

N2XSEY XLPE PVC - 12/20 (24)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 U₀/U (Um)
12/20 (24)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[®]

AN ISO/IEC 17025 AND IECCE 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 mm ² | NOMINAL SCREEN CROSS SECTIONAL AREA mm ² | NOMINAL INSULATION THICKNESS mm | NOMINAL SHEATH THICKNESS mm | NOMINAL OVERALL DIAMETER mm | NOMINAL WEIGHT kg/km |
|----------------|--------------|--|---|---------------------------------|-----------------------------|-----------------------------|----------------------|
| A9X20KV3050 | 3 | 50 | 16 | 5.5 | 2.8 | 53.3 | 3474 |
| A9X20KV3070 | 3 | 70 | 16 | 5.5 | 2.9 | 57.3 | 4288 |
| A9X20KV3095 | 3 | 95 | 16 | 5.5 | 3 | 59.9 | 5173 |
| A9X20KV3120 | 3 | 120 | 16 | 5.5 | 3.1 | 62.9 | 6028 |
| A9X20KV3150 | 3 | 150 | 25 | 5.5 | 3.2 | 67 | 7155 |
| A9X20KV3185 | 3 | 185 | 25 | 5.5 | 3.3 | 70.5 | 8352 |
| A9X20KV3240 | 3 | 240 | 25 | 5.5 | 3.5 | 76.1 | 10383 |
| A9X20KV3300 | 3 | 300 | 25 | 5.5 | 3.6 | 81.4 | 12356 |
| A9X20KV3400 | 3 | 400 | 35 | 5.5 | 3.9 | 87.7 | 15322 |
| A9X20KV3500 | 3 | 500 | 35 | 5.5 | 4.1 | 95.2 | 18760 |

ELECTRICAL CHARACTERISTICS

| NOMINAL CROSS SECTIONAL AREA mm ² | 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 | 0.22 | 0.693 | 33.24 | 0.126 | 7.15 | 1.75 | 223 | 240 |
| 70 | 0.268 | 0.342 | 0.25 | 0.787 | 37.78 | 0.118 | 10.01 | 1.75 | 274 | 299 |
| 95 | 0.193 | 0.247 | 0.272 | 0.855 | 41.03 | 0.113 | 13.585 | 1.75 | 328 | 363 |
| 120 | 0.153 | 0.196 | 0.295 | 0.928 | 44.52 | 0.109 | 17.16 | 1.75 | 374 | 417 |
| 150 | 0.124 | 0.159 | 0.321 | 1.01 | 48.48 | 0.105 | 21.45 | 2.73 | 420 | 475 |
| 185 | 0.0991 | 0.128 | 0.346 | 1.087 | 52.18 | 0.102 | 26.455 | 2.73 | 474 | 543 |
| 240 | 0.0754 | 0.098 | 0.385 | 1.21 | 58.08 | 0.098 | 34.32 | 2.73 | 551 | 643 |
| 300 | 0.0601 | 0.078 | 0.424 | 1.333 | 63.97 | 0.095 | 42.9 | 2.73 | 628 | 751 |
| 400 | 0.047 | 0.062 | 0.466 | 1.465 | 70.33 | 0.091 | 57.2 | 3.82 | 704 | 848 |
| 500 | 0.0366 | 0.049 | 0.521 | 1.638 | 78.63 | 0.088 | 71.5 | 3.82 | 796 | 977 |

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.