

BS7889 6181XY Cable



Eland Product Group: A1X

APPLICATION

'Double insulated' single core power cable for installation in walls, on boards and in channels, or embedded in plaster.

CHARACTERISTICS

Voltage Rating U_0/U
0.6/1kV

AC Test Voltage
3.5kV

Temperature Range

Maximum operating temperature: 90°C
Maximum short circuit temperature: 250°C

Minimum Bending Radius

Up to 25mm²: 4x Overall diameter
35mm² and above: 6x overall diameter

CONSTRUCTION

Conductor

Class 2 Stranded copper conductor

Insulation

XLPE (Cross-Linked Polyethylene)

Outer Sheath

PVC (Polyvinyl Chloride)

Core Identification

● Black ● Blue ● Grey ● Brown (other colours on request)

Sheath Colour

● Black

STANDARDS

BS 7889
Flame retardant to EN 60332-1-2

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 Low Voltage Directive 2014/35/EU, 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. | NOMINAL CROSS SECTIONAL AREA mm ² | NOMINAL DIAMETER OF CONDUCTOR mm | NOMINAL THICKNESS OF INSULATION mm | MINIMUM THICKNESS OF OVER SHEATH mm | NOMINAL OVERALL DIAMETER mm | NOMINAL WEIGHT kg/km |
|----------------|---|-------------------------------------|---------------------------------------|--|--------------------------------|-------------------------|
| A1XBK/**0015 | 1.5 | 1.55 | 0.70 | 1.09 | 5.4 | 42 |
| A1XBK/**0025 | 2.5 | 2.00 | 0.70 | 1.09 | 5.8 | 55 |
| A1XBK/**004 | 4 | 2.50 | 0.70 | 1.09 | 6.3 | 70 |
| A1XBK/**006 | 6 | 3.09 | 0.70 | 1.09 | 6.9 | 92 |
| A1XBK/**010 | 10 | 3.85 | 0.70 | 1.09 | 7.7 | 135 |
| A1XBK/**016 | 16 | 4.70 | 0.70 | 1.09 | 8.5 | 190 |
| A1XBK/**025 | 25 | 5.85 | 0.90 | 1.09 | 10.1 | 285 |
| A1XBK/**035 | 35 | 6.90 | 0.90 | 1.09 | 11.1 | 380 |
| A1XBK/**050 | 50 | 8.10 | 1.00 | 1.09 | 12.5 | 500 |
| A1XBK/**070 | 70 | 9.70 | 1.10 | 1.09 | 14.3 | 705 |
| A1XBK/**095 | 95 | 11.40 | 1.10 | 1.18 | 16.2 | 950 |
| A1XBK/**120 | 120 | 12.70 | 1.20 | 1.18 | 17.7 | 1180 |
| A1XBK/**150 | 150 | 14.50 | 1.40 | 1.26 | 20.1 | 1475 |
| A1XBK/**185 | 185 | 15.90 | 1.60 | 1.26 | 21.9 | 1800 |
| A1XBK/**240 | 240 | 18.60 | 1.70 | 1.35 | 25.0 | 2345 |
| A1XBK/**300 | 300 | 20.70 | 1.80 | 1.43 | 27.4 | 2925 |
| A1XBK/**400 | 400 | 23.50 | 2.00 | 1.52 | 30.7 | 3720 |
| A1XBK/**500 | 500 | 26.50 | 2.20 | 1.60 | 34.3 | 4750 |
| A1XBK/**630 | 630 | 30.20 | 2.40 | 1.77 | 38.8 | 6115 |

** Designates the insulation colour. For each Eland Cables part number replace with the colour code as listed below: e.g. A1XBK/BK0015 = 1.5mm² Black

COLOUR CODES

| COLOUR | Black | Blue | Grey | Brown |
|--------|-------|------|------|-------|
| CODE | BK | BL | GR | BR |

ELECTRICAL CHARACTERISTICS

| NOMINAL CROSS SECTIONAL AREA mm ² | CONDUCTOR DC RESISTANCE AT 20°C ohm/km |
|---|---|
| 1.5 | 12.10 |
| 2.5 | 7.41 |
| 4 | 4.61 |
| 6 | 3.08 |
| 10 | 1.83 |
| 16 | 1.15 |
| 25 | 0.727 |
| 35 | 0.524 |
| 50 | 0.387 |
| 70 | 0.268 |
| 95 | 0.193 |
| 120 | 0.153 |
| 150 | 0.124 |

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.

| NOMINAL CROSS SECTIONAL AREA mm ² | CONDUCTOR DC RESISTANCE AT 20°C ohm/km |
|---|---|
| 185 | 0.0991 |
| 240 | 0.0754 |
| 300 | 0.0601 |
| 400 | 0.0470 |
| 500 | 0.0366 |
| 630 | 0.0283 |

CURRENT CARRYING CAPACITY

Ambient temperature: 30°C | Conductor operating temperature: 90°C

| CONDUCTOR CROSS SECTIONAL AREA mm ² | REFERENCE METHOD A (enclosed in conduit in thermally insulating wall etc.) | | REFERENCE METHOD B (enclosed in conduit on a wall or in trunking etc.) | | REFERENCE METHOD C (clipped direct) | | REFERENCE METHOD F (in free air or on a perforated cable tray horizontal or vertical) | | | | |
|---|---|-------------------------------------|---|-------------------------------------|--|--|--|-------------------------------------|--|--|---------------|
| | 2 CABLES, SINGLE-PHASE A.C OR D.C A | 3 OR 4 CABLES, THREE-PHASE A.C A | 2 CABLES, SINGLE-PHASE A.C OR D.C A | 3 OR 4 CABLES, THREE-PHASE A.C A | 2 CABLES, SINGLE-PHASE A.C OR D.C FLAT AND TOUCHING A | 3 OR 4 CABLES, THREE-PHASE A.C FLAT AND TOUCHING OR TREFOIL A | Touching | | | Spaced by one diameter | |
| | | | | | | | 2 CABLES, SINGLE-PHASE A.C OR D.C FLAT A | 3 CABLES, THREE-PHASE A.C FLAT A | 3 CABLES, THREE-PHASE A.C TREFOIL A | 2 CABLES, SINGLE-PHASE A.C OR D.C OR 3 CABLES THREE-PHASE A.C FLAT | |
| | | | | | | | | | | HORIZONTAL A | VERTICAL A |
| 1 | 14 | 13 | 17 | 15 | 19 | 17.5 | - | - | - | - | - |
| 1.5 | 19 | 17 | 23 | 20 | 25 | 23 | - | - | - | - | - |
| 2.5 | 26 | 23 | 31 | 28 | 34 | 31 | - | - | - | - | - |
| 4 | 35 | 31 | 42 | 37 | 46 | 41 | - | - | - | - | - |
| 6 | 45 | 40 | 54 | 48 | 59 | 54 | - | - | - | - | - |
| 10 | 61 | 54 | 75 | 66 | 81 | 74 | - | - | - | - | - |
| 16 | 81 | 73 | 100 | 88 | 109 | 99 | - | - | - | - | - |
| 25 | 106 | 95 | 133 | 117 | 143 | 130 | 161 | 141 | 135 | 182 | 161 |
| 35 | 131 | 117 | 164 | 144 | 176 | 161 | 200 | 176 | 169 | 226 | 201 |
| 50 | 158 | 141 | 198 | 175 | 228 | 209 | 242 | 216 | 207 | 275 | 246 |
| 70 | 200 | 179 | 253 | 222 | 293 | 268 | 310 | 279 | 268 | 353 | 318 |
| 95 | 241 | 216 | 306 | 269 | 355 | 326 | 377 | 342 | 328 | 430 | 389 |
| 120 | 278 | 249 | 354 | 312 | 413 | 379 | 437 | 400 | 383 | 500 | 454 |
| 150 | 318 | 285 | 393 | 342 | 476 | 436 | 504 | 464 | 444 | 577 | 527 |
| 185 | 362 | 324 | 449 | 384 | 545 | 500 | 575 | 533 | 510 | 661 | 605 |
| 240 | 424 | 380 | 528 | 450 | 644 | 590 | 679 | 634 | 607 | 781 | 719 |
| 300 | 486 | 435 | 603 | 514 | 743 | 681 | 783 | 736 | 703 | 902 | 833 |
| 400 | - | - | 683 | 584 | 868 | 793 | 940 | 868 | 823 | 1085 | 1008 |
| 500 | - | - | 783 | 666 | 990 | 904 | 1083 | 998 | 946 | 1253 | 1169 |
| 630 | - | - | 900 | 764 | 1130 | 1033 | 1254 | 1151 | 1088 | 1454 | 1362 |

The above table is in accordance with Table 4E1A of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52

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