

<b>2170533</b>	<b>DATA SHEET</b>	
<b>valid from: 01.01.2019</b>	<b>UNITRONIC® BUS LD FD P 1X2X0,25</b>	

## Application

UNITRONIC® BUS LD FD P is a screened, twisted paired flexible cable for bus systems with a data transmission rate up to 10 MBit/s and a nominal impedance of 100 Ohms. The twisting of the conductors into pairs ensure maximum interference suppression of the individual signals. The copper screening protects against external electromagnetic influences.

The cable is applicable for constantly moving employment in power chain systems, linear robots and automatic handling machines in dry and damp interiors. The polyurethane outer sheath is largely resistant to certain oils and to abrasion.

## Design

Conductor	bare copper, superfine-wire stranded nom. 0.25 mm <sup>2</sup>
Insulation	PE, core diameter ca. 1.66 mm
Core identification code	acc. to DIN 47100
Stranding	cores stranded to pairs, pairs stranded to bundle
Screen	braid of tinned copper wires
Taping	1 layer non woven tape
Outer sheath	PUR compound, violet similar to RAL 4001, wall thickness nom. 1.0 mm, outer∅: ca. 6.0 mm

## Electrical properties at 20°C

Conductor resistance	max. 159.8 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: nom. 0.79 dB/100 m 500 kHz: nom. 1.4 dB/100 m 1 MHz: nom. 1.9 dB/100 m 10 MHz: nom. 8.5 dB/100 m
Near-end cross-talk	1 MHz: min. 50 dB 10MHz: min. 40 dB
Velocity of propagation	nom. 0,66 c
Signal transit time	nom. 5.06 ns/m
Transfer impedance	up to 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	moved: 15 x core diameter static: 6 x core diameter
Temperature range	moved: -30° C bis +70° C fixed installation: -40° C bis +80° C
Flammability	flame retardant acc. to IEC 60332-1-2
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

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