
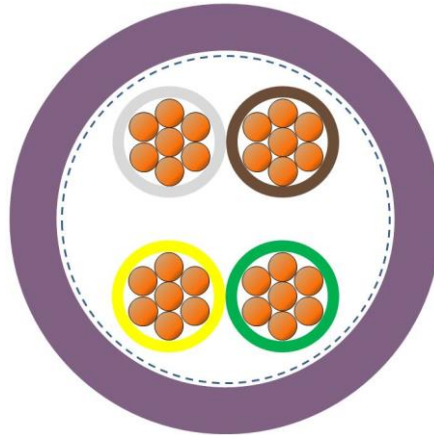


2170204	<b>DATA SHEET</b>	
valid from: 01.03.2021	<b>UNITRONIC® BUS LD 2x2x0,22 mm<sup>2</sup></b>	

## Application

UNITRONIC® BUS LD is a screened, twisted paired cable for bus systems with a data transmission rate up to 10 MBit/s. The twisting of the conductors into pairs ensures maximum interference suppression of the individual signals. The copper screening protects against external electromagnetic influences. Cables of this composition are intended for limited flexible use and for permanent installation in dry and damp interiors.

## Design




Conductor	stranded, bare copper 0,22 mm <sup>2</sup>	
Insulation	polyolefin core diameter: nom. 1.3 mm	
Core identification code	pair 1: white/brown pair 2: green/yellow	
Stranding	cores stranded to pairs, pairs stranded to bundle on top: plastic tape (overlapping)	
Screen	braid of tinned copper wires (coverage 85 % ±5 %)	
Taping	optional: non-woven tape (overlapping)	
Outer sheath	PVC violet, similar RAL 4001 outer diameter: nom. 7.1 mm (± 0.3 mm)	

## Electrical properties at 20 °C

Loop resistance	max. 175.2 Ω/km	
Insulation resistance	min. 5 GΩxkm	
Mutual capacitance	max. 60 nF/km (at 800 Hz)	
Characteristic impedance	100 Ω up to 120 Ω	
Attenuation	100 kHz:	≤ 0.9 dB/100 m
	1 MHz:	≤ 2.5 dB/100 m
	10 MHz:	≤ 7.9 dB/100 m
Near-end cross-talk	1 MHz:	≥ 50 dB
	10 MHz:	≥ 40 dB
Velocity of propagation	0.66 c	
Transfer impedance	1 MHz:	≤ 50 mΩ/m
	10 MHz:	≤ 100 mΩ/m
Maximum operating voltage	250 V (not for power applications)	
Test voltage	core/core:	1500 V
	core/screen:	1500 V

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### Mechanical and thermal properties

Minimum bending radius	flexing: 20 x outer diameter fixed installation: 8 x outer diameter
Temperature range	flexing: -5 °C up to +70 °C fixed installation: -30 °C up to +80 °C
Flammability	flame retardant acc. to. IEC 60332-1-2 resp. EN 60332-1-2
General requirements	This cable is conform to EU-Directive 2014/35/EU (Low Voltage Directive) and to EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).
Environmental information	These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

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