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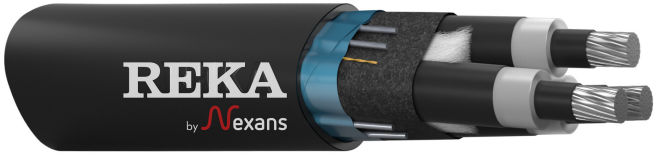
AXALJ-F TT 12/20 (24) kV 3-core

Medium voltage cable

12/20 (24) kV



DryRex

Application

Medium-voltage cable for fixed installations outdoors. May be buried directly in soil. May be buried directly in soil, also by ploughing. Cable is longitudinally and radially watertight and therefore it is suitable where wet soil and / or fresh water permanently occurs. 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	HD 620 10 M, SS 424 14 16
Certificates	SGS Fimko FI 40519
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	Aluminium wires laid symmetrically along water swellable taping
Oversheath	PE-plastic PELLD, Black
Rip cord	Two aramid cords

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	3x50/25 Al	3x95/35 Al	3x120/35 Al	3x150/35 Al	3x240/50 Al	3x300/50 Al
Product code	**1187488**	**1187490**	**1187491**	**1187492**	**1187494**	**1187495**
Nominal cross-sectional area of conductor mm²	50	95	120	150	240	300
Nominal diameter of conductor mm	8,0	11,1	12,6	13,9	17,8	19,8
Nominal thickness of conductor screen mm	0,5	0,5	0,5	0,5	0,5	0,5
Nominal thickness of insulation mm	5,5	5,5	5,5	5,5	5,5	5,5
Nominal diameter over the insulation without insulation screen mm	19,2	22,3	23,8	25,1	29,2	31,0
Nominal thickness of insulation screen mm	0,5	0,5	0,5	0,5	0,5	0,5
Nominal size of metal screen mm²	25	35	35	35	50	50
Nominal thickness of PE-laminated aluminium foil mm	0,1	0,1	0,1	0,1	0,1	0,1
Nominal thickness of oversheath mm	2,8	3,0	3,1	3,2	3,5	3,6
Nominal cable diameter mm	51,350	58,290	61,860	64,750	74,270	78,260
Nominal cable weight kg/km	1698,991	2381,486	2739,934	3088,726	4287,318	4987,411
Metall weight Al kg/m	0,452	0,838	1,054	1,250	2,033	2,559
Maximum forces during installation when pulling by						
Max. pulling force by pulling-eye kN	7,5	14,3	18,0	20,0	20,0	20,0
Max. pulling force by pulling-stocking kN	2,3	4,3	5,4	6,8	8,5	8,5
Minimum bending radii						
During handling and installation, phase conductor cm	30	35	37	39	45	48
During handling and installation, cable cm	62	70	74	78	89	94
In final installation, phase conductor cm	21	24	26	27	32	34
In final installation, cable cm	43	49	52	54	62	66
Minimum bending radii						
During handling and installation, cable m	0,62	0,70	0,74	0,78	0,89	0,94
In final installation, cable m	0,43	0,49	0,52	0,54	0,62	0,66
DC resistance						
Max. DC resistance of conductor at 20 °C Ω/km	0,641	0,320	0,253	0,206	0,125	0,100
Maximum DC resistance at 20 °C, metal screen Ω/km	1,2	0,8	0,8	0,8	0,6	0,6
AC resistance of phase conductor, screen circuit closed						
Conductor temperature 40 °C Ω/km	0,6927	0,3460	0,2736	0,2229	0,1356	0,1088
Conductor temperature 65 °C Ω/km	0,7573	0,3782	0,2991	0,2436	0,1482	0,1188
Conductor temperature 70 °C Ω/km	0,7702	0,3846	0,3042	0,2478	0,1507	0,1208
Conductor temperature 90 °C Ω/km	0,8219	0,4104	0,3246	0,2644	0,1607	0,1288

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Technical information	3x50/25 Al	3x95/35 Al	3x120/35 Al	3x150/35 Al	3x240/50 Al	3x300/50 Al
Inductance per phase						
In trefoil formation, cables touching each other mH/km	0,37	0,33	0,32	0,31	0,29	0,28
Electrical values						
Calculated operation capacitance µF/km	0,16	0,20	0,22	0,24	0,29	0,31
Calculated charging current with main voltage A/km	0,6	0,7	0,8	0,9	1,1	1,1
Calculated earth fault current with main voltage A/km	1,8	2,2	2,4	2,6	3,2	3,4
Current ratings						
Cables in air (25 °C)						
Trefoil, conductor 90 °C, closed screen A	160	230	265	305	400	460
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	230	260	340	380
Trefoil, conductor 90 °C, closed screen A	170	240	270	310	400	450
Maximum thermal short circuit current during 1 s						
Phase (initial 90 °C, final 250 °C) kA	4,7	8,9	11,3	14,1	22,6	28,3
Metal screen (initial 80 °C, final 250 °C) kA	2,3	3,4	3,4	3,4	4,7	4,7