

# LSZH Mineral Insulated 750V Cable



Eland Product Group: **A6M**

## APPLICATION

A heavy duty 750V low smoke zero halogen, mineral insulated cable designed to give ultimate fire performance. Suitable for use in public buildings, emergency lighting and alarm systems providing circuit integrity to 950°C. Suitable for Oil, Gas and Petroleum industries, airports, emergency lighting systems and fire alarm systems.

## CONSTRUCTION

### Conductor

Solid plain copper conductor

### Insulation

Magnesium Oxide

### Sheath

Copper tube, LSZH (Low Smoke Zero Halogen)

## CABLE STANDARDS

BS EN 60702 Part 1  
BS 5839-1 Enhanced (26.2e)  
BS 5266, BS 8519 Cat 1 and 2  
BS 8434-2, BS 6387 C, W and Z  
BS 8491, BS EN 50200-PH30/60/120  
BS 50265, 50266  
BS EN 50267, BS EN 50268



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

750V

### Temperature Rating

-10°C to 250°C

### Minimum Bending Radius

6 x overall diameter

### Sheath Colour

● Red ○ White ● Orange

Other colours available on request

## DIMENSIONS

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL OVERALL DIAMETER<br>mm | NOMINAL WEIGHT<br>kg/km |
|----------------|--------------|---|--------------------------------|-------------------------|
| A6M701006**    | 1            | 6   | 7.7                            | 213                     |
| A6M01010**     | 1            | 10  | 8.8                            | 273                     |
| A6M01016**     | 1            | 16  | 9.8                            | 361                     |
| A6M01025**     | 1            | 25  | 11.1                           | 506                     |
| A6M01035**     | 1            | 35  | 12.2                           | 650                     |
| A6M01050**     | 1            | 50  | 13.6                           | 842                     |
| A6M01070**     | 1            | 70  | 15.2                           | 1147                    |
| A6M01095**     | 1            | 95  | 17.4                           | 1520                    |
| A6M01120**     | 1            | 120   | 18.8                           | 1870                    |
| A6M01150**     | 1            | 150   | 20.4                           | 2230                    |
| A6M01185**     | 1            | 185   | 23.2                           | 2575                    |
| A6M01240**     | 1            | 240   | 26.1                           | 3312                    |
| A6M020015**    | 2            | 1.5   | 9.4                            | 259                     |
| A6M020025**    | 2            | 2.5   | 10.2                           | 314                     |
| A6M02004**     | 2            | 4   | 11.3                           | 398                     |
| A6M02006**     | 2            | 6   | 12.4                           | 483                     |
| A6M02010**     | 2            | 10  | 14.2                           | 697                     |
| A6M02016**     | 2            | 16  | 16.2                           | 968                     |
| A6M02025**     | 2            | 25  | 19.1                           | 1275                    |
| A6M030015**    | 3            | 1.5   | 9.8                            | 290                     |
| A6M030025**    | 3            | 2.5   | 10.8                           | 365                     |
| A6M03004**     | 3            | 4   | 11.9                           | 461                     |
| A6M03006**     | 3            | 6   | 13                             | 590                     |
| A6M03010**     | 3            | 10  | 15.1                           | 853                     |
| A6M03016**     | 3            | 16  | 17.1                           | 1080                    |
| A6M03025**     | 3            | 25  | 20.2                           | 1548                    |
| A6M040015**    | 4            | 1.5   | 10.6                           | 344                     |
| A6M040025**    | 4            | 2.5   | 11.6                           | 430                     |
| A6M04004**     | 4            | 4   | 12.9                           | 577                     |
| A6M04006**     | 4            | 6   | 14.2                           | 718                     |
| A6M04010**     | 4            | 10  | 16.3                           | 1050                    |
| A6M04016**     | 4            | 16  | 19.3                           | 1390                    |
| A6M04025**     | 4            | 25  | 22.3                           | 1943                    |
| A6M070015**    | 7            | 1.5   | 12.3                           | 478                     |
| A6M070025**    | 7            | 2.5   | 13.6                           | 614                     |
| A6M120025**    | 12           | 2.5   | 17.9                           | 970                     |
| A6M190015**    | 19           | 1.5   | 18.9                           | 1086                    |

\*Eland Part No. shown above designate the sheath colour (\*). For each colour substitute \* for a colour code as listed below. e.g. A6M701006RD = 1mm<sup>2</sup> Red

## Colour Codes

| COLOUR | Red | Orange | White |
|--------|-----|--------|-------|
| CODE   | RD  | OR     | WH    |

## CONDUCTORS

| NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C<br>ohms/km |
|---|--|
| 1.5   | 12.1   |
| 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  |
| 185   | 0.101  |
| 240   | 0.0775   |

## ELECTRICAL CHARACTERISTICS

### Current Carrying Capacity

| NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | SINGLE PHASE AC OR DC<br>Amps | THREE PHASE AC<br>Amps |
|--------------|---|-------------------------------|------------------------|
| 1            | 6   | 57                            | 52                     |
| 1            | 10  | 77                            | 70                     |
| 1            | 16  | 102                           | 92                     |
| 1            | 25  | 133                           | 120                    |
| 1            | 35  | 163                           | 147                    |
| 1            | 50  | 202                           | 181                    |
| 1            | 70  | 247                           | 221                    |
| 1            | 95  | 296                           | 264                    |
| 1            | 120   | 340                           | 303                    |
| 1            | 150   | 388                           | 346                    |
| 1            | 185   | 440                           | 392                    |
| 1            | 240   | 514                           | 457                    |
| 2            | 1.5   | 25                            | -                      |
| 2            | 2.5   | 34                            | -                      |
| 2            | 4   | 45                            | -                      |
| 2            | 6   | 57                            | -                      |
| 2            | 10  | 77                            | -                      |
| 2            | 16  | 102                           | -                      |
| 2            | 25  | 133                           | -                      |
| 3            | 1.5   | -                             | 21                     |
| 3            | 2.5   | -                             | 28                     |
| 3            | 4   | -                             | 37                     |
| 3            | 6   | -                             | 48                     |
| 3            | 10  | -                             | 65                     |
| 3            | 16  | -                             | 86                     |

| NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | SINGLE PHASE AC OR DC<br>Amps | THREE PHASE AC<br>Amps |
|--------------|---|-------------------------------|------------------------|
| 3            | 25  | -                             | 112                    |
| 4            | 1.5   | -                             | 21                     |
| 4            | 2.5   | -                             | 28                     |
| 4            | 4   | -                             | 37                     |
| 4            | 6   | -                             | 47                     |
| 4            | 10  | -                             | 64                     |
| 4            | 16  | -                             | 85                     |
| 4            | 25  | -                             | 110                    |
| 7            | 1.5   | 14.5                          | -                      |
| 7            | 2.5   | 19.5                          | -                      |
| 12           | 2.5   | 16                            | -                      |
| 19           | 1.5   | 10                            | -                      |

## Voltage Drop

| NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | SINGLE PHASE AC OR DC<br>mV/A/M | THREE PHASE AC<br>mV/A/M |
|--------------|---|---------------------------------|--------------------------|
| 1            | 6   | 7                               | 6                        |
| 1            | 10  | 4.2                             | 3.6                      |
| 1            | 16  | 2.6                             | 2.3                      |
| 1            | 25  | 1.65                            | 1.45                     |
| 1            | 35  | 1.2                             | 1.05                     |
| 1            | 50  | 0.91                            | 0.79                     |
| 1            | 70  | 0.64                            | 0.55                     |
| 1            | 95  | 0.49                            | 0.41                     |
| 1            | 120   | 0.41                            | 0.33                     |
| 1            | 150   | 0.34                            | 0.29                     |
| 1            | 185   | 0.29                            | 0.25                     |
| 1            | 240   | 0.25                            | 0.21                     |
| 2            | 1.5   | 28                              | -                        |
| 2            | 2.5   | 17                              | -                        |
| 2            | 4   | 10                              | -                        |
| 2            | 6   | 7                               | -                        |
| 2            | 10  | 4.2                             | -                        |
| 2            | 16  | 2.6                             | -                        |
| 2            | 25  | 1.65                            | -                        |
| 3            | 1.5   | -                               | 24                       |
| 3            | 2.5   | -                               | 14                       |
| 3            | 4   | -                               | 9.1                      |
| 3            | 6   | -                               | 6                        |
| 3            | 10  | -                               | 3.6                      |
| 3            | 16  | -                               | 2.3                      |
| 3            | 25  | -                               | 1.45                     |

## Voltage Drop

| NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | SINGLE PHASE AC OR DC<br>mV/A/M | THREE PHASE AC<br>mV/A/M |
|--------------|---|---------------------------------|--------------------------|
| 4            | 1.5   | -                               | 24                       |
| 4            | 2.5   | -                               | 14                       |
| 4            | 4   | -                               | 9.1                      |
| 4            | 6   | -                               | 6                        |
| 4            | 10  | -                               | 3.6                      |
| 4            | 16  | -                               | 2.3                      |
| 4            | 25  | -                               | 1.45                     |
| 7            | 1.5   | 28                              | -                        |
| 7            | 2.5   | 17                              | -                        |
| 12           | 2.5   | 17                              | -                        |
| 19           | 1.5   | 28                              | -                        |

\*Method of cable support should withstand a similar temperature and duration to that of the cable.