LAPP GROUP	**DATA SHEET**	2170203
	UNITRONIC® BUS LD … x 2 x 0,22 mm²	gültig ab : 27.10.2009

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.

Applicable connectors: D-Sub-Connector, 9-pins; Round-Connector, 9-pins (system of protection IP 65)

Design

Conductor	multiple wire stranding of bare copper wires
Insulation	special PE-based compound
Core identification	acc. to DIN 47100
Stranding	Cores twisted into pair, pairs twisted together
Wrapping	plastic foil
Screening	braiding of tinned copper wires
Sheath	special PVC-based compound
Sheath colour	violet similar to RAL 4001
CableØ 1 pair	approx. 5,7 mm (part no. 2170203)
CableØ 2 pairs	approx. 7,1 mm (part no. 2170204)
CableØ 3 pairs	approx. 7,2 mm (part no. 2170205)

Electrical properties at 20°C

Conductor resistance (loop)	max. Ω/km	186
Insulation resistance	min. GΩ x km	5
Mutual capacitance at 800 Hz	max. nF/km	60
Characteristic impedance	Ω	100 - 120
Attenuation at 100 kHz	nom. dB/100m	0,9
Attenuation at 1 MHz	nom. dB/100m	2,5
Near-end cross talk attenuation at 1 MHz	min. dB	50
Near-end cross talk attenuation at 10 MHz	min. dB	40
Transfer impedance at 30 MHz	max. mΩ/m	250
Nominal velocity of propagation	nom.	0,66 c
Signal transit time	nom. ns/m	5,06
Operating voltage (not for power purposes)	peak value V	250
Test voltage (conductor/conductor)	V	1500
Test voltage (conductor/screen)	V	1000

Mechanical and thermal properties

Permissible temperature range (fixed use)	°C	-40 to +80
Permissible temperature range (flexible use)	°C	-5 to +70
Minimum bending radius (fixed use)	cableØ x	8
Minimum bending radius (flexible use)	cableØ x	20
Flame propagation	flame retardant to IEC 60 332-1-2	

Conformity

This cable confirms to RoHS directive (2002/95/EG)