# NR/PS/ELP/00008 25/44kV Graphite Covered MDPE Cable


Eland Product Group: A9M

## APPLICATION

Cable used to distribute three phase a.c. electrical power to 25kV – 0V – 25kV autotransformer systems on AC electrified lines

## CHARACTERISTICS

**Voltage Rating** Uo/U
25/44kV

**Temperature Rating**
-25°C to +90°C

**Minimum Bending Radius**
Fixed: 15 x overall diameter
(12 x overall diameter adjacent to joints or terminations provided that bending is carefully controlled by use of former)

## CONSTRUCTION

**Conductor**
Class 2 compacted circular stranded copper conductor

**Conductor Screen**
Extruded semi-conductive XLPE (Cross-Linked Polyethylene), solidly bonded

**Insulation**
XLPE (Cross-Linked Polyethylene)

**Insulation Screen**
Extruded semi-conductive XLPE (Cross-Linked Polyethylene), strippable

**Bedding Tape**
Water swellable semi-conductive tape

**Screen** (83mm²)
Copper wire screen, helically wound with equalising copper tape

**Separator**
Water swellable tape

**Sheath**
MDPE (Medium Density Polyethylene) Graphite Coated

**Sheath Colour**
● Black

## CABLE THIRD-PARTY ACCREDITATION

Network Rail (NR) certified and PADS listed as meeting the requirements for installation within their network

## STANDARDS

NR/PS/ELP/00008 (previously RT/E/PS/00008) BS 6622, BS 6234, BS 7454, BS EN/IEC 60502-2, BS EN/IEC 60840

## 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. | NETWORK RAIL PART NO. / PADS | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA mm² | NOMINAL THICKNESS OF CONDUCTOR SCREEN mm | NOMINAL THICKNESS OF INSULATION mm | NOMINAL THICKNESS OF INSULATION SCREEN mm | NOMINAL OVERALL DIAMETER mm | NOMINAL WEIGHT kg/km |
|---|---|---|---|---|---|---|---|---|
| 6/148030 | 0006/148030 | 1 | 400 | 0.9 | 12 | 0.5 | 61 | 6212 |
| 6/148024 | 0006/148024 | 1 | 630 | 0.9 | 12 | 0.5 | 66.7 | 10080 |

The above table is in accordance with BS EN 60228 (previously BS 6360)

### Class 2 Stranded Conductors for Single Core and Multi-Core Cables

| NOMINAL CROSS SECTIONAL AREA mm² | MINIMUM NO. OF WIRES IN CONDUCTOR | MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km |
|---|---|---|
| | Circular Compacted | Annealed Copper Conductor |
| | Cu | Plain Wires |
| 400 | 61 | 0.0407 |
| 630 | 61 | 0.0283 |

The above table is in accordance with BS EN 60228 (previously BS 6360)

## ELECTRICAL CHARACTERISTICS

| NOMINAL CROSS SECTIONAL AREA mm² | CONTINUOUS CURRENT RATING Amps | | | | CAPACITANCE µF/km | INDUCTANCE mH/km | | SHORT CIRCUIT RATING FOR 1 SEC kAmps | |
|---|---|---|---|---|---|---|---|---|---|
| | In Ground | | In Air | | | | | | |
| | Trefoil | Flat | Trefoil | Flat | | Trefoil | Flat | Conductor | Screen |
| 400 | 673 | 686 | 816 | 895 | 0.22 | 0.34 | 0.56 | 57.2 | 13.15 |
| 630 | 854 | 871 | 1140 | 1236 | 0.26 | 0.31 | 0.49 | 90.1 | 13.15 |

### Permitted current rating of cables is calculated to IEC 287, considering the following data:

| | |
|---|---|
| Ground Laying Depth | 0.7m |
| Specific Resistance of Ground | 1°km/W |
| Ground Temperature | 15°C |
| Ambient Temperature in Free Air | 25°C |
| Maximum Conductor Temperature | 90°C |
| Conductor Temperature of Short Circuit Current | 250°C |
| Screen Temperature of Short Circuit Current | 350°C |





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