



# Caledonian

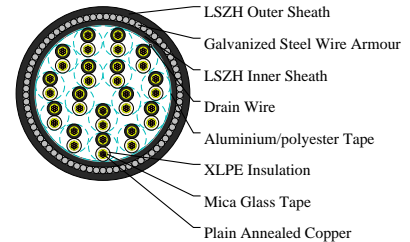
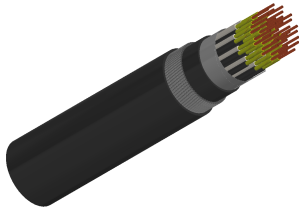
FIREFLIX Fire Resistant Instrumentation & Data Cables

www.caledonian-cables.com

marketing@caledonian-cables.com

## Fire Resistant Overall Screened, Armoured Instrumentation Cables (16 Pairs)

RE-2X(St)HSWAH...CI



### APPLICATIONS

The armoured LSZH sheathed cables are generally used when the risk of mechanical damage is increased.

The galvanized steel wire armour provides excellent protection. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

### STANDARDS

Basic design to BS EN 50288-7 (formerly BS 5308)

### FIRE PERFORMANCE

|   |   |
|---|---|
| Circuit Integrity   | IEC 60331-21; BS 6387 CWZ (Optional); BS EN 50200 (PH30/PH60/PH120) |
| Flame Retardance (Single vertical wire or cable test)                     | IEC 60332-1-2; EN 60332-1-2   |
| Reduced Fire Propagation (Vertically-mounted bundled wires & cables test) | IEC 60332-3-24; EN 60332-3-24                                       |
| Halogen Free  | IEC 60754-1; EN 50267-2-1   |
| No Corrosive Gas Emission   | IEC 60754-2; EN 50267-2-2   |
| Minimum Smoke Emission  | IEC 61034-2; EN 61034-2   |

### VOLTAGE RATING

500V

### CABLE CONSTRUCTION

Conductor: Plain or metal coated copper wire, solid, stranded or flexible according to IEC 60228 class 1, 2 and class 5.

Fire Barrier: Mica glass tape.

Insulation: Extruded XLPE compound according to EN 50290-2-29. LSZH, PE, PP compound can be offered as options.



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Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm ( $\leq 1.5\text{mm}^2$ ) or 150mm (for  $2.5\text{mm}^2$ ).

Binder Tape: PETP transparent tape.

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs with metallic side down in contact with tinned copper drain wire,  $0.5\text{mm}^2$ . Copper braid screen or aluminium/polyester tape combined with copper braid screen can be offered as option.

Inner Sheath: Thermoplastic LSZH compound.

Armouring: Galvanized steel wire armour.

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered).

Outer Sheath Option: UV resistance, hydrocarbon resistance, oil resistance, anti-rodent and anti-termite properties can be offered as option.

### COLOUR CODE

Insulation Colour: Colours and/or additional ring markings and/or symbols achieved by the use of coloured insulation or by a coloured surface using extrusion, printing or painting.

Outer Sheath: Black. Other colours can be offered upon request.

### PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation:  $-30^\circ\text{C}$  -  $+90^\circ\text{C}$

Temperature range fixed installation:  $-5^\circ\text{C}$  -  $+50^\circ\text{C}$

Maximum short circuit temperature (5 Seconds):  $250^\circ\text{C}$

Minimum bending radius: 10 x Overall Diameter

### Electrical Properties

Conductor Area Size:  $2.5\text{mm}^2$

Insulation Thickness (Nominal): 0.7 mm

Insulation Thickness (Minimum): 0.53 mm

Conductor Resistance ( $20^\circ\text{C}$ ): 7.4 ohm/km

Minimum Insulation Resistance ( $20^\circ\text{C}$ ): 1000 Mohm/km

Maximum Mutual Capacitance: 250 nf/km

Capacitance Unbalance: 500 pf/500m

Maximum L/R (Ratio): 60  $\mu\text{H}/\text{Ohm}$

Operating Voltage: 500 V

Dielectric Strength for 1 Minute AC :  $\geq 2000\text{ V}$

Dielectric Strength for 1 Minute DC :  $\geq 3000\text{ V}$

### DIMENSION AND PARAMETERS

| No. of Pairs<br>× Cross-sectional<br>Area | Conductor<br>Class | Nominal<br>Insulation<br>Thickness | Nominal<br>Inner Sheath<br>Thickness | Nominal<br>Armour Wire<br>Diameter | Nominal<br>Outer<br>Sheath<br>Thickness | Approx.<br>Overall<br>Diameter | Approx.<br>Weight |
|---|--------------------|------------------------------------|--------------------------------------|------------------------------------|---|--------------------------------|-------------------|
| No. × $\text{mm}^2$                       |                    | mm                                 | mm                                   | mm                                 | mm                                      | mm                             | kg/km             |



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|          |   |     |     |     |     |      |      |
|----------|---|-----|-----|-----|-----|------|------|
| 16x2x2.5 | 2 | 0.7 | 1.7 | 2.0 | 2.0 | 44.5 | 3803 |
|----------|---|-----|-----|-----|-----|------|------|



Rated voltage



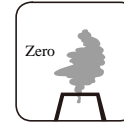
Circuit Integrity  
IEC 60331-21/BS 6387



EN 50288-7



Flame Retardancy  
BS/EN/IEC 60332-1-2



Halogen Free  
IEC 60754-1



Low Corrosivity  
IEC 60754-2



Low Smoke Emission  
EN 61034-2



Reduced Fire Propagation  
EN 60332-3-24