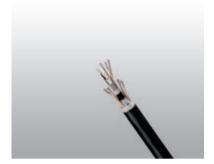
# Integrated 9/11/18/20 Cores 0.75mm<sup>2</sup> UIC Databus Cables

## **№** Applications

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

### Standards

DIN 5510-1



### **№** 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 2×6mm², 1×2.5mm²) are twisted with a filling element to a combined element. Wrapping: Overlapped plasticfoil(s). Elements sheaths: TPE



• UIC Data Bus 0.75mm<sup>2</sup>: 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.

#### For 11 cores UIC databus cables:

- 4 cores: 10 mm² stranded tinned copper conductor with LSZH insulation.
- Combined Element: 5 cores (with Cu-strand 2×6mm², 1×2.5mm² and 2×1.0 mm²) are twisted with a filling element to form a combined element.



Wrapping: Overlapped plastic-foil(s).

Elements sheaths: TPE.

• UIC Data Bus 0.75mm²: Two foam skin insulated tinned copper r 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 5 cored element, the UIC data bus and two fillers.
- Core Wrapping: Overlapped plastic-foil(s).
- Outer Sheath: Cross-linked oil resistant LSZH compound.



#### For 18/20 cores UIC databus cables:

- Star Quad: Four LSZH insulated 1mm<sup>2</sup> stranded tinned copper conductors are twisted to form a star guad.
- UIC Data Bus 0.75mm2: Two foam skin insulated tinned copper stranded conductors are twisted together with two filling elements to form a pair.

Wrapping: Overlapped plastic-foil(s) Screen: Tinned copper wire braid screen

Element sheaths: TPE.

Wrapping: Overlapped plastic-foil(s)

- Stranding: 4 star quads are stranded together with 2 or 4 UIC data bus cable and several fillers.
- Core Wrapping: Overlapped plastic-foil(s). • Screen: Tinned copper-wire braid screen.
- Outer Sheath: Cross-linked oil resistant LSZH compound.



Nominal Cross Section	mm²	0.75	1	2.5	6	10
No of Strand/Strand Diameter		19/0.22	19/0.25	37/0.29	84/0.3	80/0.4
Maximum Conductor Resistant	Ω/km	26.7	20	8.21	3.39	1.95
Impedance@1.0-10MHz	Ω	120+/-12	-	-	-	-
Maximum Attenuation @1MHz	dB/km	10	-	-	-	-
Maximum Attenuation @1.5MHz	dB/km	13	-	-	-	-
Maximum Attenuation @2MHz	dB/km	14	-	-	-	-
Maximum Attenuation @3MHz	dB/km	18	-	-	-	-
Maximum Transfer Impedance	mΩ/m	30	-	-	-	-
Nominal Voltage Rating	V	300	-	-	-	-

## ■ Mechanical and Thermal Properties

- Minimum Bending Radius: 6×OD (single); 12×OD (multiple)
- Temperature Range: -40°C to +90°C (during operation); -20°C +50°C (during installation)

### Dimensions and Weight

Cable Code	No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
RD-UIC-4C10S+2C6S+1C2.5S+2C0.75S	4×10+2×6+1×2.5+2×0.75	1.8	25	917
RD-UIC-4C10S+2C6S+1C2.5S+2C1S+2C0.75S	4×10+2×6+1×2.5+2×1.0+2×0.75	1.8	25	969
RD-UIC-4Q1S+2C0.75S	4×4×1.0+ 2×0.75	1.8	18.5	498
RD-UIC-4Q1S+2P0.75S	4×4×1.0+ 2×2×0.75	1.8	23	530







Flame Retardant NF C32-070-2.1(C2)



Highly Flexible



Fire Retardant NF C32-070-2.2(C1)



**UV** Resistant



Zero Halogen IEC 60754-1/NF C20-454



Weather Resistant



Low Smoke Emission IEC 61034/NFC20-902 EN 50268/NF C32-073



→ Cross-linked LSZH Sheath

➤ Plastic Foil(s)

➤ Star Quad

► Tinned Copper Wire Braid Screen

≥ 2×0.75mm<sup>2</sup> Data Bus with Foam Skin Insulation



Low Corrosivity EN 50267-2-2/NF C32-074



Low Toxicity