



<b>DATA SHEET</b>	2170267
<b>UNITRONIC® BUS CAN UL/CSA 2 x 2 x 0.5 mm<sup>2</sup></b>	valid from : 06.11.2003

## Application

UNITRONIC® BUS CAN UL/CSA is a data cable with UL and CSA approval, for **CAN (Controller Area Network)** fieldbus system according to ISO11898 as well as for high performance data networks with 120 Ohms nominal impedance. The second pair can be used for electrical power supply for the logical bus units. The transmission characteristics of the cable conform to the CAN system and guarantee a high operating security during data transmission.

UNITRONIC® BUS UL/CSA is intended for permanent installation and conditional flexible use in dry and damp interiors.

Approval: UL / CSA type CMX according to UL 444 and CSA C22.2 No.214-02.

## Design

Conductor	seven-wire strands of bare copper, 0.5mm <sup>2</sup> , (20AWG)
Insulation	cellular PE or foam skin, core diameter approx. 2.1 mm
Colour code	<u>pair 1</u> white and brown, <u>pair 2</u> green and yellow (acc. DIN 47100)
Twisting	2 cores twisted into pairs, 2 pairs arranged to the cable core
Wrapping	plastic foil
Screening	braid of tinned copper wires
Sheath	PVC, violet, OD approx. 9.6 mm

LAPP KABEL STUTTGART **UNITRONIC® BUS CAN** 2 x 2 x 0,5 (UL) CMX 75°C AWG 20 (SHIELDED)  
ART. 2170267

## Electrical properties at 20° C

Loop resistance		max. Ω/km	78
Insulation resistance		min. GΩxkm	5
Mutual capacitance	at 800 Hz	nom. nF/km	40
Impedance	at > 1 MHz	Ω	120 ± 15
Line attenuation	at 100 kHz	nom. dB/100 m	0.3
	at 1 MHz	nom. dB/100 m	1.1
	at 5 MHz	nom. dB/100 m	2.8
	at 10 MHz	nom. dB/100 m	3.9
	at 20 MHz	nom. dB/100 m	5.7
Near end cross talk attenuation (NEXT)	at 1 MHz	min. dB	50
	at 20 MHz	min. dB	40
Nominal velocity of propagation		%	76
Signal delay		ns/m	4.4
Transfer impedance	at 30 MHz	max. mΩ/m	250
Peak operation voltage (not for purposes of power/high voltage current)		V	250
Test voltage	core/core	U <sub>eff</sub> V	1500
	core/screen	U <sub>eff</sub> V	1000

## Mechanical and thermal characteristics

Minimum bending radius	moved	cable diameter x	10
Permissible temperature range	moved	°C	- 5 to + 70
	static	°C	- 30 to + 80
Flame propagation	flame retardant acc. to VDE 0482, part 265-2-1 / IEC 60 332-1		

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