

UNITRONIC® BUS CAN FD P 2x2x0,25

DB2170273

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Application

UNITRONIC® BUS FD P CAN UL/CSA is a highly flexible 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. The possible data transmission acc. to ISO 11898 for max. 40m is 1 Mbit/s.

UNITRONIC® BUS FD P CAN UL/CSA is intended for high flexible application in power chains, or permanently moving machines, in dry and damp interiors and in harsh industrial environment.

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

Design

Conductor	bare copper, 0.25 mm ² (24 AWG), fine-wire stranded
Insulation	Foam-Skin PE, core Ø nom. 1.65 mm
Core identification	pair 1: white and brown, pair 2: green and yellow (DIN 47100)
Stranding	2 cores twisted to pair, 2 pairs stranded to bundle with two fillers
Wrapping	non-woven tape
Screening	braid of tinned copper wires
Außenmantel	PUR, flame retardant, halogen free, violet similar to RAL 4001, Outer diameter: ca. 8.4 mm

Electrical properties at 20° C

Resistance (loop)	max. 159.8 Ω/km
Insulation resistance	min. 5 GΩxkm
Mutual capacitance	nom. 40 nF/km (at 800 Hz)
Characteristic impedance	120 Ω ± 15% (at f ≥ 1 MHz)
Line attenuation	100 kHz: nom. 0.6 dB/100 m 1 MHz: nom. 1.5 dB/100 m 5 MHz: nom. 4.3 dB/100 m 10 MHz: nom. 8.1 dB/100 m 20 MHz: nom. 10.5 dB/100 m
Near-end crosstalk attenuation	min. 40 dB (at 20 MHz)
Velocity of propagation	nom. 76%
Signal propagation time	4,4 ns/m
Transfer impedance up to 30 MHz	max. 250 mΩ/m
Operating peak voltage	250 V (not for power purposes)
Test voltage U _{eff}	core/core: 1500 V, core/screen: 1000 V

Mechanical und thermal properties

Minimum bending radius	moved: 15 x core Ø static: 6 x core Ø
Permissible temperature range	moved: -30 °C up to +70 °C static: -40 °C up to +80 °C
Flame propagation	flame retardant acc. to IEC 60332-1-2/UL 1581 VW-1
Halogen free	halogen free acc. to VDE 0472-815
General requirements	Dangerous and forbidden substances acc. to RoHS directive (2002/95/EG) are not allowed to the manufacturing