



# Caledonian

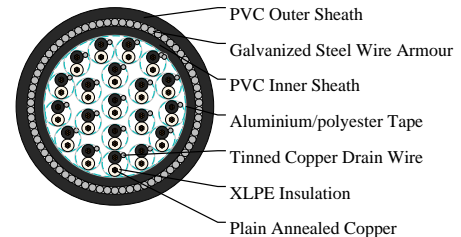
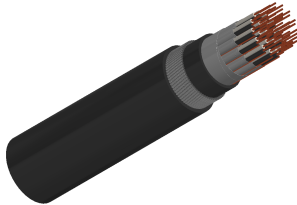
FIREGUARD Flame Retardant Instrumentation & Data Cables

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## Flame Retardant Individual and Overall Screened, Armoured Instrumentation Cables (20P0.5)

RE-2X(ST)YSWAY PIMF



### APPLICATIONS

The armoured XLPE versions are generally used when the risk of mechanical damage is increased. The galvanized steel wire armour provides excellent protection. Generally used within industrial process manufacturing plants for communication, data and voice transmission signals and services.

### STANDARDS

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

### FIRE PERFORMANCE

|  |                 |
|--|-----------------|
| Flame Retardance (Single Vertical Wire Test) | BS EN 60332-1-2 |
|--|-----------------|

### VOLTAGE RATING

500V

### CABLE CONSTRUCTION

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

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

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

Individual Screen: Aluminium/polyester tape is applied over the laid up pairs with metallic side down in contact with tinned copper drain wire,  $0.5\text{mm}^2$ .

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 PVC compound according to EN 50290-2-22.

Armouring: Galvanized steel wire armour.

Outer Sheath: Thermoplastic PVC compound according to EN 50290-2-22.

Outer Sheath Option: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti-rodent and anti-termite properties can be offered as option. Compliance to fire performance standard (IEC



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60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

### 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°C - +90°C

Temperature range fixed installation: -5°C - +50°C

Maximum short circuit temperature (5 Seconds): 250°C

Minimum bending radius: 10 x Overall Diameter

### Electrical Properties

Conductor Area Size:0.5mm<sup>2</sup>

Insulation Thickness (Nominal):0.6mm

Insulation Thickness (Minimum):0.44mm

Conductor Resistance (20°C):36.7ohm/km

Minimum Insulation Resistance (20°C):1000Mohm/km

Maximum Mutual Capacitance:250nf/km

Capacitance Unbalance:500pf/500m

Maximum L/R (ratio):25µH/ohm

Operating Voltage:500V

Dielectric Strength for 1 Minute:AC>=2000V DC>=3000V

### 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. ×mm <sup>2</sup>                      |                    | mm                                 | mm                                   | mm                                 | mm                                      | mm                             | kg/km             |
| 20x2x0.5                                  | 2                  | 0.6                                | 1.5                                  | 1.25                               | 1.8                                     | 29.4                           | 1515              |



Rated voltage



EN 50288-7



Flame Retardancy  
BS EN 60332-1-2