

AXQJ-F D / AHXCMK-HF D 6/10 (12) kV 3-core BK

Medium voltage cable

6/10 (12) kV Application

Medium-voltage cable for fixed installations indoors and outdoors. May be buried directly in soil. 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	HD 620 10 M & F, SS 424 14 16, SFS 5636
Reaction to fire	Dca-s2,d2,a2; EN 13501-6, EN 50575:2014+A1:2016
Conductor	Watertight, circular, stranded aluminium, EN/IEC 60228 class 2
Conductor screen	Semiconducting cross-linked polyethylene XLPE
Insulation	Cross-linked polyethylene XLPE
Insulation screen	Semiconducting cross-linked polyethylene XLPE
Inner covering	Semiconducting tape
Inner covering	Semiconducting tape
Metal screen	Layer of helically wound copper wires with a counter helix copper tape
Oversheath	UV-protected halogen-free polyolefin compound, Black

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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Technical information	3x50/16 BK	3x95/25 BK	3x150/25 BK	3x240/35 BK
Product code	1181833	1181836	1181838	1181844
Nominal cross-sectional area of conductor mm ²	50	95	150	240
Nominal diameter of conductor mm	8,0	11,1	13,9	17,8
Nominal thickness of conductor screen mm	0,5	0,5	0,5	0,5
Nominal thickness of insulation mm	3,4	3,4	3,4	3,4
Nominal diameter over the insulation without insulation screen mm	15,2	18,3	21,1	25,2
Nominal thickness of insulation screen mm	0,5	0,5	0,5	0,5
Nominal size of metal screen mm ²	16	25	25	35
Nominal thickness of oversheath mm	2,4	2,7	2,9	3,2
Fire load MJ/m	29,011	37,555	45,143	57,298
Fire load kWh/m	8,059	10,432	12,540	15,916
Nominal cable diameter mm	42,050	49,230	55,250	65,170
Nominal cable weight kg/km	1461,584	2164,224	2821,682	4052,004
Nominal weight of copper kg/m	0,144	0,213	0,211	0,277
Nominal weight of aluminium kg/m	0,382	0,733	1,144	1,897
Maximum forces during installation when pulling by				
Max. pulling force by pulling-eye kN	4,5	8,6	13,5	20,0
Max. pulling force by pulling-stocking kN	2,3	4,3	6,8	8,5
Minimum bending radii				
During handling and installation, phase conductor cm	24	29	33	39
During handling and installation, cable cm	50	59	66	78
In final installation, phase conductor cm	17	20	23	28
In final installation, cable cm	35	41	46	55
Minimum bending radii				
During handling and installation, cable m	0,51	0,59	0,66	0,78
In final installation, cable m	0,35	0,41	0,46	0,55
DC resistance				
Max. DC resistance of conductor at 20 °C Ω/km	0,641	0,320	0,206	0,125
Maximum DC resistance at 20 °C, metal screen Ω/km	1,2	0,8	0,8	0,6

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Technical information	3x50/16 BK	3x95/25 BK	3x150/25 BK	3x240/35 BK
AC resistance of phase conductor, screen circuit closed				
Conductor temperature 40 °C Ω/km	0,6927	0,3460	0,2229	0,1356
Conductor temperature 65 °C Ω/km	0,7573	0,3782	0,2436	0,1482
Conductor temperature 70 °C Ω/km	0,7702	0,3846	0,2478	0,1507
Conductor temperature 90 °C Ω/km	0,8219	0,4104	0,2644	0,1607
Inductance per phase				
In trefoil formation, cables touching each other mH/km	0,32	0,29	0,28	0,26
Electrical values				
Calculated operation capacitance μF/km	0,23	0,30	0,35	0,44
Calculated charging current with main voltage A/km	0,4	0,5	0,6	0,8
Calculated earth fault current with main voltage A/km	1,3	1,6	1,9	2,4
Current ratings				
Cables in air (25 °C)				
Trefoil, conductor 90 °C, closed screen A	160	230	305	400
Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m				
Trefoil, conductor 65 °C, closed screen A	145	205	260	340
Trefoil, conductor 90 °C, closed screen A	170	240	310	400
Maximum thermal short circuit current during 1 s				
Phase (initial 90 °C, final 250 °C) kA	4,7	8,9	14,1	22,6
Metal screen (initial 80 °C, final 250 °C) kA	2,3	3,4	3,4	4,7