NA2XS2Y XLPE MDPE 8.7/15 (17.5) kV Cable

Eland Product Group: C9XA

APPLICATION

Medium Voltage Aluminium MDPE power distribution cable with particular application in wind energy installations.

CHARACTERISTICS

Voltage Rating Uo/U
8.7/15 (17.5) kV

CONSTRUCTION

Conductor
Class 2 stranded compacted aluminium

Conductor Screen
Semi-conductive extruded XLPE (Cross-linked Polyethylene)

Insulation
XLPE (Cross-linked Polyethylene)

Insulation Screen
Semi-conductive extruded XLPE (Cross-linked Polyethylene)

Wrapping
Non swelling semi conductive tape

Metallic Screen
Copper Wires and Tape

Wrapping
Polyester tape

Sheath
MDPE (Medium Density Polyethylene)

Sheath Colour
Red

STANDARDS

IEC 60502-2

THE CABLE LAB®

AN ISO/IEC 17025 AND IECEE CBTL ACCREDITED FACILITY

Our world-class testing facility assures the quality and compliance of this cable through a continuous and rigorous testing regime.

SUSTAINABILITY COMMITMENT

We are on a journey to Net Zero.

We've committed to near-term emissions reductions and a net-zero target with the Science Based Targets initiative and we're a signatory to the United Nations Global Compact Sustainable Development Goals.

Learn more about embodied carbon and our carbon emissions reduction actions, our comprehensive recycling services, and wider ESG activities for sustainable operations at: www.elandcables.com/company/about-us/esg-sustainability

REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab®.

DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL DIAMETER OF CONDUCTOR mm	INSULATION mm		METALLIC SCREEN		NOMINAL OUTER DIAMETER OF CABLE mm	NOMINAL WEIGHT kg/km	MAXIMUM PULLING FORCE kN	MINIMUM BENDING RADIUS m
				Nominal thickness	Nominal diameter over	Nominal cross section mm²	Nominal diameter over mm				
C9XA15KV1050	1	50	8.25	4.5	18.5	16	22.4	27.1	780	1.5	0.41
C9XA15KV1070	1	70	9.5	4.5	19.7	25	23.6	28.4	950	2.1	0.43
C9XA15KV1095	1	95	11.3	4.5	21.5	35	25.4	30.2	1160	2.85	0.45
C9XA15KV1120	1	120	12.5	4.5	22.7	50	26.6	31.4	1400	3.6	0.47
C9XA15KV1150	1	150	14.2	4.5	24.4	50	28.3	33.1	1520	4.5	0.50
C9XA15KV1185	1	185	15.8	4.5	26.0	50	29.9	34.7	1660	5.55	0.52
C9XA15KV1240	1	240	17.9	4.5	28.1	50	32.0	36.8	1870	7.2	0.55
C9XA15KV1300	1	300	20.0	4.5	30.2	50	34.1	38.9	2080	9	0.58
C9XA15KV1400	1	400	22.9	4.5	33.1	50	37.0	41.8	2390	12	0.63
C9XA15KV1500	1	500	25.7	4.5	36.4	50	40.5	45.3	2810	15	0.68
C9XA15KV1630	1	630	29.3	4.5	40.3	50	44.4	49.3	3310	18.9	0.74
C9XA15KV1800	1	800	33.0	4.5	44.4	50	48.5	53.6	3920	24	0.80
C9XA15KV11000	1	1000	38.0	4.5	49.4	50	53.5	59.0	4680	30	0.89

ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA CONDUCTOR/ METALLIC SCREEN mm²	MAXIMUM CONDUCTOR DC RESISTANCE AT 20 °C Ω/km	MAXIMUM CONDUCTOR AC RESISTANCE AT 90 °C Ω/km	MAXIMUM METALLIC SCREEN DC RESISTANCE AT 20 °C Ω/km	MAXIMUM METALLIC SCREEN AC RESISTANCE AT 80 °C Ω/km	ELECTRICAL FIELD STRESS kV/mm		RESISTANCE Ω/km	CAPACITANCE µF/km	CAPACITANCE REACTANCE Ω/km	CHARGING CURRENT A/km	REACTANCE Ω/km
					Conductor screen	Insulation					
50/16	0.641	0.822	1.12	1.38	2.72	1.37	2.20	0.19	17.2	0.51	0.075
70/25	0.443	0.568	0.72	0.89	2.63	1.40	1.45	0.20	15.7	0.56	0.070
95/35	0.320	0.411	0.51	0.63	2.53	1.45	1.04	0.23	13.9	0.63	0.064
120/50	0.253	0.325	0.36	0.44	2.48	1.47	0.77	0.25	12.9	0.67	0.061
150/50	0.206	0.265	0.36	0.44	2.42	1.51	0.71	0.27	11.8	0.74	0.057
185/50	0.164	0.211	0.36	0.44	2.37	1.53	0.65	0.29	10.9	0.80	0.054
240/50	0.125	0.161	0.36	0.44	2.32	1.56	0.60	0.32	9.9	0.88	0.050
300/50	0.100	0.130	0.36	0.44	2.28	1.59	0.57	0.35	9.1	0.96	0.047
400/50	0.0778	0.102	0.36	0.44	2.24	1.61	0.54	0.39	8.1	1.07	0.044
500/50	0.0605	0.0801	0.36	0.44	2.18	1.62	0.52	0.43	7.3	1.18	0.043
630/50	0.0469	0.0634	0.36	0.44	2.14	1.65	0.51	0.49	6.5	1.33	0.040
800/50	0.0367	0.0513	0.36	0.44	2.11	1.67	0.49	0.54	5.9	1.49	0.039
1000/50	0.0291	0.0427	0.36	0.44	2.08	1.69	0.49	0.61	5.2	1.67	0.036

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NOMINAL CROSS SECTIONAL AREA CONDUCTOR/ METALLIC SCREEN mm²	INDUCTANCE L mH/km			INDUCTANCE REACTANCE XL Ω/km			IMPEDANCE Ω/km		
	o o²	ooo³	ooo⁴	o o²	ooo³	ooo⁴	o o²	ooo³	ooo⁴
50/16	0.43	0.73	0.61	0.134	0.229	0.192	0.833	0.853	0.844
70/25	0.41	0.70	0.59	0.128	0.221	0.186	0.582	0.610	0.598
95/35	0.39	0.67	0.57	0.121	0.211	0.179	0.428	0.462	0.448
120/50	0.37	0.65	0.56	0.117	0.205	0.175	0.345	0.384	0.369
150/50	0.36	0.63	0.54	0.112	0.198	0.171	0.288	0.331	0.315
185/50	0.35	0.61	0.53	0.109	0.193	0.167	0.237	0.286	0.269
240/50	0.33	0.59	0.52	0.105	0.186	0.163	0.192	0.246	0.229
300/50	0.32	0.57	0.51	0.101	0.180	0.159	0.164	0.222	0.205
400/50	0.31	0.55	0.49	0.097	0.173	0.155	0.141	0.201	0.185
500/50	0.30	0.54	0.49	0.095	0.168	0.153	0.124	0.186	0.173
630/50	0.29	0.52	0.48	0.092	0.162	0.150	0.112	0.174	0.163
800/50	0.29	0.50	0.47	0.090	0.157	0.148	0.103	0.165	0.156
1000/50	0.28	0.48	0.46	0.087	0.151	0.145	0.097	0.157	0.151

2 - Cables in trefoil formation, the distance between cables De
3 - Cables in flat formation (in the ground), the distance between cables De + 70 mm
4 - Cables in flat formation (in the air), the distance between cables 2 × De

CURRENT RATING FOR SINGLE-CORE CABLES – AMPERES

NOMINAL CROSS SECTIONAL AREA mm²	MAXIMUM SHORT CIRCUIT CAPACITY CONDUCTOR kA/sec	MAXIMUM SHORT CIRCUIT CAPACITY METALLIC SCREEN kA/sec	FLAT FORMATION		TREFOIL FORMATION		FLAT FORMATION		TREFOIL FORMATION	
			CONFIGURATIONS							
			SPP; CB	BOTH-ENDS	SPP; CB	BOTH-ENDS	SPP; CB	BOTH-ENDS	SPP; CB	BOTH-ENDS
			CABLES IN EARTH				CABLES IN AIR			
50/16	4.7	3.7	225	224	212	212	231	230	196	196
70/25	6.6	5.3	276	272	259	258	286	283	242	242
95/35	9.0	7.1	333	324	312	310	350	343	295	294
120/50	11.3	9.8	379	364	356	353	403	388	340	337
150/50	14.2	9.8	428	407	401	397	461	440	387	384
185/50	17.5	9.8	487	456	455	450	530	501	445	440
240/50	22.7	9.8	567	520	530	522	627	583	526	518
300/50	28.4	9.8	643	578	600	589	722	660	604	593
400/50	37.8	9.8	742	650	692	676	849	758	708	692
500/50	47.3	9.8	851	725	793	770	991	862	825	802
630/50	59.5	9.8	979	808	908	876	1161	981	963	931
800/50	75.6	9.8	1116	889	1028	983	1347	1101	1110	1065
1000/50	94.5	9.8	1262	971	1152	1093	1558	1225	1271	1210

SPB – Single Point Bonding; CB – Cross-bonding Both-ends; BE – Both-ends bonding

Laying conditions at trefoil formation are as below:

-Soil thermal resistivity: 1/2.5 k m/W

-Burial depth: 0.7m

-Ground temperature: 20°C | Ambient temperature: 30°C