MVB (Multifunction Vehicle Bus) Cables  
FRL-MVB-02YCH-1P0.5S+1G0.5/FRL-MVB-02YCH-2P0.5S

Application
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.

Construction
Conductor
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

Electrical & Mechanical Properties
Nominal Voltage  300 V
Max. Temperature  90 °C
Min. Temperature  -40 °C
Bending Radius  10 × Overall Diameter

Chemical & Environmental Properties
EN 60684-2
EN 50305; EN 60811-2-1
EN 50305
No fluorine
Resistance to mineral oil & fuel oil, acid & alkali
Resistance to ozone
Fire Performance for Rolling Stock Application

EN 50306-2
DIN 5510-2
BS 6853
NF F 16-101

Fire Performance in General

EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2)
EN 50266-2-4 + EN 50305; IEC 60332-3-24;
NF C 32-070 2.2 (C1); VDE 0472 Teil 804
EN 50268-2; IEC 60754-1; NF C 32-074;
NF C 20-453; VDE 0472 Teil 813
EN 50305; NF X 70-100; NF F 63 808; TM1-04; BS6853
NF F 63 808; BS6853; NF F 16 101

FRL-MVB-02YCH-1P0.5S+1G0.5

<table>
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<tr>
<th>Nominal Cross-Sectional Area</th>
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<th>Nominal Sheath Thickness</th>
<th>Nominal Overall Diameter</th>
<th>Nominal Weight</th>
<th>Max. Conductor Resistance</th>
<th>Impedance</th>
<th>Max. Transfer Impedance</th>
<th>Max.Attenuation</th>
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<td>mm²</td>
<td>No/mm</td>
<td>mm</td>
<td>mm</td>
<td>kg/km</td>
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<td>@0.5-2MHz @1MHz @1.5MHz @2MHz @3MHz</td>
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<td>120+/-12</td>
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<td>12.5 15 18 21</td>
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FRL-MVB-02YCH-2P0.5S

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