NR/PS/ELP/00008 25/44kV Graphite Covered LSZH 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 with LSZH sheath for use in tunnels and stations.

CONSTRUCTION

Conductor
Class 2 compacted circular stranded copper conductor according to BS EN 60228 (previously BS 6360)

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
LSZH (Low Smoke Zero Halogen) graphite coated

CABLE 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 electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved product drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

CHARACTERISTICS

Voltage Rating (Uo/U)
25/44kV

Operating Temperature
-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)

Sheath Colour
● Black
The above table is in accordance with BS EN 60228 (previously BS 6360)

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

<table>
<thead>
<tr>
<th>NOMINAL CROSS SECTIONAL AREA mm²</th>
<th>MINIMUM NO. OF WIRES IN CONDUCTOR</th>
<th>MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circular Compacted</td>
<td>Annealed Copper Conductor</td>
<td></td>
</tr>
<tr>
<td>Cu</td>
<td>Plain Wires</td>
<td>ohms/km</td>
</tr>
<tr>
<td>400</td>
<td>61</td>
<td>0.0407</td>
</tr>
</tbody>
</table>

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

**ELECTRICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>NOMINAL CROSS SECTIONAL AREA mm²</th>
<th>CONTINUOUS CURRENT RATING</th>
<th>CAPACITANCE µF/km</th>
<th>INDUCTANCE mH/km</th>
<th>SHORT CIRCUIT RATING FOR 1 SEC kAmps</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Ground Amps</td>
<td>In Air Amps</td>
<td>Trefoil Flat</td>
<td>Trefoil Flat</td>
<td>Trefoil Flat Conductor Screen</td>
</tr>
<tr>
<td>400</td>
<td>673</td>
<td>686</td>
<td>816</td>
<td>895</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.26</td>
<td>0.34</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td></td>
<td>57.2</td>
<td>13.15</td>
<td></td>
</tr>
</tbody>
</table>

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

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.