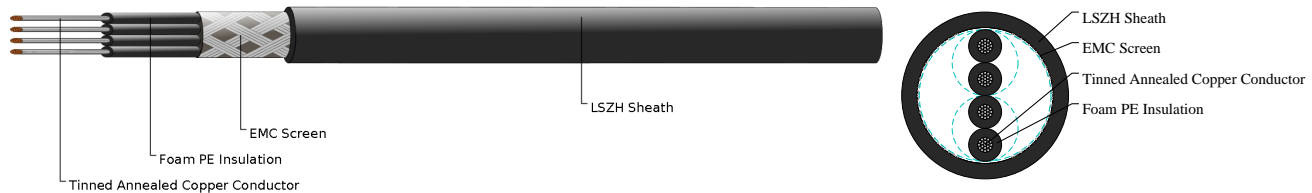




WTB (Wired Train Bus) Cables

FRL-WTB-02YCH-2P0.75S



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.

VOLTAGE RATING

300 V

CABLE CONSTRUCTION

Conductors: Stranded tinned copper conductor according to IEC 60228 class 5

Insulation: Foam PE or foam skin PE

Core Wrapping: Plastic tape(s)

EMC Screen: Tinned copper braid

Outer Sheath: Cross-linked oil resistant LSZH compound

MECHANICAL PROPERTIES

Max. Temperature: 90 °C

Min. Temperature: -40 °C

Bending Radius: 12 x Overall Diameter

CHEMICAL AND ENVIRONMENTAL PROPERTIES

| | |
|------------------------|---|
| EN 60684-2 | No fluorine |
| EN 50305; EN 60811-2-1 | Resistance to mineral oil & fuel oil, acid & alkali |
| EN 50305 | Resistance to ozone |

FIRE PERFORMANCE FOR ROLLING STOCK APPLICATION

| | |
|-------------|--|
| EN 50306-2 | Hazard levels HL1, HL2, HL3 |
| DIN 5510-2 | Protection level 1/2/3/4 |
| BS 6853 | Interior use 1a, 1b, II; Exterior use 1a, 1b, II |
| NF F 16-101 | F0 |



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| | |
|-----------|--|
| EN45545-2 | R15 Interior/ R16 Exterior HL1, HL2, HL3 |
|-----------|--|

FIRE PERFORMANCE IN GENERAL

| | |
|---|---|
| EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2) | Vertical flame propagation for a single insulated wire or cable |
| EN 50266-2-4 + EN 50305; IEC 60332-3-24;NF C 32-070 2.2 (C1); VDE 0472 Teil 804 | Vertical flame spread of vertically mounted bunched wires or cables |
| EN 50268-2; IEC 61034-2; NF C 32-073 ;NF C 20-902; NF F 16 101; VDE 0472 Teil 816 | Low Smoke Emission |
| EN 50267-2-1; IEC 60754-1; NF C 32-074;NF C 20-454; VDE 0472 Teil 815 | Halogen Free |
| EN 50267-2-2/3; IEC 60754-2; NF C 32-074;NF C 20-453; VDE 0472 Teil 813 | Low Corrosivity (Acidity & Conductivity) |
| EN 50305; NF X 70-100; NF F 63 808; TM1-04; BS6853 | Low Toxicity |
| NF F 63 808; BS6853; NF F 16 101 | Smoke Index |
| EN45545-2 | Requirement for fire behavior of materials & components R15/R16 |

DIMENSION AND PARAMETERS

| No. of Pairs × Cross-sectional Area | No./ Nominal Diameter of Strands | Nominal Sheath Thickness | Approx. Overall Diameter | Approx. Weight | Max. Conductance Resistance at 20 °C | Impedance @1-10MHz | Max. Transfer Impedance (Not more than 30MHz) | Max. Attenuation (@1MHz) | Max. Attenuation (@1.5MHz) | Max. Attenuation (@2MHz) | Max. Attenuation (@3MHz) |
|-------------------------------------|----------------------------------|--------------------------|--------------------------|----------------|--------------------------------------|--------------------|---|--------------------------|----------------------------|--------------------------|--------------------------|
| No. ×mm ² | no./mm | mm | mm | kg/km | MΩ × km | Ω | μΩ/m | dB/Km | dB/Km | dB/Km | dB/Km |
| 2×0.75 | 19/0.22 | 1.4 | 11.4 | 150 | 26.7 | 120+/-12 | 30 | 10 | 13 | 14 | 18 |



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Abrasion Retardant



Acid & Alkaline Resistant



Cold Resistant



Corona Resistant



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



IRM 902
Mineral Oil Resistant



IRM 903
Fuel Oil Resistant



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



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



Low Toxicity
EN 50305; NF X70-100/NF
F63 808/TM1-04/BS 6853



Ozone Resistant



Resistance To Soldering Heat



UV Resistant



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