

Coil End Lead Type 4 BS 6195 Cable



Eland Product Group: A6K

APPLICATION

Coil end leads are used mainly as a flexible connection to coil windings of motors, generators, transformers, circuit breakers and actuators. Also suitable in certain applications instead of tri-rated and bi-rated cables.

CHARACTERISTICS

Voltage Rating U₀/U

Type 4A: 300/500V
Type 4C: 0.6/1kV
Type 4D: 1.9/3.3kV
Type 4E: 3.8/6.6kV
Type 4F: 6.35/11kV

Temperature Rating

Fixed: -40°C to +90°C
Flexed: -30°C to +90°C

Minimum Bending Radius

Fixed: 4 x overall diameter
Flexed: 6 x overall diameter

CONSTRUCTION

Conductor

Class 5 flexible tinned copper conductor

Separator

PET (Polyester Tape)

Insulation

4A, 4C: EPR-HOFR (Ethylene Propylene Rubber - Heat and Oil Resistant and Flame Retardant)
4D, 4E, 4F: EPR-HOFR (Ethylene Propylene Rubber - Heat and Oil Resistant and Flame Retardant)

Outer Sheath

CPE (Chlorinated Polyethylene) rubber compound

Sheath Colour

● Black

STANDARDS

BS EN 60228, BS 6195

Flame Retardant according to BS EN/IEC 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. | CABLE TYPE | NO. OF CORES | VOLTAGE RATING KV | NOMINAL CROSS SECTIONAL AREA mm ² | NOMINAL THICKNESS OF INSULATION mm | NOMINAL OVERALL DIAMETER mm | NOMINAL WEIGHT kg/km |
|----------------|------------|--------------|-------------------|--|------------------------------------|-----------------------------|----------------------|
| A6K0015A | 4A | 1 | 0.3/0.5 | 1.5 | 0.8 | 4 | 29 |
| A6K0025A | 4A | 1 | 0.3/0.5 | 2.5 | 0.9 | 4.6 | 42 |
| A6K0040A | 4A | 1 | 0.3/0.5 | 4 | 1 | 5.4 | 61 |
| A6K006A | 4A | 1 | 0.3/0.5 | 6 | 1 | 6.5 | 88 |
| A6K010A | 4A | 1 | 0.3/0.5 | 10 | 1.2 | 7.9 | 141 |
| A6K0015 | 4C | 1 | 0.6/1 | 1.5 | 1.4 | 4.3 | 34 |
| A6K0025 | 4C | 1 | 0.6/1 | 2.5 | 1.4 | 4.8 | 45 |
| A6K0040 | 4C | 1 | 0.6/1 | 4 | 1.4 | 5.4 | 70 |
| A6K006 | 4C | 1 | 0.6/1 | 6 | 1.5 | 6.2 | 97 |
| A6K010 | 4C | 1 | 0.6/1 | 10 | 1.5 | 8.5 | 130 |
| A6K016 | 4C | 1 | 0.6/1 | 16 | 1.5 | 9.6 | 190 |
| A6K025 | 4C | 1 | 0.6/1 | 25 | 1.6 | 11.4 | 290 |
| A6K035 | 4C | 1 | 0.6/1 | 35 | 1.6 | 12.8 | 380 |
| A6K050 | 4C | 1 | 0.6/1 | 50 | 1.7 | 14.8 | 510 |
| A6K070 | 4C | 1 | 0.6/1 | 70 | 1.8 | 17.2 | 750 |
| A6K095 | 4C | 1 | 0.6/1 | 95 | 2 | 19.7 | 935 |
| A6K120 | 4C | 1 | 0.6/1 | 120 | 2.2 | 21.9 | 1160 |
| A6K150 | 4C | 1 | 0.6/1 | 150 | 2.3 | 24.1 | 1450 |
| A6K185 | 4C | 1 | 0.6/1 | 185 | 2.4 | 26.3 | 1770 |
| A6K240 | 4C | 1 | 0.6/1 | 240 | 2.4 | 28.3 | 2260 |
| A6K300 | 4C | 1 | 0.6/1 | 300 | 2.6 | 33 | 2760 |
| A6K400 | 4C | 1 | 0.6/1 | 400 | 2.8 | 37.4 | 3880 |
| A6K500 | 4C | 1 | 0.6/1 | 500 | 3.2 | 38 | 4650 |
| A6K630 | 4C | 1 | 0.6/1 | 630 | 3.3 | 43 | 6220 |
| A6K0025D | 4D | 1 | 1.9/3.3 | 2.5 | 2.8 | 8.5 | 100 |
| A6K0040D | 4D | 1 | 1.9/3.3 | 4 | 2.8 | 9.1 | 115 |
| A6K006D | 4D | 1 | 1.9/3.3 | 6 | 2.8 | 10.3 | 141 |
| A6K010D | 4D | 1 | 1.9/3.3 | 10 | 2.8 | 11.3 | 216 |
| A6K016D | 4D | 1 | 1.9/3.3 | 16 | 2.8 | 12.4 | 288 |
| A6K025D | 4D | 1 | 1.9/3.3 | 25 | 2.8 | 13.8 | 392 |
| A6K035D | 4D | 1 | 1.9/3.3 | 35 | 2.8 | 15.2 | 509 |
| A6K050D | 4D | 1 | 1.9/3.3 | 50 | 2.8 | 17.1 | 682 |
| A6K070D | 4D | 1 | 1.9/3.3 | 70 | 2.8 | 19.2 | 894 |
| A6K095D | 4D | 1 | 1.9/3.3 | 95 | 3 | 22 | 1168 |
| A6K120D | 4D | 1 | 1.9/3.3 | 120 | 3 | 23.5 | 1433 |
| A6K150D | 4D | 1 | 1.9/3.3 | 150 | 3 | 25.5 | 1734 |
| A6K185D | 4D | 1 | 1.9/3.3 | 185 | 3 | 27.5 | 2073 |
| A6K240D | 4D | 1 | 1.9/3.3 | 240 | 3 | 30.6 | 2657 |
| A6K300D | 4D | 1 | 1.9/3.3 | 300 | 3 | 33.8 | 3279 |
| A6K400D | 4D | 1 | 1.9/3.3 | 400 | 3 | 37.8 | 4229 |
| A6K016E | 4E | 1 | 3.8/6.6 | 16 | 5 | 17.2 | 408 |
| A6K025E | 4E | 1 | 3.8/6.6 | 25 | 5 | 18.6 | 527 |
| A6K035E | 4E | 1 | 3.8/6.6 | 35 | 5 | 20 | 656 |
| A6K050E | 4E | 1 | 3.8/6.6 | 50 | 5 | 22.1 | 832 |

| ELAND PART NO. | CABLE TYPE | NO. OF CORES | VOLTAGE RATING KV | NOMINAL CROSS SECTIONAL AREA mm ² | NOMINAL THICKNESS OF INSULATION mm | NOMINAL OVERALL DIAMETER mm | NOMINAL WEIGHT kg/km |
|----------------|------------|--------------|-------------------|--|------------------------------------|-----------------------------|----------------------|
| A6K070E | 4E | 1 | 3.8/6.6 | 70 | 5 | 24.2 | 1053 |
| A6K095E | 4E | 1 | 3.8/6.6 | 95 | 5 | 26.3 | 1304 |
| A6K120E | 4E | 1 | 3.8/6.6 | 120 | 5 | 27.8 | 1634 |
| A6K150E | 4E | 1 | 3.8/6.6 | 150 | 5 | 29.8 | 1894 |
| A6K185E | 4E | 1 | 3.8/6.6 | 185 | 5 | 32.1 | 2242 |
| A6K240E | 4E | 1 | 3.8/6.6 | 240 | 5 | 35.1 | 2842 |
| A6K025F | 4F | 1 | 6.35/11 | 25 | 7.6 | 24.1 | 764 |
| A6K035F | 4F | 1 | 6.35/11 | 35 | 7.6 | 25.5 | 911 |
| A6K050F | 4F | 1 | 6.35/11 | 50 | 7.6 | 27.3 | 1114 |
| A6K070F | 4F | 1 | 6.35/11 | 70 | 7.6 | 29.4 | 1344 |
| A6K095F | 4F | 1 | 6.35/11 | 95 | 7.6 | 31.5 | 1610 |
| A6K120F | 4F | 1 | 6.35/11 | 120 | 7.6 | 33.3 | 1919 |
| A6K150F | 4F | 1 | 6.35/11 | 150 | 7.6 | 35.3 | 2248 |
| A6K185F | 4F | 1 | 6.35/11 | 185 | 7.6 | 37.3 | 2616 |
| A6K240F | 4F | 1 | 6.35/11 | 240 | 7.6 | 40.3 | 3252 |

ELECTRICAL CHARACTERISTICS

Class 5 Flexible Copper Conductors for Single Core and Multi-Core Cables

| NOMINAL CROSS SECTIONAL AREA mm ² | MAXIMUM DIAMETER OF WIRES IN CONDUCTOR mm | MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km |
|--|---|---|
| | | Plain Wires |
| 1.5 | 0.26 | 13.3 |
| 2.5 | 0.26 | 7.98 |
| 4 | 0.31 | 4.95 |
| 6 | 0.31 | 3.3 |
| 10 | 0.41 | 1.91 |
| 16 | 0.41 | 1.21 |
| 25 | 0.41 | 0.78 |
| 35 | 0.41 | 0.554 |
| 50 | 0.41 | 0.386 |
| 70 | 0.51 | 0.272 |
| 95 | 0.51 | 0.206 |
| 120 | 0.51 | 0.161 |
| 150 | 0.51 | 0.129 |
| 185 | 0.51 | 0.106 |
| 240 | 0.51 | 0.0801 |
| 300 | 0.51 | 0.0641 |
| 400 | 0.51 | 0.0486 |
| 500 | 0.61 | 0.0384 |
| 630 | 0.61 | 0.0287 |

The above table is in accordance with BS EN 60228 (previously BS 6360)

ELECTRICAL CHARACTERISTICS

| NOMINAL CROSS SECTIONAL AREA mm ² | REFERENCE METHOD C (clipped direct) A | | REFERENCE METHOD F (in free air or on a perforated cable tray etc horizontal or vertical etc) Touching A | | | REFERENCE METHOD G (in free air) Spaced by one cable diameter A | |
|---|--|--|--|-------------------------------------|--|--|----------|
| | 2 cables, single-phase AC or DC flat and touching | 3 or 4 cables, three-phase AC flat and touching or trefoil | 2 cables, single-phase AC or DC flat | 3 cables, three-phase AC flat | 3 cables, three-phase AC trefoil | 2 cables, single-phase AC or DC or 3 cables three-phase AC flat | |
| | | | | | | Horizontal | Vertical |
| 1 | 19 | 17.5 | - | - | - | - | - |
| 1.5 | 25 | 23 | - | - | - | - | - |
| 2.5 | 34 | 31 | - | - | - | - | - |
| 4 | 46 | 41 | - | - | - | - | - |
| 6 | 59 | 54 | - | - | - | - | - |
| 10 | 81 | 74 | - | - | - | - | - |
| 16 | 109 | 99 | - | - | - | - | - |
| 25 | 143 | 130 | 161 | 141 | 135 | 182 | 161 |
| 35 | 176 | 161 | 200 | 176 | 169 | 226 | 201 |
| 50 | 228 | 209 | 242 | 216 | 207 | 275 | 246 |
| 70 | 293 | 268 | 310 | 279 | 268 | 353 | 318 |
| 95 | 355 | 326 | 377 | 342 | 328 | 430 | 389 |
| 120 | 413 | 379 | 437 | 400 | 383 | 500 | 454 |
| 150 | 476 | 436 | 504 | 464 | 444 | 577 | 527 |
| 185 | 545 | 500 | 575 | 533 | 510 | 661 | 605 |
| 240 | 644 | 590 | 679 | 634 | 607 | 781 | 719 |
| 300 | 743 | 681 | 783 | 736 | 703 | 902 | 833 |
| 400 | 868 | 793 | 940 | 868 | 823 | 1085 | 1008 |
| 500 | 990 | 904 | 1083 | 998 | 946 | 1253 | 1169 |
| 630 | 1130 | 1033 | 1254 | 1151 | 1088 | 1454 | 1362 |
| 800 | 1288 | 1179 | 1358 | 1275 | 1214 | 1581 | 1485 |
| 1000 | 1443 | 1323 | 1520 | 1436 | 1349 | 1775 | 1671 |

Reference table : BS7671 18th Ed. 4E1A

Ambient temperature: 30°C

Conductor operating temperature: 90°C

NOTES:

1. There it is intended to connect the cables in this table to equipment or accessories designed to operate at a temperature lower than the maximum operating temperature of the cable, the cables should be rated at the maximum operating temperature of the equipment or accessory (see Regulation 512.1.5).
2. There it is intended to group a cable in this table with other cables, the cable should be rated at the lowest of the maximum operating temperatures of any of the cables in the group (see Regulation 512.1.5).
3. For cables having flexible conductors see section 2.4 of appendix for adjustment factors for current-carrying capacity and voltage drop.

DE-RATING FACTORS

| AMBIENT TEMP | 25°C | 30°C | 35°C | 40°C | 45°C | 50°C | 55°C | 60°C | 65°C | 70°C | 75°C | 80°C | 85°C | 90°C | 95°C |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| DE-RATING FACTOR | 1.02 | 1.00 | 0.96 | 0.91 | 0.87 | 0.82 | 0.76 | 0.71 | 0.65 | 0.58 | 0.50 | 0.41 | - | - | - |

Reference table : BS7671 18th Ed. 4B1

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.