



# Caledonian

FIREFLIX Fire Resistant Instrumentation & Data Cables

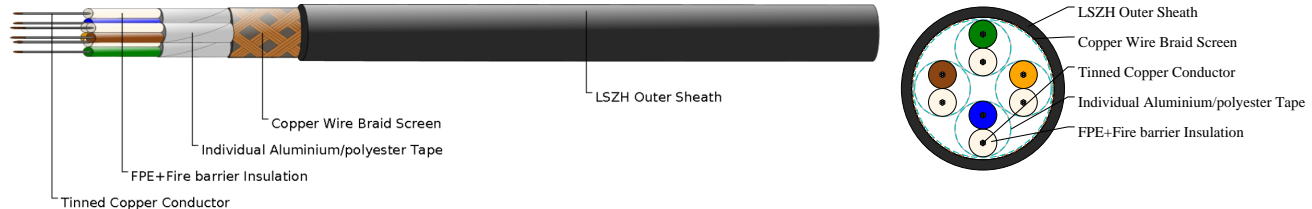
www.caledonian-cables.com

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## Fire Resistant RS 485 Databus Cables

Multipair RS 485 Individual & Overall screened Databus Cable

RE-m02Y(St)CH PiMF-FR / RE-m02YS(St)CH-FR PiMF-FR 4P0.22



## APPLICATIONS

The cables are designed for RS 485 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)	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
Circuit Integrity	IEC 60331-23; BS 6387 CWZ (Optional)

## CABLE CONSTRUCTION

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

Insulation: FPE+Fire barrier.

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 Fire Barrier (optional).

Overall Screen: Copper wire braid.

Outer Sheath: Halogen-free flame retardant 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.



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## 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

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

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

Impedance: 120Ω

Capacitance: 45 nF/km conductor to conductor

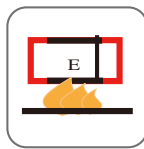
90 nF/km conductor to shield

## 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
4	0.22	7/0.2	1.2	1.1	14	266



Rated voltage



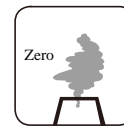
Circuit Integrity  
IEC 60331-23/BS 6387(Optional)



EIA/TIA 485



Flame Retardancy  
BS EN 60332-1-2



Halogen Free  
IEC 60754-1



Low Corrosivity  
IEC 60754-2



Low Smoke Emission  
IEC 61034-2



Reduced Fire Propagation  
EN 60332-3-24