

N2XS(FL)H 18/30 (36)kV Cable



Eland Product Group: A9X

APPLICATION

Medium voltage power cables for distribution networks and generation units. LSZH outer sheathing makes the cable suitable for internal installation as well as directly in ground, outdoors, and in cable ducts. UV Resistant.

CHARACTERISTICS

Voltage Rating U₀/U (Um)
18/30 (36)kV

Test Voltage
63kV AC 50Hz (15 mins)

Temperature Rating
-20°C to +60°C
Permissible Conductor Operating Temperature: +90°C
Permissible Short Circuit Temperature up to 5 sec: 250°C

Minimum Bending Radius
15 x overall diameter

CONSTRUCTION

Conductor
Class 2 Stranded Copper

Conductor Screen
Semi-conductive material

Insulation
XLPE (Cross-Linked Polyethylene)

Insulation Screen
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 tightly bonded to sheath

Outer Sheath
LSZH (Low Smoke Zero Halogen)

Sheath Colour
● Red ● Black

STANDARDS

IEC 60502-2, IEC 60228,
Low Smoke Zero Halogen: IEC 60754-1/2, IEC 61034-2
Flame Retardant: EN 60332-3-24 Cat C, IEC 60332-1-2
UV Resistant: EN 50396
Abrasion and Tear Resistant: EN 60229-4.1
Impact rated to: AG2 EN 60364-5.5

THE CABLE LAB[®]

AN ISO/IEC 17025 AND IEC EE 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 Low Voltage Directive 2014/35/EU, the RoHS Directive 2015/863/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 CONDUCTOR DIAMETER mm | NUMBER WIRES CONDUCTOR mm | NOM. THICKNESS SEMI-CON. LAYER | | NOMINAL INSULATION THICKNESS mm | MINIMUM INSULATION THICKNESS mm | NOMINAL DIAMETER OVER INSULATION mm |
|------------------|--------------|---|--------|----------------------------------|------------------------------|--------------------------------|-------------|------------------------------------|------------------------------------|--|
| | | Conductor | Screen | | | INNER mm | OUTER mm | | | |
| | | | | | | | | | | |
| A9XHL30KV1050RDC | 1 | 50 | 16 | 8.1 | 10 x 2.62 | 0.5 | 0.4 | 8 | 7.1 | 25.1 |
| A9XHL30KV1070RDC | 1 | 70 | 16 | 9.7 | 14 x 2.62 | 0.5 | 0.4 | 8 | 7.1 | 26.7 |
| A9XHL30KV1095RDC | 1 | 95 | 16 | 11.4 | 19 x 2.62 | 0.5 | 0.4 | 8 | 7.1 | 28.4 |
| A9XHL30KV1120RDC | 1 | 120 | 16 | 12.7 | 19 x 2.97 | 0.5 | 0.4 | 8 | 7.1 | 29.7 |
| A9XHL30KV1150RDC | 1 | 150 | 25 | 14.5 | 19 x 3.20 | 0.5 | 0.4 | 8 | 7.1 | 31.5 |
| A9XHL30KV1185RDC | 1 | 185 | 25 | 15.9 | 37 x 2.62 | 0.5 | 0.4 | 8 | 7.1 | 32.9 |
| A9XHL30KV1240RDC | 1 | 240 | 25 | 18.6 | 48 x 2.62 | 0.5 | 0.4 | 8 | 7.1 | 25.6 |
| A9XHL30KV1300RDC | 1 | 300 | 25 | 20.7 | 61 x 2.62 | 0.5 | 0.4 | 8 | 7.1 | 37.7 |
| A9XHL30KV1400RDC | 1 | 400 | 35 | 23.5 | 61 x 2.97 | 0.5 | 0.4 | 8 | 7.1 | 40.5 |
| A9XHL30KV1500RDC | 1 | 500 | 35 | 26.5 | 61 x 3.29 | 0.5 | 0.4 | 8 | 7.1 | 43.5 |
| A9XHL30KV1630RDC | 1 | 630 | 35 | 30.2 | 61 x 3.80 | 0.5 | 0.4 | 8 | 7.1 | 47.7 |

| NOMINAL CROSS SECTIONAL AREA mm ² | NUMBER WIRES SCREEN n x mm | DIAMETER TAPE SCREEN mm | NOMINAL SHEATH THICKNESS mm | MINIMUM SHEATH THICKNESS mm | NOMINAL OVERALL DIAMETER mm | NOMINAL WEIGHT kg/km | MAXIMUM SIDEWALL PRESSURE N/cm ² | MAXIMUM PULLING TENSION N |
|---|-------------------------------|----------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------|--|------------------------------|
| 50 | 44x0.66 | 1x0.1x10 | 2.0 | 1.40 | 32 | 1400 | 416 | 2500 |
| 70 | 44x0.66 | 1x0.1x10 | 2.0 | 1.40 | 34 | 1600 | 534 | 3500 |
| 95 | 44x0.66 | 1x0.1x10 | 2.1 | 1.48 | 36 | 1900 | 668 | 4750 |
| 120 | 44x0.66 | 1x0.1x10 | 2.1 | 1.48 | 37 | 2250 | 805 | 6000 |
| 150 | 71x0.66 | 1x0.1x10 | 2.2 | 1.56 | 39 | 2750 | 935 | 7500 |
| 185 | 71x0.66 | 1x0.1x10 | 2.2 | 1.56 | 40 | 3000 | 1103 | 9250 |
| 240 | 71x0.66 | 1x0.1x10 | 2.3 | 1.64 | 43 | 3750 | 1299 | 12000 |
| 300 | 71x0.66 | 1x0.1x10 | 2.4 | 1.72 | 46 | 4250 | 1499 | 15000 |
| 400 | 60x0.85 | 1x0.1x15 | 2.5 | 1.80 | 49 | 5250 | 1939 | 20000 |
| 500 | 60x0.85 | 1x0.1x15 | 2.6 | 1.88 | 52 | 6250 | 2123 | 25000 |
| 630 | 60x0.85 | 1x0.1x15 | 2.7 | 1.96 | 56 | 7750 | 2436 | 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 | NOMINAL INSULATION THICKNESS mm | | REACTANCE ohms/km | CHARGING ADMITTANCE A/km | CAPACITANCE uF/km | S.C.C CONDUCTOR 1SEC kA | CONDUCTOR LOSSES IN THE GROUND kW/km |
|---|--|--|--|------------------------------------|----------------|----------------------|-----------------------------|----------------------|----------------------------|---|
| | | | | In Ground 20°C | In Air 30°C | | | | | |
| 50 | 0.387 | 0.801 | 0.497 | 251 | 279 | 0.20 | 0.44 | 0.12 | 7.15 | 31.3 |
| 70 | 0.268 | 0.555 | 0.344 | 306 | 348 | 0.20 | 0.41 | 0.13 | 10.01 | 32.2 |
| 95 | 0.193 | 0.399 | 0.248 | 363 | 521 | 0.19 | 0.39 | 0.14 | 13.59 | 32.7 |
| 120 | 0.153 | 0.316 | 0.196 | 410 | 483 | 0.18 | 0.38 | 0.15 | 17.16 | 32.9 |
| 150 | 0.124 | 0.256 | 0.160 | 449 | 540 | 0.18 | 0.36 | 0.17 | 21.45 | 32.3 |
| 185 | 0.0991 | 0.205 | 0.128 | 503 | 615 | 0.18 | 0.35 | 0.18 | 26.46 | 32.4 |
| 240 | 0.0754 | 0.156 | 0.0980 | 576 | 718 | 0.17 | 0.34 | 0.20 | 34.32 | 32.5 |
| 300 | 0.0601 | 0.124 | 0.0800 | 641 | 812 | 0.17 | 0.32 | 0.21 | 42.90 | 32.9 |
| 400 | 0.0470 | 0.0974 | 0.0640 | 697 | 904 | 0.16 | 0.31 | 0.24 | 57.20 | 31.1 |
| 500 | 0.0366 | 0.0758 | 0.0510 | 768 | 1011 | 0.16 | 0.30 | 0.26 | 71.50 | 30.1 |
| 630 | 0.0283 | 0.0586 | 0.0420 | 850 | 1030 | 0.16 | 0.29 | 0.29 | 90.09 | 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.