



DATA SHEET	2170209
UNITRONIC® BUS IBS UL/CSA 3 x 2 x 0,22 mm²	valid from : 11.01.2008

Application

UNITRONIC® BUS IBS UL/CSA is a data cable with UL and CSA approval for the field-bus system INTERBUS with a data transmission rate of 500kBit/s at a length of 400m. The field-bus cable is designed to the requirements of the bus-system INTERBUS, the transmission characteristics conform to the system and guarantee a high operating security during data transmission.

UNITRONIC® BUS IBS UL/CSA is certified by the INTERBUS-CLUB.

The cable is intended for limited flexible use and for permanent installation in dry and damp interiors.

Applicable connectors: D-Sub-connector, 9 pin
 Round connector, 9 pin, IP 65

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

Design

Conductor multi-wire stranded (7 x 0.2 mm) of bare copper
Insulation PE, 2YI1 in acc. to VDE 0207 part 2
Coding colour-coded to DIN 47100
Stranding 2 cores twisted to pair
 3 pairs laid up
Wrapping one layer polyester foil
Screen copper wire braid
Sheath PVC, violet, outer diameter approx 7.4 mm

LAPP KABEL STUTTGART **UNITRONIC® BUS IBS UL/CSA** 3x2x0,22 (UL) CMX 75°C 24AWG
SHIELDED) E ROHS ART. 2170209

Electrical properties at 20° C

DC resistance	acc. to UL 444	max. Ω/km	87,6
Insulation resistance		min GΩx km	5
Mutual capacitance at	800 Hz	max nF/km	60
Impedance at	64 kHz	Ω	120 +/- 20%
	1 MHz	Ω	100 +/- 15%
Line attenuation at	0.256 MHz	max dB/100m	1.5
	0.772 MHz	max dB/100m	2.4
	4 MHz	max dB/100m	5.2
	10 MHz	max dB/100m	8.4
	16 MHz	max dB/100m	11.2
	20 MHz	max dB/100m	11.9
Near-end cross-talk attenuation at	0.772 MHz	min dB	61
	1 MHz	min dB	59
	2 MHz	min dB	55
	4 MHz	min dB	50
	8 MHz	min dB	46
	10 MHz	min dB	44
	16 MHz	min dB	41
	20 MHz	min dB	40
Transfer impedance at	30 MHz	max. mΩ/m	250
Nominal velocity of propagation		nom.	0.66c

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Peak operating voltage (not for purposes of power / high voltage current)		V	250
Test voltage	core/core	U _{eff} V	1500
	core/screen	U _{eff} V	1000

Mechanical and thermal properties

Temperature range	static	°C	-30 up to +80
Minimum bend radius	fixed installation	mm	64
Burning load		kWh/m	0.2
Flame propagation	flame retardant acc. to IEC 60 332-1-2 / UL-1581 VW-1		

General properties

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

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