

## UNITRONIC® TRAIN

Bus cables - MVB and WTB - Electron beam cross-linked for high requirements in railway applications

### Info

Small outer diameters for maximum saving of space and weight

Extremely low attenuation  $\leq 5$  MHz



Rail



Good chemical resistance



Flame-retardant



Halogen-free



Low weight



Oil-resistant



Interference signals



Temperature-resistant



UV-resistant

### Benefits

Good chemical resistance please see Appendix T1

Resistant to mechanical influences in harsh environmental conditions

Extended temperature range

Last Update (26.08.2023)

©2023 Lapp Group - Technical changes reserved

Product Management [www.lappkabel.de](http://www.lappkabel.de)

You can find the current technical data in the corresponding data sheet.

PN 0456 / 02\_03.16

## UNITRONIC® TRAIN

Reduced flame spreading increases the protection against damage to persons and property in the event of a fire  
EMC-optimised design

### Application range

The communication systems WTB (wire train bus) and MVB (multifunction vehicle bus) make up the so-called TCN (train communication network)

UNITRONIC® TRAIN bus cables are designed for use in TCN acc. IEC 61375

MVB according IEC 61375-3-1

WTB according IEC 61375-2-1

For use in railway vehicles and buses, for fixed installations and applications where limited movement may occur

Also applicable within oily environments and areas with increased ambient temperature

### Product features

Fire behaviour according to EN/IEC:

- Halogen-free acc. to EN 60754-1
- No corrosive gases acc. to EN 60754-2
- No fluorine acc. to EN 60684-2
- No toxic gases acc. to EN 50305
- Low smoke density acc. to EN 61034-2
- Flame-retardant acc. to EN 60332-1-2
- No flame propagation acc. to EN 60332-3-25

Fire behaviour according to NF:

- Toxicity of gases acc. to NF X 70-100
- Low smoke density acc. to NF X 10-702
- No flame propagation acc. to NF C 32-070, Cat. C1 and C2

Chemical properties:

- Oil resistant acc. to EN 50264-1
- Fuel resistant acc. to EN 50264-1
- Acid resistant acc. to EN 50264-1
- Alkali resistant acc. to EN 50264-1
- Ozone resistant acc. to EN 50264-3-2

### Norm references / Approvals

EN 45545-2 HL1, HL2, HL3

EN 50264-1

### Product Make-up

Stranded tinned 19-wire conductor

Core insulation: Based on Polyolefin

Outer sheath: electron beam cross-linked polymer-compound EM 104

Outer sheath colour: Black

### Technical Data

Classification ETIM 5:

ETIM 5.0 Class-ID: EC000830

ETIM 5.0 Class-Description: Data cable

Classification ETIM 6:

ETIM 6.0 Class-ID: EC000830

ETIM 6.0 Class-Description: Data cable

Peak operating voltage:

(not for power applications) 125 V

Minimum bending radius:

Flexing: 10 x outer diameter

Fixed installation: 6 x outer diameter

Last Update (26.08.2023)

©2023 Lapp Group - Technical changes reserved

Product Management [www.lappkabel.de](http://www.lappkabel.de)

You can find the current technical data in the corresponding data sheet.

PN 0456 / 02\_03.16

## UNITRONIC® TRAIN

Test voltage:	Core/core: 1000 V Core/screen: 1000 V
Characteristic impedance:	120 ohm ( $\pm 10\%$ )
Temperature range:	Fixed installation: -45 °C to +90 °C Occasional flexing: -35 °C up to +90 °C

### Note

Photographs and graphics are not to scale and do not represent detailed images of the respective products.  
Prices are net prices without VAT and surcharges. Sale to business customers only.

**UNITRONIC® TRAIN**

Article number	Article designation	Number of cores and mm <sup>2</sup> per conductor	Outer diameter [mm]	Copper index (kg/km)
Cables for MVB				
2173000	UNITRONIC® TRAIN MVB 1x2x0,5	1x2x0,5	7.6	29
2173001	UNITRONIC® TRAIN MVB 1x2x0,5+1x0,5	1x2x0,5+1x0,5	7.6	34
2173002	UNITRONIC® TRAIN MVB 2x2x0,5	2x2x0,5	8.3	40
2173003	UNITRONIC® TRAIN MVB 2x2x0,5+4x0,25	2x2x0,5+4x0,25	8.3	50
Cables for WTB				
2173004	UNITRONIC® TRAIN WTB 1x2x0,75	1x2x0,75	8.4	41

Last Update (26.08.2023)

©2023 Lapp Group - Technical changes reserved

Product Management [www.lappkabel.de](http://www.lappkabel.de)

You can find the current technical data in the corresponding data sheet.

PN 0456 / 02\_03\_16