



N2XS(FL)2Y 6/10 (12)kV Cable



Eland Product Group: A9X

APPLICATION

Medium voltage power cables for distribution networks and generation units, suitable for external installation including direct in ground and in buried cable ducts. UV Resistant.

CHARACTERISTICS

Voltage Rating U₀/U 6/10 (12)kV

Test Voltage: 21kV AC 50Hz (5 mins)

Temperature Rating

Operating: -20°C to +60°C

Permissible Conductor Operating Temperature: +90°C

Permissible Short Circuit Temperature (5 secs): 250°C

Minimum Bending Radius 15 x overall diameter

CONSTRUCTION

Conductor

Class 2 stranded Cu

Cu EVDUP Cu DSFFO

Semi-conductive material

Insulation

XLPE (Cross-Linked Polyethylene)

OTVMBU Cu P04DSFFO

Semi-conductive material (bonded)

Longitudinal Waterblocking

Semi-conductive swellable tape

Screen

Copper wires and copper tape

Longitudinal Waterblocking

Swellable Tapes

Radial Waterblocking

Al/PET (Aluminium/Polyester) Tape bonded to sheath

Outer Sheath

MDPE (Medium Density Polyethylene) - UV Resistant

Sheath Colour

● Red ● Black

STANDARDS

IEC 60502-2, IEC 60228,

UV Resistant to: ISO 4892-3

Water Resistant to: EN 60529

Abrasion and Tear Resistance to: EN 60229-4.1

Impact rated to: AG2 EN 60364-5.51

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 is compliant with European Regulation EN 50575, the Construction Products Regulation.



This cable meets the requirements of the RoHS Directive 2011/65/EU. RoHS compliance has been tested and confirmed by The Cable Lab[®] as meeting the requirements of the BSI RoHS Trusted Kitemark[™].





DIMENSIONS

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA | | NOMINAL CONDUCTOR DIAMETER | NUMBER WIRES CONDUCTOR | NOM. THICKNESS SEMI-CON. LAYER | | NOMINAL INSULATION THICKNESS | MINIMUM INSULATION THICKNESS | NOMINAL DIAMETER OVER INSULATION |
|-----------------|--------------|------------------------------|--------|----------------------------|------------------------|--------------------------------|-------|------------------------------|------------------------------|----------------------------------|
| | | mm ² | | | | INNER | OUTER | | | |
| | | Conductor | Screen | | | | | | | |
| A9XFL10KV150RD | 1 | 50 | 16 | 8.10 | 10 x 2.62 | 0.50 | 0.40 | 3.40 | 2.96 | 16.3 |
| A9XFL10KV170RD | 1 | 70 | 16 | 9.70 | 14 x 2.62 | 0.50 | 0.40 | 3.40 | 2.96 | 17.9 |
| A9XFL10KV195RD | 1 | 95 | 16 | 11.4 | 19 x 2.62 | 0.50 | 0.40 | 3.40 | 2.96 | 19.6 |
| A9XFL10KV1120RD | 1 | 120 | 16 | 12.7 | 19 x 2.97 | 0.50 | 0.40 | 3.40 | 2.96 | 20.9 |
| A9XFL10KV1150RD | 1 | 150 | 25 | 14.5 | 19 x 3.20 | 0.50 | 0.40 | 3.40 | 2.96 | 22.7 |
| A9XFL10KV1185RD | 1 | 185 | 25 | 15.9 | 27 x 2.62 | 0.50 | 0.40 | 3.40 | 2.96 | 24.1 |
| A9XFL10KV1240RD | 1 | 240 | 25 | 18.6 | 48 x 2.62 | 0.50 | 0.40 | 3.40 | 2.96 | 26.8 |
| A9XFL10KV1300RD | 1 | 300 | 25 | 20.7 | 61 x 2.62 | 0.50 | 0.40 | 3.40 | 2.96 | 28.9 |
| A9XFL10KV1400RD | 1 | 400 | 35 | 23.5 | 61 x 2.97 | 0.50 | 0.40 | 3.40 | 2.96 | 31.7 |
| A9XFL10KV1500RD | 1 | 500 | 35 | 26.5 | 61 x 3.29 | 0.50 | 0.40 | 3.40 | 2.96 | 34.7 |
| A9XFL10KV1630RD | 1 | 630 | 35 | 30.2 | 61 x 3.80 | 0.50 | 0.40 | 3.40 | 2.96 | 38.9 |

| NOMINAL CROSS SECTIONAL AREA | NUMBER WIRES SCREEN | DIAMETER TAPE SCREEN | NOMINAL SHEATH THICKNESS | MINIMUM SHEATH THICKNESS | NOMINAL OVERALL DIAMETER | NOMINAL WEIGHT | MAXIMUM SIDEWALL PRESSURE | MAXIMUM PULLING TENSION |
|------------------------------|---------------------|----------------------|--------------------------|--------------------------|--------------------------|----------------|---------------------------|-------------------------|
| mm ² | mm | mm | mm | mm | mm | kg/km | N/cm ² | N |
| 50 | 44 x 0.66 | 1x0.1x10 | 1.80 | 1.24 | 23 | 900 | 536 | 2500 |
| 70 | 44 x 0.66 | 1x0.1x10 | 1.80 | 1.24 | 25 | 1100 | 672 | 3500 |
| 95 | 44 x 0.66 | 1x0.1x10 | 1.80 | 1.24 | 26 | 1400 | 847 | 4750 |
| 120 | 44 x 0.66 | 1x0.1x10 | 1.80 | 1.24 | 28 | 1700 | 983 | 6000 |
| 150 | 71 x 0.66 | 1x0.1x10 | 1.90 | 1.32 | 30 | 2000 | 1124 | 7500 |
| 185 | 71 x 0.66 | 1x0.1x10 | 1.90 | 1.32 | 31 | 2500 | 1315 | 9250 |
| 240 | 71 x 0.66 | 1x0.1x10 | 2.00 | 1.40 | 34 | 3000 | 1521 | 12000 |
| 300 | 71 x 0.66 | 1x0.1x10 | 2.10 | 1.48 | 36 | 3500 | 1764 | 15000 |
| 400 | 60 x 0.85 | 1x0.1x15 | 2.20 | 1.56 | 39 | 4500 | 2133 | 20000 |
| 500 | 60 x 0.85 | 1x0.1x15 | 2.30 | 1.64 | 43 | 5500 | 2398 | 25000 |
| 630 | 60 x 0.85 | 1x0.1x15 | 2.40 | 1.72 | 47 | 7000 | 2720 | 31500 |



ELECTRICAL CHARACTERISTICS

| NOMINAL CROSS SECTIONAL AREA mm ² | CONDUCTOR DC RESISTANCE AT 20°C ohms/km | CONDUCTOR DC RESISTANCE AT 75°C ohms/km | CONDUCTOR AC RESISTANCE BY MAX TEMP ohms/km | CURRENT CARRYING CAPACITY (A) | | REACTANCE ohms/km | CHARGING ADMITTANCE A/km | CAPACITANCE uF/km | S.C.C CONDUCTOR 1SEC kA | S.C.C SCREEN 1SEC kA | CONDUCTOR LOSSES IN THE GROUND kW/km |
|---|--|--|--|---------------------------------|-------------|----------------------|-----------------------------|----------------------|----------------------------|-------------------------|---|
| | | | | In Ground 20°C | In Air 30°C | | | | | | |
| 50 | 0.387 | 0.801 | 0.497 | 249 | 277 | 0.18 | 0.36 | 0.21 | 7.15 | 3.2 | 30.8 |
| 70 | 0.268 | 0.555 | 0.344 | 303 | 345 | 0.17 | 0.34 | 0.24 | 10.1 | 3.2 | 31.6 |
| 95 | 0.193 | 0.399 | 0.248 | 358 | 418 | 0.17 | 0.33 | 0.27 | 13.59 | 3.2 | 31.8 |
| 120 | 0.153 | 0.316 | 0.196 | 404 | 481 | 0.16 | 0.32 | 0.30 | 17.16 | 3.2 | 32.0 |
| 150 | 0.124 | 0.160 | 0.256 | 441 | 537 | 0.16 | 0.30 | 0.33 | 21.45 | 5.0 | 31.1 |
| 185 | 0.0991 | 0.205 | 0.128 | 493 | 612 | 0.16 | 0.30 | 0.35 | 26.46 | 5.0 | 31.1 |
| 240 | 0.0754 | 0.156 | 0.0980 | 563 | 716 | 0.15 | 0.28 | 0.40 | 34.32 | 5.0 | 31.1 |
| 300 | 0.0601 | 0.124 | 0.0800 | 626 | 811 | 0.15 | 0.28 | 0.44 | 42.90 | 5.0 | 31.4 |
| 400 | 0.0470 | 0.0974 | 0.0640 | 676 | 901 | 0.15 | 0.27 | 0.49 | 57.20 | 7.1 | 29.2 |
| 500 | 0.0366 | 0.0758 | 0.0510 | 743 | 1006 | 0.15 | 0.26 | 0.54 | 71.50 | 7.1 | 28.2 |
| 630 | 0.0283 | 0.0420 | 0.0586 | 850 | 1030 | 0.14 | 0.26 | 0.62 | 90.09 | 7.1 | 30.3 |

Derating factor (ground): 1 (Soil thermal resistivity: 1km/W, Depth 0.8m, Flat formation - touching)

Derating factor (air): 1 (Flat formation - touching)

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.