

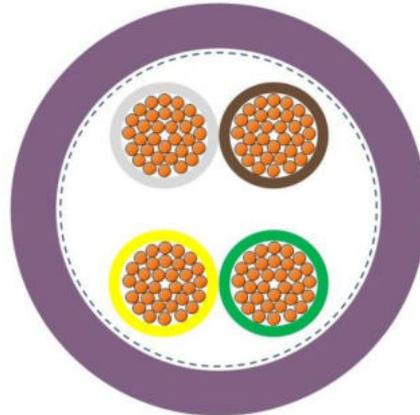
2170273	<b>DATA SHEET</b>	
valid from: 01.01.2019	<b>UNITRONIC® BUS CAN FD P 2x2x0,25</b>	

## Application

UNITRONIC® BUS CAN FD P is a highly flexible data cable with UL and cUL 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 CAN FD P is intended for high flexible application in power chains, or permanently moving machines, in dry and damp interiors and in harsh industrial environment.

## Design



Certification	UL / cUL Typ CMX according to UL 444 and CSA C22.2 No.214-02.
Conductor	bare copper, 0.25 mm <sup>2</sup> (24 AWG), fine-wire stranded
Insulation	Foam-Skin PE, core Ø nom. 1.65 mm
Core identification code	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 non-woven tape
Screen	braid of tinned copper wires
Outer sheath	PUR, flame retardant, halogen free, violet similar to RAL 4001, Outer diameter: ca. 8.4 mm

## Electrical properties at 20°C

Loop resistance	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)
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 cross-talk	min. 40 dB (at 20 MHz)
Velocity of propagation	nom. 76 %
Signal transit time	4,4 ns/m
Transfer impedance	at 30 MHz max. 250 mΩ/m
Test voltage	conductor/conductor 1500 V conductor/screen 1000 V

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### Mechanical and thermal properties

Minimum bending radius	fixed use 6 x cable Ø
	flexible use 15 x cable Ø
Temperature range	moved - 30° C to + 70° C
	static - 40° C to + 80° C
Flammability	flame retardant acc. to IEC 60332-1-2/UL 1581 VW-1
Halogen free	halogen free acc. to VDE 0472-815
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

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