# N2XSEY XLPE PVC - 6/10 (12)kV Cable


Eland Product Group: A9X

## APPLICATION

Medium voltage cables for distribution networks; also for connection to generation units and plant and process connection. To be laid directly in ground, outdoors, indoors and in cable ducts e.g. in industrial and switchboard plants.

## CHARACTERISTICS

**Voltage Rating** Uo/U (Um)
6/10 (12)kV

**Temperature Range**
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**
10 x overall diameter

## CONSTRUCTION

**Conductor**
Class 2 Stranded copper conductor

**Conductor Screen**
Extruded Inner Semi Conductor (Bonded Type)

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

**Insulation Screen**
Extruded Outer Semi Conductor (Strippable Type)

**Screen**
Copper wires with Open Helix Copper Tape Screen

**Outer Sheath**
PVC (Polyvinyl Chloride)

**Sheath Colour**
Red Black

## STANDARDS

IEC 60228, IEC 60502-2

Flame Retardant according to IEC/EN 60332-1-2

UV Resistant

## 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 mm² | NOMINAL SCREEN CROSS SECTIONAL AREA mm² | NOMINAL INSULATION THICKNESS mm | NOMINAL SHEATH THICKNESS mm | NOMINAL OVERALL DIAMETER mm | NOMINAL WEIGHT kg/km |
|---|---|---|---|---|---|---|---|
| A9X10KV3050 | 3 | 50 | 16 | 3.4 | 2.4 | 43.8 | 2752 |
| A9X10KV3070 | 3 | 70 | 16 | 3.4 | 2.5 | 47.9 | 3513 |
| A9X10KV3095 | 3 | 95 | 16 | 3.4 | 2.7 | 51.1 | 4399 |
| A9X10KV3120 | 3 | 120 | 16 | 3.4 | 2.8 | 54.3 | 5241 |
| A9X10KV3150 | 3 | 150 | 25 | 3.4 | 2.9 | 58 | 6300 |
| A9X10KV3185 | 3 | 185 | 25 | 3.4 | 3 | 61.4 | 7440 |
| A9X10KV3240 | 3 | 240 | 25 | 3.4 | 3.2 | 66.8 | 9359 |
| A9X10KV3300 | 3 | 300 | 25 | 3.4 | 3.3 | 72.2 | 11267 |
| A9X10KV3400 | 3 | 400 | 35 | 3.4 | 3.6 | 78.4 | 14127 |
| A9X10KV3500 | 3 | 500 | 35 | 3.4 | 3.8 | 86.2 | 17513 |

## 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 µF/Km | CHARGING CURRENT A/Km | DIELECTRIC LOSSES W/Km | REACTANCE AT 50 HZ ohm/km | CONDUCTOR S.C.C FOR 1 SEC KA | COPPER SCREEN S.C.C FOR 1 SEC KA | CURRENT RATING A | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Laid in ground | Laid in free air |
| 50 | 0.387 | 0.494 | 0.316 | 0.496 | 11.90 | 0.113 | 7.15 | 1.75 | 222 | 231 |
| 70 | 0.268 | 0.342 | 0.363 | 0.571 | 13.71 | 0.107 | 10.01 | 1.75 | 273 | 288 |
| 95 | 0.193 | 0.247 | 0.398 | 0.625 | 15.00 | 0.103 | 13.585 | 1.75 | 328 | 352 |
| 120 | 0.153 | 0.196 | 0.435 | 0.683 | 16.40 | 0.099 | 17.16 | 1.75 | 373 | 407 |
| 150 | 0.124 | 0.159 | 0.477 | 0.75 | 17.99 | 0.095 | 21.45 | 2.73 | 419 | 464 |
| 185 | 0.0991 | 0.128 | 0.516 | 0.812 | 19.47 | 0.093 | 26.455 | 2.73 | 474 | 533 |
| 240 | 0.0754 | 0.098 | 0.579 | 0.911 | 21.85 | 0.089 | 34.32 | 2.73 | 550 | 631 |
| 300 | 0.0601 | 0.078 | 0.642 | 1.009 | 24.22 | 0.087 | 42.9 | 2.73 | 626 | 741 |
| 400 | 0.047 | 0.062 | 0.71 | 1.116 | 26.79 | 0.084 | 57.2 | 3.82 | 700 | 833 |
| 500 | 0.0366 | 0.049 | 0.799 | 1.256 | 30.14 | 0.081 | 71.5 | 3.82 | 789 | 961 |

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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