



MVB (Multifunction Vehicle Bus) Cables (Redundant Version)

Applications

The cables are designed for permanent installation inside of rolling stock to connect fixed parts. A typical application is a communication system in a locomotive. The system uses a wire backed bus system to the TCN standard for control and instrumentation and for diagnostics. This bus system consists of the rail bus WTB (Wired Train Bus) and the road bus MVB (Multifunction Vehicle Bus) which are connected via redundant gateways.

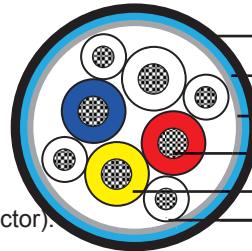


Standards

- DIN 5510-2

Construction

- Conductors: Stranded tinned copper conductor according to IEC 60228 class 5.
- Insulation: 0.6mm foam/foam skin PE (for 0.5sqmm conductor), 0.2mm PE (for 0.25sqmm conductor).
- Core Wrapping: Plastic tape(s).
- EMC Screen: Tinned copper braid.
- Outer Sheath: Cross-linked oil resistant LSZH compound.



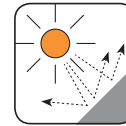
- Cross-linked Oil Resistance LSZH Sheath
- Tinned Copper Braid Screen
- Plastic Tape
- Stranded Tinned Copper Conductor
- Foam/Foam-skin Insulation
- PE Insulation



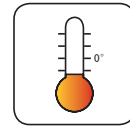
Impact Resistant



Highly Flexible



UV Resistant



Weather Resistant

Electrical Characteristics at 20°C

Nominal Cross Section	mm ²	0.5
Maximum Conductor Resistance	Ω/km	41
Impedance @0.75-3MHz	Ω	120+/-12
Maximum Attenuation @1.5MHz	dB/km	17
Maximum Attenuation @3MHz	dB/km	25
Maximum Transfer Impedance	mΩ/m	20
Nominal Voltage Rating	V	300

Mechanical and Thermal Properties

- Minimum Bending Radius: 6×OD (single); 10×OD (multiple)
- Temperature Range: -40°C to +100°C (during operation); -20°C +50°C (during installation)

Dimensions and Weight

Cable Code	No. of cores & Nominal Conductor Cross Sectional Area No. × mm ²	Nominal Diameter of Strands No./mm	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
RD-MVB-02YCH-1Q0.5S+4G0.25	1×4×0.5+4×1×0.25	19/0.18	0.6	7.9	95



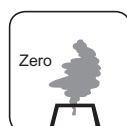
Oil Resistant



Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1



Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266



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



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



Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453



Low Toxicity

