

# BS 5308 Part 1 Type 1 ICAM XLPE - LSZH Instrumentation Cable



Eland Product Group: I

## APPLICATION

BS 5308 cables are designed to carry communication and control signals in a variety of installation types including those found in the petrochemical industry. The signals can be of analogue, data or voice type and from a variety of transducers such as pressure, proximity or microphone. Part 1 Type 1 cables are generally designed for indoor use and in environments where mechanical protection is not required.

## CONSTRUCTION

### Conductor

Class 1 solid copper conductor according to BS EN 60228

(previously BS 6360)

Class 2 stranded copper conductor according to BS EN 60228

(previously BS 6360)

Class 5 flexible copper conductor according to BS EN 60228

(previously BS 6360)

### Insulation

MICA Tape + XLPE (Cross-Linked Polyethylene)

### Binder Tape

PET (Polyester Tape)

### Screen

PET (Polyester Tape)

AL/PET (Aluminium/Polyester Tape)

### Drain Wire

Tinned copper

### Sheath

LSZH (Low Smoke Zero Halogen) Type LTS3 according to BS 7655

## CABLE STANDARDS

BS/PAS 5308, BS EN 60228, BS 6234, BS EN 50363,  
BS EN/IEC 60331-1, BS EN/IEC 60332-3-24



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 (U<sub>o</sub>/U)

300/500V

### Operating Temperature

+90°C

### Temperature Rating

0°C to +50°C

### Sheath Colour

● Red ● Black

## DIMENSIONS

## Individually and Collectively Screened

| ELAND PART NO.  | NO. OF PAIRS/TRIPLE | NOMINAL GROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL OVERALL DIAMETER<br>mm |
|-----------------|---------------------|---|--------------------------------|
| IFRP1T1IL**0205 | 2P                  | 0.5   | 12.2                           |
| IFRP1T1IL**0210 | 2P                  | 1   | 12.9                           |
| IFRP1T1IL**0215 | 2P                  | 1.5   | 14.7                           |
| IFRP1T1IL**0225 | 2P                  | 2.5   | 16.1                           |
| IFRP1T1IL**0275 | 2P                  | 0.75  | 13                             |
| IFRP1T1IL**0305 | 3P                  | 0.5   | 12.9                           |
| IFRP1T1IL**0310 | 3P                  | 1   | 13.7                           |
| IFRP1T1IL**0315 | 3P                  | 1.5   | 15.6                           |
| IFRP1T1IL**0325 | 3P                  | 2.5   | 17.4                           |
| IFRP1T1IL**0375 | 3P                  | 0.75  | 13.9                           |
| IFRP1T1IL**0505 | 5P                  | 0.5   | 15.5                           |
| IFRP1T1IL**0510 | 5P                  | 1   | 16.7                           |
| IFRP1T1IL**0515 | 5P                  | 1.5   | 19.7                           |
| IFRP1T1IL**0525 | 5P                  | 2.5   | 21.6                           |
| IFRP1T1IL**0575 | 5P                  | 0.75  | 16.9                           |
| IFRP1T1IL**1005 | 10P                 | 0.5   | 22.6                           |
| IFRP1T1IL**1010 | 10P                 | 1   | 24                             |
| IFRP1T1IL**1015 | 10P                 | 1.5   | 27.6                           |
| IFRP1T1IL**1025 | 10P                 | 2.5   | 30.5                           |
| IFRP1T1IL**1075 | 10P                 | 0.75  | 24.3                           |
| IFRP1T1IL**1505 | 15P                 | 0.5   | 25.9                           |
| IFRP1T1IL**1510 | 15P                 | 1   | 27.6                           |
| IFRP1T1IL**1515 | 15P                 | 1.5   | 32                             |
| IFRP1T1IL**1525 | 15P                 | 2.5   | 35.4                           |
| IFRP1T1IL**1575 | 15P                 | 0.75  | 28                             |
| IFRP1T1IL**2005 | 20P                 | 0.5   | 29.1                           |
| IFRP1T1IL**2010 | 20P                 | 1   | 31                             |
| IFRP1T1IL**2015 | 20P                 | 1.5   | 36.1                           |
| IFRP1T1IL**2025 | 20P                 | 2.5   | 40.5                           |
| IFRP1T1IL**2075 | 20P                 | 0.75  | 31.7                           |
| IFRP1T1IL**3005 | 30P                 | 0.5   | 34.4                           |
| IFRP1T1IL**3010 | 30P                 | 1   | 36.7                           |
| IFRP1T1IL**3015 | 30P                 | 1.5   | 43                             |
| IFRP1T1IL**3025 | 30P                 | 2.5   | 47.7                           |
| IFRP1T1IL**3075 | 30P                 | 0.75  | 37.2                           |

P = Pairs

\*Eland Part No. shown above designate the sheath colour (\*). For each colour substitute \* for a colour code as listed below. e.g. IFRP1T1ILRD0205 = 0.5mm<sup>2</sup> Red

## Colour Codes

| COLOUR | Black | Red |
|--------|-------|-----|
| CODE   | BK    | RD  |

## ELECTRICAL CHARACTERISTICS

### Individually and Collectively Screened Cables

| NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | MUTUAL CAPACITANCE<br>pF/m         |   |   | MINIMUM INSULATION RESISTANCE AT 20°C<br>Gohms/km | MAXIMUM L/R RATIO<br>μH/ohms |
|---|------------------------------------|---|---|---|------------------------------|
|   | Cables with Collective Screen Only | 1 Pair, 2 Pairs, 1 Triple Collectively Screened | Cables with Individually Screened Pairs |   |                              |
| 0.5   | 75                                 | 115   | 115                                     | >5  | 25                           |
| 0.75  | 75                                 | 115   | 115                                     | >5  | 25                           |
| 1   | 75                                 | 115   | 115                                     | >5  | 25                           |
| 1.5   | 85                                 | 120   | 120                                     | >5  | 40                           |
| 2.5   | 85                                 | 120   | 120                                     | >5  | 65                           |

## CONDUCTORS

| NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | CONDUCTOR CLASS | MAXIMUM DC RESISTANCE OF CONDUCTOR AT 20°C<br>ohms/km |
|---|-----------------|---|
| 0.5   | 5               | 39  |
| 0.75  | 5               | 26  |
| 1   | 1               | 18.1  |
| 1.5   | 2               | 12.1  |
| 2.5   | 2               | 7.41  |