



Caledonian

Railway Cables

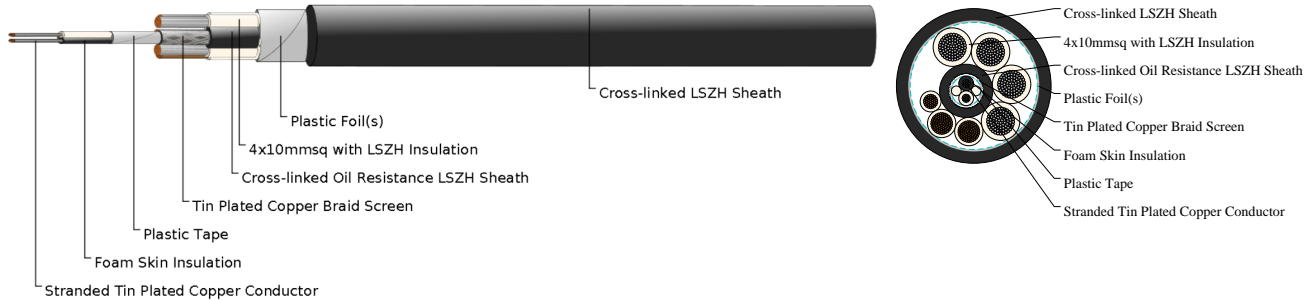
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Firerail Databus Cables For Railway Applications

Integrated 9 Cores 0.75mm sq UIC Databus Cables

FRA-UIC-4C10S+2C6S+1C2.5S+2C0.75S



APPLICATIONS

The cables are used as connecting cables to transmit digital signals inside railway rolling stocks.

STANDARDS

DIN 5510-1

CABLE CONSTRUCTION

For 9 cores UIC databus cables:

4 cores: 10 mm² stranded tinned copper conductor with LSZH insulation.

Combined Element: 3 cores(with Cu-strand 2 x 6mm², 1 x 2.5mm²) are twisted with a filling element to a combined element.

Wrapping: Overlapped plastic-foil(s).

Elements sheaths: TPE.

UIC Data Bus 0.75 mm²: Two foam skin insulated tinned copper stranded conductors are twisted together with two filling elements to a pair.

Wrapping: Overlapped plastic-foil(s).

Screen: Tinned copper wire braid screen.

Element sheaths: TPE.

Wrapping: Overlapped plastic-foil(s).

Stranding: 4 strands are twisted to a core together with 3 cored element, the UIC data bus and two fillers.

Core Wrapping: Overlapped plastic-foil(s).

Outer Sheath: Cross-linked oil resistant LSZH compound.

PHYSICAL AND THERMAL PROPERTIES

Minimum Bending Radius: 6xOD (single); 12xOD (multiple)

Temperature Range: -40°C to +90°C (during operation); -20°C +50°C (during installation)

Electrical Properties

Electrical Characteristics at 20°C:

Nominal Cross Section: 0.75 mm²



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No of Strand/Strand Diameter:19/0.22
 Maximum Conductor Resistance:26.7 Ω/km
 Impedance@1.0-10MHz:120+/-12 Ω
 Maximum Attenuation @1MHz:10 dB/km
 Maximum Attenuation @1.5MHz:13 dB/km
 Maximum Attenuation @2MHz:14 dB/km
 Maximum Attenuation @3MHz:18 dB/km
 Maximum Transfer Impedance:30 mΩ/m
 Nominal Voltage Rating:300 V

Nominal Cross Section:2.5 mm²
 No of Strand/Strand Diameter:37/0.29
 Maximum Conductor Resistance:8.21 Ω/km

Nominal Cross Section:6 mm²
 No of Strand/Strand Diameter:84/0.3
 Maximum Conductor Resistance:3.39 Ω/km

Nominal Cross Section:10 mm²
 No of Strand/Strand Diameter:80/0.4
 Maximum Conductor Resistance:1.95 Ω/km

DIMENSION AND PARAMETERS

No. of Cores × Cross-sectional Area	Nominal Sheath Thickness	Nom. Overall Diameter	Approx. Weight
No.×mm ²	mm	mm	kg/km
4 x 10+2 x 6+1 x 2.5+2 x 0.75	1.8	25	917



Fire Retardant
 NF C32-070-2-2(C1)
 IEC60332-3-24/EN50266-2-4



Flame Retardant
 NF C32-070-2-1(C2)
 IEC60332-1-2/EN50265-2-1



Highly Flexible



Impact Resistant



Low Corrosivity
 IEC60754-2/EN50267-2-2/3
 NF C32-074/NF C20-453



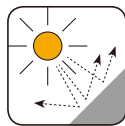
Low Smoke Emission
 IEC 61034-1 / EN 50268-2
 NF C32-073/NF C 20-902



Low Toxicity



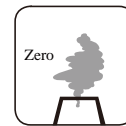
Oil Resistant



UV Resistant



Water Resistant



Zero Halogen
 IEC 60754-1/EN 50267-2-1
 NF C20-454