

## 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<sub>o</sub>/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 25mm<sup>2</sup>: 4x Overall diameter  
35mm<sup>2</sup> 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

### 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.



### 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.	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	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 = 1.5mm<sup>2</sup> Black

## COLOUR CODES

COLOUR	Black	Blue	Grey	Brown
CODE	BK	BL	GR	BR

## ELECTRICAL CHARACTERISTICS

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