

NA2XS(FL)2Y 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. Longitudinally and radially sealed cables for aid protection against water ingress.

CHARACTERISTICS

Voltage Rating U_0/U
8.7/15 (17.5) kV

CONSTRUCTION

Conductor

Class 2 stranded Aluminium

Conductor Screen

Semi-conductive extruded XLPE (Cross-linked Polyethylene)

Insulation

XLPE (Cross-linked Polyethylene)

Insulation Screen

Semi-conductive extruded XLPE (Cross-linked Polyethylene)

Longitudinal Waterblock

Semi-conductive water swelling tape

Metallic Screen

Copper Wires and Tape

Longitudinal Waterblock

Non-conductive water swelling tape

Radial Waterblock

Al/PET (Aluminium/Polyester) Tape tightly bonded to sheath

Sheath

MDPE (Medium Density Polyethylene)

Sheath Colour

● Black

STANDARDS

IEC 60502-2, EN 60228

UV Resistant: ISO 4892-3

Abrasion and Tear Resistant: EN 60229-4.1

Impact rated to: AG2 EN 60364-5.51

THE CABLE LAB[®]

AN ISO/IEC 17025 AND IECCE 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 mm ²	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 mm ²	Nominal diameter over mm				
C9XAFL15KV1050	1	50	8.25	4.5	18.5	16	22.5	28.6	780	1.5	0.60
C9XAFL15KV1070	1	70	9.5	4.5	19.7	25	23.8	29.8	950	2.1	0.63
C9XAFL15KV1095	1	95	11.3	4.5	21.5	35	25.6	31.6	1160	2.85	0.68
C9XAFL15KV1120	1	120	12.5	4.5	22.7	50	26.8	32.8	1400	3.6	0.71
C9XAFL15KV1150	1	150	14.2	4.5	24.4	50	28.5	34.5	1520	4.5	0.75
C9XAFL15KV1185	1	185	15.8	4.5	26.0	50	30.1	36.1	1660	5.55	0.79
C9XAFL15KV1240	1	240	17.9	4.5	28.1	50	32.2	38.2	1860	7.2	0.84
C9XAFL15KV1300	1	300	20.0	4.5	30.2	50	34.3	40.3	2080	9	0.89
C9XAFL15KV1400	1	400	22.9	4.5	33.1	50	37.2	43.2	2380	12	0.97
C9XAFL15KV1500	1	500	25.7	4.5	36.4	50	40.7	46.7	2800	15	1.05
C9XAFL15KV1630	1	630	29.3	4.5	40.3	50	44.5	50.8	3290	18.9	1.15
C9XAFL15KV1800	1	800	33.0	4.5	44.4	50	48.6	55.3	3910	24	1.25
C9XAFL15KV11000	1	1000	38.0	4.5	49.4	50	53.6	60.5	4630	30	1.38

ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA CONDUCTOR/ METALLIC SCREEN mm ²	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					
	0.641	0.822	1.12	1.38	2.72	1.37	1.63	0.19	17.2	0.51	0.078
	0.443	0.568	0.72	0.89	2.63	1.40	1.17	0.20	15.7	0.56	0.073
	0.320	0.411	0.51	0.63	2.53	1.45	0.88	0.23	13.9	0.63	0.066
	0.253	0.325	0.36	0.44	2.48	1.47	0.67	0.25	12.9	0.67	0.063
	0.206	0.265	0.36	0.44	2.42	1.51	0.61	0.27	11.8	0.74	0.059
	0.164	0.211	0.36	0.44	2.37	1.53	0.55	0.29	10.9	0.80	0.055
	0.125	0.161	0.36	0.44	2.32	1.56	0.50	0.32	9.9	0.88	0.052
	0.100	0.130	0.36	0.44	2.28	1.59	0.46	0.35	9.1	0.96	0.049
	0.0778	0.102	0.36	0.44	2.24	1.61	0.43	0.39	8.1	1.07	0.046
	0.0605	0.0800	0.36	0.44	2.18	1.62	0.40	0.43	7.3	1.18	0.044
	0.0283	0.0410	0.36	0.44	2.14	1.65	0.38	0.38	6.5	1.33	0.042
	0.0221	0.0343	0.36	0.44	2.11	1.67	0.36	0.36	5.9	1.49	0.040
	0.0176	0.0296	0.36	0.44	2.08	1.69	0.34	0.34	5.2	1.67	0.037



NOMINAL CROSS SECTIONAL AREA CONDUCTOR/ METALLIC SCREEN mm ²	INDUCTANCE L mH/km			INDUCTANCE REACTANCE XL Ω/km			IMPEDANCE Ω/km		
	ooo ²	ooo ³	ooo ⁴	ooo ²	ooo ³	ooo ⁴	ooo ²	ooo ³	ooo ⁴
	0.44	0.73	0.62	0.137	0.230	0.195	0.833	0.853	0.845
	0.42	0.71	0.60	0.131	0.222	0.189	0.583	0.610	0.599
	0.39	0.67	0.58	0.124	0.212	0.182	0.429	0.462	0.449
	0.38	0.66	0.57	0.120	0.206	0.178	0.346	0.385	0.370
	0.37	0.63	0.55	0.115	0.199	0.173	0.289	0.331	0.316
	0.35	0.62	0.54	0.111	0.193	0.169	0.238	0.286	0.270
	0.34	0.59	0.53	0.107	0.187	0.165	0.193	0.247	0.231
	0.33	0.58	0.51	0.103	0.181	0.161	0.166	0.223	0.207
	0.32	0.55	0.50	0.099	0.174	0.157	0.142	0.202	0.187
	0.31	0.54	0.49	0.097	0.169	0.155	0.126	0.187	0.174
	0.30	0.52	0.48	0.094	0.163	0.152	0.113	0.175	0.165
	0.29	0.50	0.48	0.092	0.158	0.150	0.105	0.166	0.158
	0.28	0.48	0.47	0.088	0.151	0.147	0.098	0.157	0.153

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 mm ²	MAXIMUM SHORT CIRCUIT CAPACITY	MAXIMUM SHORT CIRCUIT CAPACITY	FLAT FORMATION		TREFOIL FORMATION		FLAT FORMATION		TREFOIL FORMATION	
	CONDUCTOR kA/sec	METALLIC SCREEN kA/sec			CONFIGURATIONS					
			SPP; CB	BOTH-ENDS	SPP; CB	BOTH-ENDS	SPP; CB	BOTH-ENDS	SPP; CB	BOTH-ENDS
			CABLES IN EARTH				CABLES IN AIR			
	4.7	3.7	228	226	214	213	236	234	200	200
	6.6	5.3	279	274	262	261	292	288	247	247
	9.0	7.1	336	326	315	313	357	348	302	300
	11.3	9.8	383	365	359	355	411	394	347	343
	14.2	9.8	432	407	405	400	470	445	395	391
	17.5	9.8	491	455	460	453	541	506	454	447
	22.7	9.8	572	516	535	525	639	586	536	526
	28.4	9.8	649	571	606	592	736	660	615	601
	37.8	9.8	749	638	699	677	864	755	720	699
	47.3	9.8	859	705	798	768	1007	852	838	808
	59.5	9.8	987	778	913	871	1181	960	977	935
	75.6	9.8	1123	846	1034	975	1368	1064	1125	1065
	94.5	9.8	1271	915	1157	1078	1584	1175	1287	1206

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