

U.I. Lapp GmbH	<b>PRODUCT INFORMATION</b>	
	<b>UNITRONIC® BUS LD FD P</b>	12.09.2012

UL variant has approval: UL/CSA type CMX acc. to UL 444 and CSA C22.2 no. 214-02

PUR outer sheath, tear and notch-resistant, resistant to mineral oils and abrasion when used in power chains



### Info

LD is a LAPP abbreviation for long distance

### Application range

For highly flexible applications (power chains, moving machine parts)

Bus cables for bus systems such as e.g. Modbus, SUCOnet P, Modulink P, VariNet-P)

### Design

Stranded conductor, bare, core identification code in accordance with DIN 47100

Copper braiding

PUR outer sheath

Colour: violet (RAL 4001)

UV-resistant (but colour may change after some time)

### Product features

The stated bit rates result in the following cable lengths (maximum) of one bus segment:

9.6-93.75 kbit/s = 1200m

187.5 kbit/s = max. 1,000 m

500 kBit/s = max. 400 m

Flame-retardant according to IEC 60332-1-2

### Remark

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.

Copper price basis: EUR 150/100kg. Refer to Appendix T17 for the definition and calculation of copper-related surcharges.

Please find our standard lengths at: [www.lappkabel.de/en/cable-standardlengths](http://www.lappkabel.de/en/cable-standardlengths)

Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum

Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).

Modbus is owned by the Modbus-IDA Organisation. SUCOnet P is a registered trademark of the Moeller Group. Modulink P is a registered trademark of Weidmüller GmbH & Co. VariNet is a registered trademark of Pepperl+Fuchs GmbH.

Photographs are not to scale and do not represent detailed images of the respective products.

### Technical Data

Mutual capacitance:	(800 Hz): max. 60 nF/km
Peak operating voltage:	(not for power applications) 250 V
Conductor resistance:	(loop): max. 159.8 ohm/km
Minimum bending radius:	Fixed installation: 6 x core diameter One bend at end of core: 3 x cable diameter Flexing: 15 x outer diameter
Test voltage:	Core/core: 1500 V rms
Temperature range:	Fixed installation: -40 °C to +80 °C Flexing: -30 °C to +70 °C
Characteristic impedance:	100 - 120 Ohm

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Part number	Article designation	Number of pairs and mm <sup>2</sup> per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
For highly flexible applications (power chains, moving machine parts)					
2170213	UNITRONIC® BUS LD FD P	1 x 2 x 0,25	6.0	18.0	39
2170214	UNITRONIC® BUS LD FD P	2 x 2 x 0,25	7.9	33.0	65
2170215	UNITRONIC® BUS LD FD P	3 x 2 x 0,25	8.0	39.0	77
For highly flexible applications (e.g. power chains) - with UL/CSA (CMX) approval					
2170813	UNITRONIC® BUS LD FD P A	1 x 2 x 0,25	6.2	18.0	39
2170814	UNITRONIC® BUS LD FD P A	2 x 2 x 0,25	8.3	33.0	65
2170815	UNITRONIC® BUS LD FD P A	3 x 2 x 0,25	8.4	39.0	77