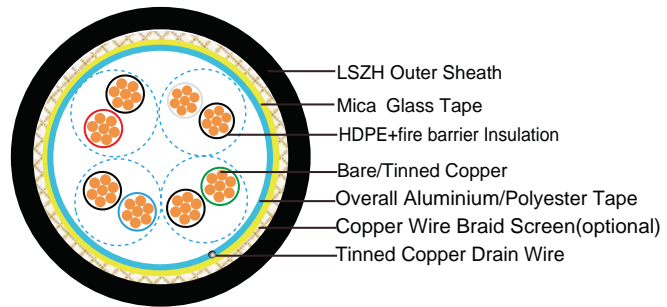
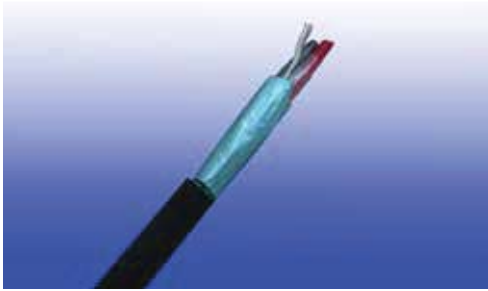


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## Fire Resistant RS 485 Databus Cables to IEC60331-21

### 2x2x0.5mmsq Solid Cu/MICA/PE/Fire Barrier/OS+DW/LSZH



RS 485

#### APPLICATION

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

Circuit Integrity	IEC 60331-23; BS 6387 CWZ (Optional)
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

#### CABLE CONSTRUCTION

##### MULTIPAIR RS 485 OVERALL SCREENED DATABUS CABLE

**Conductors:** Bare/tinned copper wire, stranded according to IEC 60228 class 1 or class 2.

**Insulation:** Mica glass tape PE or PE +SR.

**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.

**Overall Fire Barrier:** Mica glass tape.

**Overall Screen:** Aluminum/polyester tape with tinned copper drain wire.



# Caledonian

## FIREFLIX Fire Resistant Instrumentation & Data Cables

[www.caledonian-cables.net](http://www.caledonian-cables.net)   [www.addison-cables.com](http://www.addison-cables.com)

**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-termites properties can be offered as option.

### **MULTIPAIR RS 485 OVERALL DOUBLE SCREENED DATABUS CABLE**

**Conductors:** Bare/tinned copper wire, stranded according to IEC 60228 class 1 or class 2.

**Insulation:** Mica glass tape PE or PE +SR.

**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.

**Overall Fire Barrier:** Mica glass tape.

**Overall Screen:** Aluminium/polyester tape+copper wire braid.

**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-termites properties can be offered as option.

### **MULTIPAIR RS 485 CWB OVERALL SCREENED DATABUS CABLE**

**Conductors:** Bare/tinned copper wire, stranded according to IEC 60228 class 1 or class 2.

**Insulation:** Mica glass tape PE or PE +SR.

**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.

**Overall Fire Barrier:** Mica glass tape.

**Overall Screen:** Copper wire braid.

**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-termites properties can be offered as option.

## 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
Nom. mutual capacitance:	45+/-5 nF/km conductor to conductor
	80+/-10 nF/km conductor to shield
Nom. conductor resistance@ 20°C	36.8 ohm/km
Nominal Velocity of Propagation:	66%
Nominal attenuation@1Mhz:	2 dB/100m

## CONSTRUCTION PARAMETERS

### Multipair RS 485 Overall Screened Databus Cable

#### RE-m02Y(St)H-FR/ RE-m02YS(St)H-FR

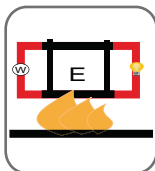
No. of Pair	Nominal Cross Sectional Area	No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight
No.	mm <sup>2</sup>	No./mm	mm	mm	mm	kg/km
1	0.22	7/0.2	1.2	1.1	6.6	73
2	0.22	7/0.2	1.2	1.1	10.9	136
4	0.22	7/0.2	1.2	1.1	12.6	214
1	0.50	1/0.8	1.2	1.1	7.2	88
2	0.50	1/0.8	1.2	1.1	13.5	165
4	0.50	1/0.8	1.2	1.1	14.9	266
1	0.75	24/0.2	1.2	1.1	7.6	100
2	0.75	24/0.2	1.2	1.1	12.8	189
4	0.75	24/0.2	1.2	1.1	15.0	309
1	1.00	30/0.2	1.2	1.1	7.8	106
2	1.00	30/0.2	1.2	1.1	13.1	199
4	1.00	30/0.2	1.2	1.1	15.3	328



Rated Voltage



Standard



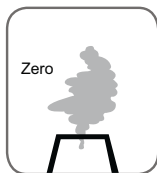
Circuit Integrity  
IEC 60331-23/BS 6387(Optional)



Flame Retardancy  
BS EN 60332-1-2



Reduced Fire Propagation  
EN 60332-3-24



Halogen Free  
IEC 60754-1



Low Corrosivity  
IEC 60754-2



Low Smoke Emission  
IEC 61034-2