



N2XS2Y XLPE HDPE 8.7/15 (17.5) kV Cable



Eland Product Group: M9A

APPLICATION

Medium Voltage HDPE sheathed power distribution cables particularly noted for applications in wind energy installations.

CHARACTERISTICS

Voltage Rating U₀/U
8.7/15 (17.5) kV

CONSTRUCTION

Conductor

Class 2 stranded compacted copper conductor

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

HDPE (High Density Polyethylene)

Sheath Colour

● Red

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 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 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				
M9A15KV01035	1	35	7.0	4.5	17.2	16	21.1	25.9	920	1.75	0.39
M9A15KV01050	1	50	8.25	4.5	18.5	16	22.4	27.1	1060	2.5	0.41
M9A15KV01070	1	70	9.6	4.5	19.8	25	23.7	28.5	1370	3.5	0.43
M9A15KV01095	1	95	11.5	4.5	21.7	35	25.6	30.4	1740	4.75	0.46
M9A15KV01120	1	120	12.9	4.5	23.1	50	27.0	31.8	2140	6	0.48
M9A15KV01150	1	150	14.5	4.5	24.7	50	28.6	33.4	2430	7.5	0.50
M9A15KV01185	1	185	16.0	4.5	26.2	50	30.1	34.9	2790	9.25	0.52
M9A15KV01240	1	240	18.5	4.5	28.7	50	32.6	37.4	3350	12	0.56
M9A15KV01300	1	300	20.5	4.5	30.7	50	34.6	39.4	3940	15	0.59
M9A15KV01400	1	400	23.5	4.5	33.7	50	37.6	42.4	4810	20	0.64
M9A15KV01500	1	500	26.5	4.5	37.2	50	41.3	46.1	5920	25	0.69
M9A15KV01630	1	630	30.3	4.5	41.3	50	45.4	50.3	7290	31.5	0.75
M9A15KV01800	1	800	34.6	4.5	46.0	50	50.1	55.4	9010	40	0.83
M9A15KV011000	1	1000	38.2	4.5	49.6	50	53.7	59.2	10930	50	0.89

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					
35/16	0.524	0.668	1.12	1.38	2.84	1.32	2.05	0.17	19.1	0.46	0.082
50/16	0.387	0.494	1.12	1.38	2.72	1.37	1.88	0.19	17.2	0.51	0.075
70/25	0.268	0.342	0.72	0.89	2.63	1.41	1.23	0.20	15.6	0.56	0.070
95/35	0.193	0.247	0.51	0.63	2.52	1.45	0.88	0.23	13.7	0.63	0.063
120/50	0.153	0.196	0.36	0.44	2.46	1.48	0.64	0.25	12.7	0.69	0.060
150/50	0.124	0.159	0.36	0.44	2.41	1.51	0.60	0.27	11.6	0.75	0.056
185/50	0.0991	0.128	0.36	0.44	2.37	1.54	0.57	0.30	10.8	0.81	0.053
240/50	0.0754	0.0979	0.36	0.44	2.31	1.57	0.54	0.33	9.6	0.90	0.049
300/50	0.0601	0.0789	0.36	0.44	2.27	1.59	0.52	0.36	8.9	0.98	0.047
400/50	0.0470	0.0630	0.36	0.44	2.23	1.62	0.51	0.40	7.9	1.10	0.043
500/50	0.0366	0.0506	0.36	0.44	2.17	1.63	0.49	0.44	7.2	1.21	0.042
630/50	0.0283	0.0412	0.36	0.44	2.13	1.65	0.48	0.50	6.4	1.37	0.040
800/50	0.0221	0.0344	0.36	0.44	2.1	1.67	0.48	0.57	5.6	1.55	0.038
1000/50	0.0221	0.0344	0.36	0.44	2.1	1.67	0.48	0.57	5.6	1.55	0.038



NOMINAL CROSS SECTIONAL AREA CONDUCTOR/ METALLIC SCREEN mm ²	INDUCTANCE L mH/km			INDUCTANCE REACTANCE XL Ω/km			IMPEDANCE Ω/km		
	0 ⁰ 0 ²	000 ³	000 ⁴	0 ⁰ 0 ²	000 ³	000 ⁴	0 ⁰ 0 ²	000 ³	000 ⁴
	35/16	0.45	0.76	0.64	0.141	0.238	0.200	0.683	0.710
50/16	0.43	0.73	0.61	0.134	0.229	0.192	0.512	0.544	0.530
70/25	0.41	0.70	0.59	0.128	0.220	0.186	0.365	0.407	0.389
95/35	0.38	0.67	0.57	0.120	0.210	0.178	0.274	0.324	0.304
120/50	0.37	0.65	0.55	0.116	0.204	0.174	0.228	0.282	0.262
150/50	0.36	0.63	0.54	0.112	0.197	0.170	0.194	0.253	0.233
185/50	0.34	0.61	0.53	0.108	0.192	0.166	0.167	0.230	0.210
240/50	0.33	0.59	0.51	0.103	0.184	0.162	0.142	0.209	0.189
300/50	0.32	0.57	0.50	0.100	0.179	0.158	0.128	0.196	0.177
400/50	0.31	0.55	0.49	0.096	0.172	0.154	0.115	0.183	0.167
500/50	0.30	0.53	0.48	0.094	0.167	0.152	0.107	0.174	0.160
630/50	0.29	0.51	0.47	0.091	0.160	0.149	0.100	0.166	0.155
800/50	0.28	0.49	0.47	0.089	0.155	0.147	0.095	0.158	0.151
1000/50	0.28	0.49	0.47	0.089	0.155	0.147	0.095	0.158	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 mm ²	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			
35/16	5.0	3.7	245	243	230	230	248	246	211	210
50/16	7.2	3.7	291	288	273	273	298	296	253	252
70/25	10.0	5.3	356	348	334	333	370	363	313	311
95/35	13.6	7.1	430	413	403	400	454	438	383	380
120/50	17.2	9.8	491	456	460	454	523	492	440	435
150/50	21.5	9.8	554	505	518	510	598	555	502	495
185/50	26.5	9.8	628	560	586	575	685	625	574	564
240/50	34.3	9.8	733	634	684	667	814	725	681	665
300/50	42.9	9.8	830	697	773	750	935	812	779	757
400/50	57.2	9.8	953	773	882	849	1093	920	906	874
500/50	71.5	9.8	1088	850	1002	957	1270	1034	1047	1003

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