation: cables laid horizontally in flat formation, distance between cables equal to one cable diameter (see reference method G of HD 60364-5-52)

Current carrying capacity of three or more core 0,6/1 kV Al power cables in air (maximum conductor temperature: +90°C)

Cross-section of Al conductor (mm2)	Permissible current rating (A) in free air
	In air Method E of installation
16	80
25	101
35	125
50	152
70	196
95	236
120	274
150	316
185	361
240	425
300	490

Method E of installation: multicore cables in free air (see reference method E of HD 60364-5-52)