**Caledonian**
Any inquiries, please feel free to contact
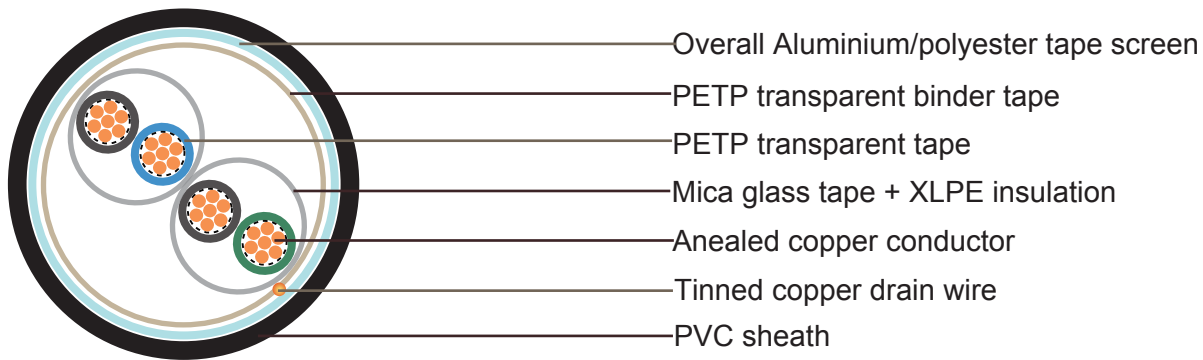sales@caledoniancable.com

ISO 9001:2008 REGISTERED FIRM

# BS5308 Cable Part 1 Type1 MG-XLPE-OS-LSOH

## Application

The unarmoured fire resistant versions (Part 1 Type 1) are typically used in chemical and process industries where there is danger of fire.

## Construction



- Overall Aluminium/polyester tape screen
- PETP transparent binder tape
- PETP transparent tape
- Mica glass tape + XLPE insulation
- Anealed copper conductor
- Tinned copper drain wire
- PVC sheath

| | |
|---|---|
| **Conductor** | Annealed or tinned copper, Class 2 |
| **Insulation** | Mica glass tape, XLPE (Cross Linked Polyethylene), or PE (optional) |
| **Pairing** | Two insulated conductors uniformly twisted together with a lay not exceeding 100mm |
| **Colour code** | See technical information |
| **Binder tape** | PETP transparent tape |
| **Collective screen** | Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm² |
| **Outer sheath** | LSOH(Low Smoke Zero Halogen) sheath<br>Flame retardant to IEC60332-3-22<br>Fire resistant to IEC60331<br>Halogen free to IEC60754-1<br>Low smoke emission to IEC61034-1-2 |
| **Sheath colour** | Black or blue |

# Mechanical and Electrical Properties

**Operating temperature:** -20°C up to + 90°C( fixed installation)

   0°C  to +50°C(during operation )

**Minimum bending radius:**  5 x overall diameter

| Conductor Area Size | mm$^2$ | 0.5 | 0.75 | 1.0 | 1.5 |
|---|---|---|---|---|---|
| Conductor Stranding | No. x mm | 7 x 0.3 | 7 x 0.37 | 7 x 0.44 | 7 x 0.53 |
| Conductor resistance max | ohm/km | 36 | 24.5 | 18.1 | 12.1 |
| Insulation resistance min | Gohm/km | 5 | 5 | 5 | 5 |
| Capacitance unbalance at 1 kHz(pair to pair screen) | pF/250m | 250 | | | |
| Max. Mutual Capacitance @ 1 kHz forNon OS or OS cables (except one-pair and two-pairs) | pF/m | 115 | 115 | 115 | 115 |
| Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair) | pF/m | 75 | 75 | 75 | 75 |
| Max. L/R Ratio for adjacent cores(Inductance/ Resistance) | µH/ohm | 25 | 25 | 25 | 40 |
| Test voltage — Core to core | V | 1000 | 1000 | 1000 | 1000 |
| Test voltage — Core to screen | V | 1000 | 1000 | 1000 | 1000 |
| Rated voltage max | V | 300/500 | 300/500 | 300/500 | 300/500 |

# Parameter

| No.of Pairs | No.and Dia. of Wires | Nominal Conductor Cross-Sectional Area | Nominal Thickness of Insulation | Nominal Thickness of Sheath | Nominal Dia. of Cable | Approx. Weight |
|---|---|---|---|---|---|---|
| | no./mm | mm$^2$ | mm | mm | mm | kg/km |
| 1 | 7/0.44 | 1 | 0.6 | 1.4 | 7.8 | 89 |
| 2 | 7/0.44 | 1 | 0.6 | 1.4 | 9.2 | 121 |
| 5 | 7/0.44 | 1 | 0.6 | 1.4 | 13.9 | 298 |