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

Eland Product Group: E9X

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 Uo/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 Copper

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

BSI KITEMARK™ TESTED

bsi. Cable Testing Verification KITEMARK™
KM 662609

Cables are tested and verified by The Cable Lab® to confirm they meet the quality standards required of the BSI Cable Testing Verification Kitemark™.

STANDARDS

BS 7870-4.10, BS EN 60228, HD620 S2 Part 10O / 11O

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.

UKAS ISO/IEC 17025 Accredited Testing Laboratory
IECEE CBTL Accredited Testing Laboratory

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

SCIENCE BASED TARGETS
BUSINESS AMBITION FOR 1.5°C

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®.

RoHS REACH

DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL INSULATION THICKNESS mm	NOMINAL SCREEN SECTIONAL AREA mm²	NOMINAL INSULATION THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
E9X22KV01070	1	70	5.5	35	1.51	32.4	1502
E9X22KV01095	1	95	5.5	35	1.51	33.7	1768
E9X22KV01120	1	120	5.5	35	1.6	35.3	2037
E9X22KV01150	1	150	5.5	35	1.6	36.9	2334
E9X22KV01185	1	185	5.5	35	1.68	38.6	2698
E9X22KV01240	1	240	5.5	35	1.77	41.2	3282
E9X22KV01300	1	300	5.5	35	1.77	43.6	3887
E9X22KV01400	1	400	5.5	35	1.85	46.4	4740
E9X22KV01500	1	500	5.5	35	1.94	50	5764
E9X22KV01630	1	630	5.5	35	2.02	54.5	7186
E9X22KV01800	1	800	5.5	35	2.19	59	9020

ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm²	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	0.268	0.342	0.158	0.946	71.88	0.144	10.01	4.1	284	310
95	0.193	0.247	0.17	1.017	77.31	0.139	13.585	4.1	338	378
120	0.153	0.196	0.183	1.094	83.12	0.134	17.16	4.1	385	437
150	0.124	0.159	0.198	1.18	89.70	0.128	21.45	4.1	429	491
185	0.0991	0.128	0.211	1.261	95.85	0.124	26.455	4.1	483	567
240	0.0754	0.098	0.233	1.39	105.61	0.119	34.32	4.1	554	670
300	0.0601	0.078	0.254	1.517	115.33	0.115	42.9	4.1	622	773
400	0.047	0.062	0.277	1.655	125.81	0.110	57.2	4.1	698	883
500	0.0366	0.049	0.307	1.835	139.46	0.106	71.5	4.1	784	1020
630	0.0283	0.039	0.345	2.061	156.65	0.103	90.09	4.1	867	1154
800	0.0221	0.032	0.381	2.276	173.00	0.099	114.4	4.1	945	1300

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

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