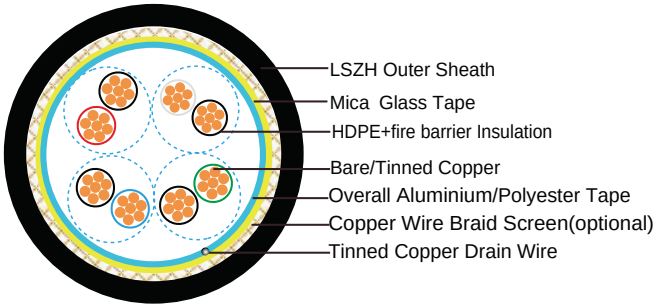
Fire Resistant RS 485 Databus Cables to IEC60331-21

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 1or class2.
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.

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.

MULTIPAIR RS 485 OVERALL DOUBLE SCREENED DATABUS CABLE

Conductors: Bare/tinned copper wire, stranded according to IEC 60228 class 1or class2.
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-termite 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 1or class2.
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-termite 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

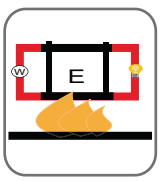
Multipair RS 485 Overall Screened Databus Cable

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^2	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

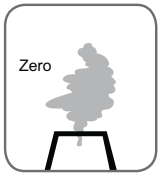
Standard



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