



# Caledonian

FIREGUARD Flame Retardant Instrumentation & Data Cables

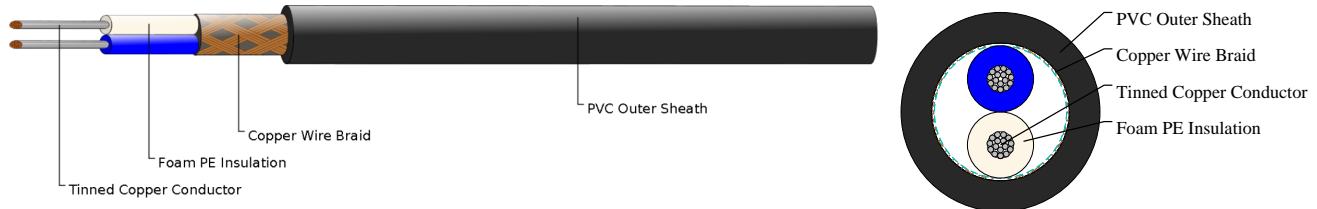
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## Flame Retardant RS485 Databus Cables

Multipair RS 485 Individual & Overall Screened Databus Cable

RE-02Y(St)CY PiMF / RE-02YS(St)CY PiMF 1P0.5



## APPLICATIONS

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

## STANDARDS

Basic design adapted to EIA/TIA 485

## FIRE PERFORMANCE

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

## CABLE CONSTRUCTION

Conductors: Tinned copper wire, stranded according to IEC 60228 class 2.

Insulation: Foam PE or foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Individual Screen: Individual aluminium/polyester tape.

Overall Screen: Copper wire braid.

Outer Sheath: Thermoplastic PVC compound.

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

## PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

## Electrical Properties



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Dielectric test: 1000 V r.m.s. for 5' (core-core)

1000 V r.m.s. for 5' (core-screen)

Impedance: 120  $\Omega$

Capacitance: 45 nF/km conductor to conductor

90 nF/km conductor to shield

## DIMENSION AND PARAMETERS

| No. of Pairs | Nominal Cross-sectional Area | No./Nominal Diameter of Strands | Nominal Insulation Thickness | Nominal Sheath Thickness | Approx. Overall Diameter | Approx. Weight |
|--------------|------------------------------|---------------------------------|------------------------------|--------------------------|--------------------------|----------------|
|              | mm <sup>2</sup>              | no./mm                          | mm                           | mm                       | mm                       | kg/km          |
| 1            | 0.5                          | 16/0.2                          | 0.7                          | 1.1                      | 7                        | 69             |



Rated voltage



EIA/TIA 485



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