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 installaton in dry and damp interiors.

Design
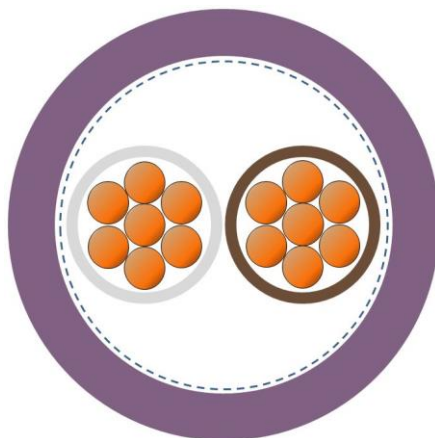
Conductor	multiple wire stranding of bare copper wires
Insulation	special PE-based compound
Core identification code	acc. to DIN 47100
Stranding	Cores twisted into pair, pairs twisted together plastic foil
Screen	special PVC-based compound
Outer sheath	special PVC-based compound violet similar to RAL 4001

Diameter of the outer sheath

Article number	Dimension	Outer sheath ∅
2170203	1 x 2 x 0.22 mm²	ca. 5,7 mm
2170204	2 x 2 x 0.22 mm²	ca. 7,1 mm
2170205	3 x 2 x 0.22 mm²	ca. 7,2 mm

Electrical properties at 20°C

Loop resistance	max. 186 Ω/km
Insulation resistance	min. 5 GΩ x km
Mutual capacitance	max. 60 nF/km
Characteristic impedance	100 - 120 Ω
Attenuation	at 100 kHz nom. 0,9 dB/100m at 1 MHz nom. 2,5 dB/100m
Near-end cross-talk	at 1 MHz min. 50 dB at 10 MHz min. 40 dB
Velocity of propagation	nom. 0,66 c
Signal transit time	nom. 5,06 ns/m
Transfer impedance	Transfer impedance at 30 MHz max. 250 mΩ/m
Peak operating voltage	250 V (not for power applications)
Test voltage	conductor/conductor 1500 V conductor/screen 1000 V

Mechanical and thermal properties

Minimum bending radius	fixed use	8 x cable Ø
	flexible use	20 x cable Ø
Temperature range	fixed use	-40˚ C to +80˚ C
	flexible use	-5˚ C to +70˚ C
Flammability	flame retardant to IEC 60 332-1-2	
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).	