



**ELAND[®]
CABLES**

BS 7870-4.10 Aluminium MDPE 12.7/22 (24)kV Cable



Eland Product Group: E9XA

APPLICATION

Medium Voltage cable for power distribution and power supply stations used in Utility and Industrial applications, for the rated voltage of 12.7/22 (24)kV.

CHARACTERISTICS

Voltage Rating U₀/U
12.7/22 (24)kV

Temperature Rating

Maximum conductor operating temperature: +90°C
Initial temperature at S.C.C for metallic screen: +80°C
Maximum conductor temperature during S.C: +250°C

Minimum Bending Radius

20 x overall diameter

CONSTRUCTION

Conductor

Class 2 Stranded Aluminium

Conductor Screen

Semi-conductive extruded XLPE (Cross-linked Polyethylene)
(Bonded)

Insulation

XLPE (Cross Linked Polyethylene)

Insulation Screen

Semi-conductive extruded XLPE (Cross-linked Polyethylene) (Strippable)

Longitudinal Waterblock

Semi-conductive waterblocking tape

Metallic Screen

Copper Wires And Open Helix Copper Tape

Longitudinal Waterblock

Non-conductive waterblocking tape

Outer Sheath

MDPE (Medium Density Polyethylene)

Sheath Colour

●Black

STANDARDS

BS 7870-4.10, BS EN 60228, HD620 S2 Part 100 / 110

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 INSULATION THICKNESS mm	NOMINAL SCREEN SECTIONAL AREA mm ²	NOMINAL SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
E9XA22KV01070	1	70	5.5	35	1.51	32.2	1099
E9XA22KV01095	1	95	5.5	35	1.51	33.7	1204
E9XA22KV01120	1	120	5.5	35	1.6	35.3	1327
E9XA22KV01150	1	150	5.5	35	1.6	37.5	1467
E9XA22KV01185	1	185	5.5	35	1.68	38.6	1593
E9XA22KV01240	1	240	5.5	35	1.77	41.2	1825
E9XA22KV01300	1	300	5.5	35	1.77	43.5	2058
E9XA22KV01400	1	400	5.5	35	1.85	46.3	2407
E9XA22KV01500	1	500	5.5	35	1.94	49.9	2812
E9XA22KV01630	1	630	5.5	35	2.02	54.2	3386
E9XA22KV01800	1	800	5.5	35	2.19	59.4	4118

ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm ²	MAXIMUM CONDUCTOR DC RESISTANCE AT 20 °C Ω/Km	MAXIMUM CONDUCTOR AC RESISTANCE AT OPERATING TEMP. AND 50HZ Ω/Km	CAPACITANCE mF/Km	CHARGING CURRENT A/Km	DIELECTRIC LOSSES W/Km	REACTANCE AT 50 HZ ohm/km	S.C.C FOR 1 SEC KA		CURRENT RATING A	
							Conductor	Screen	Laid in ground	Laid in free air
70	0.443	0.569	0.203	0.81	41.16	0.136	6.559	4.1	222	247
95	0.32	0.411	0.223	0.889	45.14	0.130	8.9015	4.1	266	298
120	0.253	0.325	0.241	0.961	48.83	0.125	11.244	4.1	306	344
150	0.206	0.265	0.269	1.075	54.61	0.118	14.055	4.1	339	391
185	0.164	0.211	0.281	1.121	56.96	0.116	17.3345	4.1	388	449
240	0.125	0.161	0.312	1.244	63.22	0.111	22.488	4.1	445	534
300	0.1	0.129	0.341	1.362	69.20	0.107	28.11	4.1	498	615
400	0.0778	0.101	0.375	1.495	75.94	0.103	37.48	4.1	574	714
500	0.0605	0.079	0.418	1.668	84.73	0.099	46.85	4.1	646	838
630	0.0469	0.062	0.47	1.876	95.31	0.097	59.031	4.1	756	966
800	0.0367	0.049	0.531	2.119	107.68	0.093	74.96	4.1	855	1113

Laying conditions at trefoil formation are as below:

- Soil thermal resistivity 120 °C.Cm/Watt
- Burial depth 0.5 m
- Ground temperature 15°C | Air temperature 25°C | Frequency 50 Hz