

## 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**  $U_o/U$  (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

**Inner Layer**

Extruded Inner Semi Conductor (Bonded Type)

**Insulation**

XLPE (Cross-Linked Polyethylene)

**Outer Layer**

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<sup>®</sup>

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](https://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<sup>®</sup>.





## DIMENSIONS

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL SCREEN CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL INSULATION THICKNESS<br>mm | NOMINAL SHEATH THICKNESS<br>mm | NOMINAL OVERALL DIAMETER<br>mm | NOMINAL WEIGHT<br>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<br>mm <sup>2</sup> | MAXIMUM CONDUCTOR DC RESISTANCE<br>AT 20 °C<br>Ω/Km | MAXIMUM CONDUCTOR AC RESISTANCE<br>AT OPERATING TEMP. AND 50HZ<br>Ω/Km | CAPACITANCE<br>μF/Km | CHARGING CURRENT<br>A/Km | DIELECTRIC LOSSES<br>W/Km | REACTANCE<br>AT 50 HZ<br>ohm/km | CONDUCTOR S.C.C FOR 1 SEC<br>KA | COPPER SCREEN S.C.C FOR 1 SEC<br>KA | CURRENT RATING<br>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

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.