ELAND® CABLES

# BS 7846 F120 Armoured Fire Performance Power Cable

Eland Product Group: **A6NX**

## APPLICATION

These armoured fire performance power cables are fire resistant and designed for direct impact. Designed to meet the application of fire, direct impact and water jet as specified in BS 8491, making them suitable for use as 120 minute rated category 3 power cables according to BS 8519.

## CHARACTERISTICS

**Voltage Rating** Uo/U
0.6/1kV

**Operating Temperature**
-20°C to +90°C

**Minimum Bending Radius**
During Installation: 8 x overall diameter

## CONSTRUCTION

**Conductor**
Class 2 stranded copper

**Fire Barrier**
MGT (Mica Glass Tape)

**Insulation**
XLPE (Cross-Linked Polyethylene)

**Inner Barrier**
Glass Tape

**Bedding**
LSZH (Low Smoke Zero Halogen)

**Armour**
SWA (Galvanised Steel Wire Armour)

**Outer Barrier**
Glass Tape

**Sheath**
LSZH (Low Smoke Zero Halogen)

**Core Identification**
2 core : Brown Blue
3 core: Brown Black Grey
4 core: Brown Black Grey Blue
5 core: Brown Black Grey Blue Green/Yellow

**Sheath Colour**
Black

**Note**
Cables above 4 core are not BASEC or LPCB approved

## CABLE THIRD-PARTY ACCREDITATION

**We supply BASEC approved products**
Cables are tested and certified by BASEC, The British Approvals Service for Cables

**We supply LPCB certified products**
Certified by the Loss Prevention Certification Board (LPCB) for security and fire protection and listed in Red Book Live

## STANDARDS

BS 7846-F120
Fire Resistant to: BS 8491-120 mins, BS 6387 CAT CWZ, BS 8519 Cat3
Flame Retardant to: IEC 60332-3 Cat C, IEC 60332-1-2
Low Smoke Zero Halogen to: IEC 60754-1/2, IEC 61034-1/2

## 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.

ISO/IEC 17025 Accredited Testing Laboratory · IECEE CBTL Accredited Testing Laboratory

## 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

SCIENCE BASED TARGETS · BUSINESS AMBITION FOR 1.5°C

## 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®.

RoHS · REACH · CE · UKCA

## DIMENSIONS

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA mm² | INSULATION RADIAL THICKNESS mm | GALVANISED STEEL ARMOUR WIRE DIAMETER mm | OUTER SHEATH RADIAL THICKNESS mm | OUTER SHEATH DIAMETER mm | NOMINAL WEIGHT kg/km |
|---|---|---|---|---|---|---|---|
| A6NX02040BK | 2 | 4 | 0.7 | 1.25 | 1.4 | 23.9 | 950 |
| A6NX02060BK | 2 | 6 | 0.7 | 1.25 | 1.4 | 25.1 | 1100 |
| A6NX0210BK | 2 | 10 | 0.7 | 1.25 | 1.5 | 26.4 | 1200 |
| A6NX0216BK | 2 | 16 | 0.7 | 1.25 | 1.5 | 28.3 | 1400 |
| A6NX0225BK | 2 | 25 | 0.9 | 1.25 | 1.6 | 31.4 | 1800 |
| A6NX0235BK | 2 | 35 | 0.9 | 1.6 | 1.7 | 34.1 | 2250 |
| A6NX03040BK | 3 | 4 | 0.7 | 1.25 | 1.4 | 23.4 | 950 |
| A6NX03060BK | 3 | 6 | 0.7 | 1.25 | 1.4 | 24.7 | 1100 |
| A6NX0310BK | 3 | 10 | 0.7 | 1.25 | 1.5 | 25.2 | 1200 |
| A6NX0316BK | 3 | 16 | 0.7 | 1.25 | 1.6 | 27.4 | 1500 |
| A6NX0325BK | 3 | 25 | 0.9 | 1.6 | 1.7 | 31.7 | 2000 |
| A6NX0335BK | 3 | 35 | 0.9 | 1.6 | 1.8 | 34.0 | 2500 |
| A6NX0350BK | 3 | 50 | 1 | 1.6 | 1.8 | 32.7 | 2750 |
| A6NX0370BK | 3 | 70 | 1.1 | 1.6 | 1.9 | 36.4 | 3500 |
| A6NX0395BK | 3 | 95 | 1.1 | 2 | 2.1 | 41.0 | 4750 |
| A6NX03120BK | 3 | 120 | 1.2 | 2 | 2.2 | 44.5 | 5500 |
| A6NX03150BK | 3 | 150 | 1.4 | 2.5 | 2.3 | 49.3 | 7000 |
| A6NX03185BK | 3 | 185 | 1.6 | 2.5 | 2.4 | 53.4 | 8250 |
| A6NX03240BK | 3 | 240 | 1.7 | 2.5 | 2.6 | 58.7 | 10500 |
| A6NX03300BK | 3 | 300 | 1.8 | 2.5 | 2.7 | 63.7 | 12500 |
| A6NX03400BK | 3 | 400 | 2 | 2.5 | 2.9 | 71.1 | 15500 |
| A6NX04040BK | 4 | 4 | 0.7 | 1.25 | 1.4 | 24.7 | 1100 |
| A6NX04060BK | 4 | 6 | 0.7 | 1.25 | 1.5 | 26.2 | 1200 |
| A6NX0410BK | 4 | 10 | 0.7 | 1.25 | 1.5 | 27.8 | 1500 |
| A6NX0416BK | 4 | 16 | 0.7 | 1.25 | 1.6 | 29.3 | 1700 |
| A6NX0425BK | 4 | 25 | 0.9 | 1.6 | 1.7 | 34.0 | 2500 |
| A6NX0435BK | 4 | 35 | 0.9 | 1.6 | 1.8 | 35.2 | 3000 |
| A6NX0450BK | 4 | 50 | 1 | 1.6 | 1.9 | 36.6 | 3250 |
| A6NX0470BK | 4 | 70 | 1.1 | 2 | 2.1 | 40.3 | 4500 |
| A6NX0495BK | 4 | 95 | 1.1 | 2 | 2.2 | 44.6 | 5750 |
| A6NX04120BK | 4 | 120 | 1.2 | 2.5 | 2.3 | 49.5 | 7250 |
| A6NX04150BK | 4 | 150 | 1.4 | 2.5 | 2.4 | 54.0 | 8500 |
| A6NX04185BK | 4 | 185 | 1.6 | 2.5 | 2.6 | 58.8 | 10500 |
| A6NX04240BK | 4 | 240 | 1.7 | 2.5 | 2.7 | 64.8 | 13000 |
| A6NX04300BK | 4 | 300 | 1.8 | 2.5 | 2.9 | 71.7 | 16000 |
| A6NX04400BK | 4 | 400 | 2 | 3.15 | 3.2 | 82.5 | 21000 |
| A6NX05040BK | 5 | 4 | 0.7 | 1.25 | 1.4 | 26.3 | 1200 |
| A6NX05060BK | 5 | 6 | 0.7 | 1.25 | 1.5 | 27.9 | 1400 |
| A6NX0510BK | 5 | 10 | 0.7 | 1.25 | 1.5 | 29.7 | 1700 |
| A6NX0516BK | 5 | 16 | 0.7 | 1.25 | 1.6 | 32.2 | 2250 |



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## CONDUCTORS

| NOMINAL CROSS SECTIONAL AREA mm² | MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km |
|---|---|
| 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 |
| 185 | 0.0991 |
| 240 | 0.0754 |
| 300 | 0.0601 |
| 400 | 0.047 |

## ELECTRICAL CHARACTERISTICS

Current Carrying Capacity

| NOMINAL CROSS SECTIONAL AREA mm² | 2 CORE | | | 3 AND 4 CORE | | |
|---|---|---|---|---|---|---|
| | Single-Phase | | | Three-Phase | | |
| | Laid Direct Amps | In Ducts Amps | In Air Amps | Laid Direct Amps | In Ducts Amps | In Air Amps |
| 4 | 65 | 53 | 55 | 55 | 45 | 47 |
| 6 | 81 | 67 | 70 | 69 | 56 | 59 |
| 10 | 109 | 89 | 95 | 92 | 75 | 82 |
| 16 | 141 | 115 | 126 | 119 | 96 | 107 |
| 25 | 183 | 148 | 164 | 152 | 124 | 140 |
| 35 | 219 | 178 | 202 | 182 | 149 | 172 |
| 50 | 259 | 211 | 244 | 217 | 177 | 209 |
| 70 | 317 | 260 | 306 | 266 | 218 | 263 |
| 95 | 381 | 313 | 378 | 319 | 263 | 324 |
| 120 | 433 | 357 | 437 | 363 | 300 | 346 |
| 150 | 485 | 401 | 499 | 409 | 338 | 430 |
| 185 | 547 | 455 | 576 | 458 | 382 | 495 |
| 240 | 632 | 527 | 680 | 529 | 442 | 584 |
| 300 | 708 | 592 | 775 | 592 | 496 | 672 |
| 400 | 799 | 669 | 892 | 667 | 570 | 766 |



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Voltage Drop

| NOMINAL CROSS SECTIONAL AREA mm² | DC M/V/A/M | SINGLE-PHASE AC M/V/A/M | THREE-PHASE AC M/V/A/M |
|---|---|---|---|
| 4 | 12 | 12 | 10 |
| 6 | 7.9 | 7.9 | 6.8 |
| 10 | 4.7 | 4.7 | 4 |
| 16 | 2.9 | 2.9 | 2.5 |
| 25 | 1.85 | 1.9 | 1.65 |
| 35 | 1.35 | 1.35 | 1.15 |
| 50 | 0.98 | 1 | 0.87 |
| 70 | 0.97 | 0.69 | 0.6 |
| 95 | 0.49 | 0.52 | 0.45 |
| 120 | 0.39 | 0.42 | 0.37 |
| 150 | 0.31 | 0.35 | 0.3 |
| 185 | 0.25 | 0.29 | 0.26 |
| 240 | 0.195 | 0.24 | 0.21 |
| 300 | 0.155 | 0.21 | 0.185 |

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.



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