# 309-Y / H05V2V2-F BS EN 50525-2-11 Flexible Cable


Eland Product Group: **A5Y**

## APPLICATION

For internal wiring or supply cords to electrical apparatus, particularly for use in high temperature zones such as lighting applications. Not suitable for outdoor use.

## CONSTRUCTION

**Conductor**
Class 5 flexible copper conductor according to BS EN 60228 (previously BS 6360)

**Insulation**
PVC (Polyvinyl Chloride) Type TI3 according to BS EN 50363

**Sheath**
PVC (Polyvinyl Chloride) Type TM3 according to BS EN 50363

## CABLE STANDARDS

BS EN 50525-2-11 (previously BS 6500, BS 7919 table 41), BS EN/IEC 60332-1-2

The electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved product drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

## CHARACTERISTICS

**Voltage Rating** (Uo/U)
300/500V

**Temperature Rating**
Flexed: 0°C to +90°C

**Minimum Bending Radius**
Fixed: 6 x overall diameter
Flexed: 10 x overall diameter

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

**Sheath Colour**
White

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## DIMENSIONS

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA mm² | NOMINAL THICKNESS OF INSULATION mm | NOMINAL THICKNESS OF SHEATH mm | NOMINAL OVERALL DIAMETER mm | NOMINAL WEIGHT kg/km |
|---|---|---|---|---|---|---|
| A5Y020075HRWH | 2 | 0.75 | 0.6 | 0.8 | 6.3 | 63 |
| A5Y030075HRWH | 3 | 0.75 | 0.6 | 0.8 | 6.7 | 74 |
| A5Y03010HRWH | 3 | 1 | 0.6 | 0.8 | 7 | 86 |
| A5Y03015HRWH | 3 | 1.5 | 0.7 | 0.9 | 8.1 | 115 |
| A5Y03025HRWH | 3 | 2.5 | 0.8 | 1 | 9.7 | 170 |
| A5Y040075HRWH | 4 | 0.75 | 0.6 | 0.8 | 7.3 | 78 |
| A5Y04010HRWH | 4 | 1 | 0.6 | 0.9 | 7.9 | 110 |
| A5Y04015HRWH | 4 | 1.5 | 0.7 | 1 | 9 | 140 |
| A5Y04025HRWH | 4 | 2.5 | 0.8 | 1.1 | 10.8 | 210 |
| A5Y050075HRWH | 5 | 0.75 | 0.6 | 0.9 | 8.1 | 105 |

## CONDUCTORS

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

| NOMINAL CROSS SECTIONAL AREA mm² | MAXIMUM DIAMETER OF WIRES IN CONDUCTOR mm | MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C | |
|---|---|---|---|
| | | Plain Wires ohms/km | Metal-Coated Wires ohms/km |
| 0.75 | 0.21 | 26 | 26.7 |
| 1 | 0.21 | 19.5 | 20 |
| 1.5 | 0.26 | 13.3 | 13.7 |
| 2.5 | 0.26 | 7.98 | 8.21 |

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

## ELECTRICAL CHARACTERISTICS

Current Carrying Capacity and Mass Supportable

| NOMINAL CROSS SECTIONAL AREA mm² | CURRENT CARRYING CAPACITY | | MAXIMUM MASS SUPPORTABLE BY TWIN FLEXIBLE CORD (See Regulations 522.7.2 and 559.6.1.5 of the 17th Edition of IEE Wiring Regulations) kg |
|---|---|---|---|
| | Single-Phase AC Amps | Three-Phase AC Amps | |
| 0.75 | 6 | 6 | 3 |
| 1 | 10 | 10 | 5 |
| 1.5 | 16 | 16 | 5 |
| 2.5 | 25 | 20 | 5 |

The above table is in accordance with Table 4F3A of the 17th Edition of IEE Wiring Regulations.

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### Voltage Drop

| NOMINAL CROSS SECTIONAL AREA mm² | DC OR SINGLE-PHASE AC mV/A/m | THREE-PHASE AC mV/A/m |
|---|---|---|
| 0.75 | 62 | 54 |
| 1 | 46 | 40 |
| 1.5 | 32 | 27 |
| 2.5 | 19 | 16 |

Conductor operating temperature: 60°C*
* The tabulated values above are for 60°C thermoplastic or thermosetting insulated flexible cords. For other types of flexible cords they are to be multiplied by the following factors: for thermoplastic or thermoset insulation at 90°C: 1.09, at 105°C: 1.31

The above table is in accordance with Table 4F3B of the 17th Edition of IEE Wiring Regulations.

## DE-RATING FACTORS

### De-Rating factor for ambient temperature 60°C thermoplastic or thermosetting insulated cords

| AIR TEMPERATURE | 35°C | 40°C | 45°C | 50°C | 55°C |
|---|---|---|---|---|---|
| DE-RATING FACTOR | 0.91 | 0.82 | 0.71 | 0.58 | 0.41 |

The above table is in accordance with Table 4F3A of the 17th Edition of IEE Wiring Regulations.