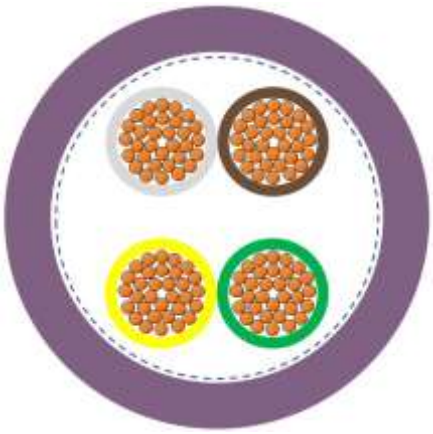
2170214	DATA SHEET	
valid from: 05.10.2020	UNITRONIC® BUS LD FD P 2x2x0,25 mm²	

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 - 120 Ohms. The copper screening protects against external electromagnetic influences.
The cable is applicable for constanty moving employment in power chain systems, linear robots and automatic handling machines in dry and damp interiors.
Outdoor use: They may only be installed considering the indicated temperature range, whereat changings of the colour of the outer sheath may occur.
The polyurethane outer sheath is largely resistant to certain oils and to abrasion.

Design



Conductor	fine-wire stranded, bare copper 0,25 mm²
Insulation	PE core ⌀: ca. 1.56 mm
Core identification code	pair 1: white/brown pair 2: green/yellow
Stranding	cores stranded to pairs, pairs stranded to bundle on top: non-woven tape (overlapping)
Screen	braid of tinned copper wires (coverage 85 % ±5 %)
Taping	non-woven tape (optional)
Outer sheath	PUR violet, similar to RAL 4001 outer Ø: ca. 7.9 mm

Electrical properties at 20°C

Loop 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 1 MHz: nom. 1.9 dB/100 m 10 MHz: nom. 8.5 dB/100 m
Velocity of propagation	nom. 0.66c
Peak operating voltage	250 V (not for power applications)
Test voltage	core/core: 1500 V core/screen: 1500 V

Mechanical and thermal properties

Minimum bending radius	fixed: 8x cable Ø flexing: 15x cable Ø
Temperature range	fixed: -40 °C up to +80 °C flexing: -30 °C up to +70 °C
Flammability	flame retardant acc. to. IEC 60332-1-2 resp. EN 60332-1-2
Halogen free	acc. to VDE 0472-815
Weather and UV resistance	acc. to EN ISO 4892-2-2013, method A (change of color allowed)
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).