

# 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 ● Black

**Sheath Colour**  
● Black

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

## CABLE THIRD-PARTY ACCREDITATION



Cables are tested and accredited 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



London Underground Limited (LUL) certified and listed on the Approved Products Register as meeting the requirements for installation within their network

## CABLE STANDARDS

BS 7846-F120  
Fire Resistant to: BS 8491-120 mins, BS 6387 CAT CWS, 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

## ISO/IEC 17025 LABORATORY TESTED

This product is subject to the Quality Assurance protocols of The Cable Lab®, an ISO/IEC 17025 accredited cable testing laboratory. Testing includes vertical flame, conductor resistance, tensile & elongation, and dimensional consistency, verified to published standards and approved product drawings.



8578

FS 672069

EMS 672067

OHS 672066

## REGULATORY COMPLIANCE

This cable meets the requirements of the Low Voltage Directive 2014/35/EU and 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 mm <sup>2</sup>	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



## CONDUCTORS

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	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 mm <sup>2</sup>	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



## Voltage Drop

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	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.