

YY Control Flexible Cable

Eland Product Group **A5Y**



Application

Used as interconnecting cable for measuring, controlling or regulation in control equipment for assembly and production lines, conveyors and for computer units. Suitable for fixed installations or for flexible use in conditions of light mechanical stress. Can be used outdoors when protected, and in dry or moist conditions indoors.

Standards

Generally to BS6500, VDE0250

Technical Data

Conductor

Class 5 flexible plain copper conductors

Insulation

PVC (Polyvinyl Chloride)

Sheath

PVC (Polyvinyl Chloride)

Sheath Colour

Grey

Voltage Rating

300/500V

Temperature Rating

Fixed: -35°C to + 70°C

Flexing: -5°C to + 70°C

Minimum Bending Radius

10 x overall diameter

Core Identification

Black with White numbers

(3 cores and above includes Green/Yellow)

Coloured cores available

Dimensions

| Eland Part Number | No. of Cores x Nominal Cross Sectional Area # x mm ² | Thickness of Insulation mm | Thickness of Outer Sheath mm | Nominal Overall Diameter mm | Nominal Weight kg/ Km | FCGA2/A2P Gland Brass/Plastic |
|--|--|----------------------------------|------------------------------------|-----------------------------------|--------------------------|-------------------------------------|
| YY Control Flexible Cable - 2 Cores | | | | | | |
| A5Y020050* | 2 x 0.50 | 0.5 | 0.8 | 5.20 | 39.33 | -/20S |
| A5Y020075* | 2 x 0.75 | 0.5 | 0.8 | 5.70 | 48.01 | -/20S |
| A5Y02010 | 2 x 1.00 | 0.5 | 0.8 | 5.90 | 54.61 | -/20S |
| A5Y02015 | 2 x 1.50 | 0.6 | 0.9 | 7.10 | 78.21 | -/20S |
| A5Y02025 | 2 x 2.50 | 0.7 | 0.9 | 8.30 | 113.08 | 20S/20 |
| YY Control Flexible Cable - 3 Cores | | | | | | |
| A5Y030005 | 3 x 0.50 | 0.5 | 0.8 | 5.50 | 46.67 | -/20S |
| A5Y030075 | 3 x 0.75 | 0.5 | 0.8 | 6.04 | 57.36 | -/20S |
| A5Y03010* | 3 x 1.00 | 0.5 | 0.8 | 6.26 | 66.26 | -/20S |
| A5Y03015* | 3 x 1.50 | 0.6 | 0.9 | 7.54 | 94.77 | -/20S |
| A5Y03025 | 3 x 2.50 | 0.7 | 1.0 | 9.04 | 143.57 | 20S/20 |
| A5Y03040* | 3 x 4.00 | 0.8 | 1.1 | 10.90 | 213.90 | 20S/20 |
| A5Y03060* | 3 x 6.00 | 0.8 | 1.2 | 12.40 | 292.40 | 20/25 |
| A5Y0310 | 3 x 10.00 | 1.0 | 1.3 | 15.50 | 477.80 | 25/25 |
| A5Y0316 | 3 x 16.00 | 1.0 | 1.5 | 18.40 | 705.60 | 25/32 |

| Eland Part Number | No. of Cores x Nominal Cross Sectional Area # x mm ² | Thickness of Insulation mm | Thickness of Outer Sheath mm | Nominal Overall Diameter mm | Nominal Weight kg/ Km | FCGA2/A2P Gland Brass/Plastic |
|---|--|-------------------------------|---------------------------------|--------------------------------|--------------------------|----------------------------------|
| YY Control Flexible Cable - 4 Cores | | | | | | |
| A5Y040005 | 4 x 0.50 | 0.5 | 0.8 | 5.98 | 56.65 | -/20S |
| A5Y040075 | 4 x 0.75 | 0.5 | 0.8 | 6.58 | 70.00 | -/20S |
| A5Y04010 | 4 x 1.00 | 0.5 | 0.9 | 7.02 | 84.83 | -/20S |
| A5Y04015 | 4 x 1.50 | 0.6 | 0.9 | 8.23 | 116.63 | 20S/20 |
| A5Y04025 | 4 x 2.50 | 0.7 | 1.0 | 9.87 | 177.76 | 20S/20 |
| A5Y04040 | 4 x 4.00 | 0.8 | 1.1 | 11.90 | 265.00 | 20/20 |
| A5Y04060 | 4 x 6.00 | 0.8 | 1.2 | 13.60 | 365.80 | 25/25 |
| A5Y0410 | 4 x 10.00 | 1.0 | 1.3 | 17.20 | 607.70 | 25/25 |
| A5Y0416 | 4 x 16.00 | 1.0 | 1.5 | 20.20 | 888.60 | 32/32 |
| YY Control Flexible Cable - 5 Cores | | | | | | |
| A5Y050005 | 5 x 0.50 | 0.5 | 0.8 | 6.53 | 68.35 | -/20S |
| A5Y050075 | 5 x 0.75 | 0.5 | 0.9 | 7.41 | 88.33 | -/20S |
| A5Y05010 | 5 x 1.00 | 0.5 | 0.9 | 7.68 | 102.74 | -/20S |
| A5Y05015 | 5 x 1.50 | 0.6 | 1.0 | 9.23 | 146.37 | 20S/20 |
| A5Y05025 | 5 x 2.50 | 0.7 | 1.1 | 11.05 | 222.36 | 20S/20 |
| A5Y05040 | 5 x 4.00 | 0.8 | 1.1 | 13.10 | 324.70 | 20/25 |
| A5Y05060 | 5 x 6.00 | 0.8 | 1.3 | 15.10 | 453.90 | 25/25 |
| A5Y0510 | 5 x 10.00 | 1.0 | 1.3 | 18.90 | 744.50 | 25/32 |
| A5Y0516 | 5 x 16.00 | 1.0 | 1.5 | 22.20 | 1090.10 | 32/32 |
| A5Y0525 | 5 x 25.00 | 1.3 | 1.9 | 29.00 | 1774.90 | 32/40 |
| YY Control Flexible Cable - 7 Cores | | | | | | |
| A5Y070050 | 7 x 0.50 | 0.5 | 0.9 | 7.30 | 88.00 | -/20S |
| A5Y070075 | 7 x 0.75 | 0.5 | 0.9 | 8.05 | 109.29 | 20S/20 |
| A5Y07010 | 7 x 1.00 | 0.5 | 1.0 | 8.55 | 132.59 | 20S/20 |
| A5Y07015 | 7 x 1.50 | 0.6 | 1.0 | 10.05 | 183.13 | 20S/20 |
| A5Y07025 | 7 x 2.50 | 0.7 | 1.2 | 12.25 | 286.42 | 20/25 |
| YY Control Flexible Cable - 12 Cores | | | | | | |
| A5Y12005 | 12 x 0.50 | 0.5 | 1.0 | 9.70 | 154.23 | 20S/20 |
| A5Y12075 | 12 x 0.75 | 0.5 | 1.1 | 10.94 | 197.78 | 20S/20 |
| A5Y12010 | 12 x 1.00 | 0.5 | 1.1 | 11.36 | 231.78 | 20S/20 |
| A5Y12015 | 12 x 1.50 | 0.6 | 1.2 | 13.64 | 329.43 | 20/25 |
| A5Y12025 | 12 x 2.50 | 0.7 | 1.4 | 16.54 | 510.44 | 25/25 |
| YY Control Flexible Cable - 18 Cores | | | | | | |
| A5Y18005 | 18 x 0.50 | 0.5 | 1.1 | 11.50 | 220.54 | 20S/20 |
| A5Y18075 | 18 x 0.75 | 0.5 | 1.2 | 12.95 | 282.32 | 20/25 |
| A5Y18010 | 18 x 1.00 | 0.5 | 1.3 | 13.65 | 338.96 | 20/25 |
| A5Y18015 | 18 x 1.50 | 0.6 | 1.4 | 16.35 | 480.03 | 25/25 |
| A5Y18025 | 18 x 2.50 | 0.7 | 1.6 | 19.75 | 741.53 | 25/32 |
| YY Control Flexible Cable - 25 Cores | | | | | | |
| A5Y250005 | 25 x 0.50 | 0.5 | 1.3 | 13.80 | 314.42 | 25/25 |
| A5Y25075 | 25 x 0.75 | 0.5 | 1.4 | 15.50 | 400.91 | 25/25 |
| A5Y25010 | 25 x 1.00 | 0.5 | 1.4 | 16.10 | 471.30 | 25/25 |
| A5Y25015 | 25 x 1.50 | 0.6 | 1.6 | 19.50 | 677.47 | 25/25 |
| A5Y25025 | 25 x 2.50 | 0.7 | 1.8 | 23.50 | 1042.51 | 32/32 |

* Available with colour coded cores

Conductors

Class 5 flexible Copper Conductors for Single Core and Multi-Core cables

| 1 Nominal Cross Sectional Area mm ² | 2 Maximum Diameter of Wires in Conductor mm | 3 Maximum Resistance of Conductor at 20°C |
|--|--|--|
| | | Plain Wires ohms/Km |
| 0.50 | 0.21 | 39.0000 |
| 0.75 | 0.21 | 26.0000 |
| 1.00 | 0.21 | 19.5000 |
| 1.50 | 0.26 | 13.3000 |
| 2.50 | 0.26 | 7.9800 |
| 4.00 | 0.31 | 4.9500 |
| 6.00 | 0.31 | 3.3000 |
| 10.00 | 0.41 | 1.9100 |
| 16.00 | 0.41 | 1.2100 |
| 25.00 | 0.41 | 0.7800 |
| 35.00 | 0.41 | 0.5540 |
| 50.00 | 0.41 | 0.3860 |
| 70.00 | 0.51 | 0.2720 |
| 95.00 | 0.51 | 0.2060 |
| 120.00 | 0.51 | 0.1610 |

Table in accordance with BS EN 60228:2005 (previously BS6360)

Electrical Characteristics

Current Carrying Capacity (amperes) at 30°C

| Nominal Cross Sectional Area mm ² | Current Rating Amps |
|---|------------------------|
| 0.50 | 7 |
| 0.75 | 12 |
| 1.00 | 15 |
| 1.50 | 18 |
| 2.50 | 26 |
| 4.00 | 34 |
| 6.00 | 44 |
| 10.00 | 61 |
| 16.00 | 82 |
| 25.00 | 108 |
| 35.00 | 135 |
| 50.00 | 168 |
| 70.00 | 207 |
| 95.00 | 250 |
| 120.00 | 292 |

De-rating Factors

Multi-Conductor cables with cross sectional area up to 10mm²

| No. of Cores | De-rating Factor |
|--------------|------------------|
| 5 | 0.75 |
| 7 | 0.65 |
| 10 | 0.55 |
| 14 | 0.50 |
| 19 | 0.45 |
| 24 | 0.40 |
| 40 | 0.35 |
| 61 | 0.30 |

The information contained within this datasheet is for guidance only. When selecting accessories such as cleats, glands, etc please note that actual cable dimensions may vary due to manufacturing tolerances.