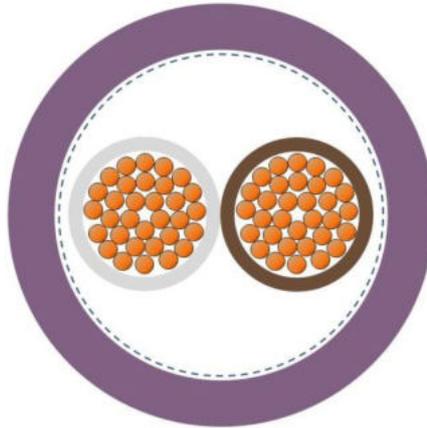


|                           |  |   |
|---------------------------|--|---|
| 2170272                   | <b>DATA SHEET</b>                                      |  |
| valid from:<br>2025-12-08 | <b>UNITRONIC® BUS CAN FD P 1x2x0.25 mm<sup>2</sup></b> |   |

## Application

Field of use: Flexible for the field-bus system CAN (Controller Area Network) acc. to ISO 11898 for use in industrial automation.  
Performance: Twisted pair cable, having a nominal impedance of 120 Ω. Designed for transmission rates of 10 Kbit/s up to 1 Mbit/s.  
Cable length is dependent on the transmission rate and the conductor cross section.  
Characteristics: Flame retardant, halogen free  
Applications: CAN BUS, CANopen und weitere



## Design

|                          |   |
|--------------------------|---|
| Certification            | E236660 c(UL)us CMX 75 °C gemäß UL 444 und CSA C22.2 Nr. 214    |
| Conductor                | fine-wire stranded bare copper<br>0.25 mm <sup>2</sup> (24 AWG) |
| Insulation               | Foam-Skin Polyolefin<br>Corediameter: ca. 1.7 mm                |
| Core identification code | white and brown (DIN 47100)                                     |
| Stranding                | two cores stranded to pairs<br>on top: non-woven tape           |
| Screen                   | braid of tinned copper wires (coverage: 85% ± 5%)               |
| Taping                   | non-woven tape (optional)                                       |
| Outer sheath             | TPU<br>violet, similar RAL 4001<br>outer diameter: ca. 6.5 mm   |

## Electrical properties at 20 °C

|                           |   |
|---------------------------|---|
| Loop resistance           | max. 175.2 Ω/km   |
| Insulation resistance     | min. 5 GΩ x km  |
| Mutual capacitance        | nom. 48 nF/km (at 800 Hz)   |
| Characteristic impedance  | 120 Ω ± 15 %  |
| Attenuation               | 100 kHz nom. 0.6 dB/100m<br>1 MHz nom. 1.5 dB/100m<br>5 MHz nom. 4.3 dB/100m<br>10 MHz nom. 8.1 dB/100m<br>20 MHz nom. 10.5 dB/100m |
| Velocity of propagation   | 0.76 c  |
| Signal propagation time   | 4.4 ns/m  |
| Transfer impedance        | max. 250 mΩ/m (at 30 MHz)   |
| Maximum operating voltage | 250 V (not for power purposes)  |
| Rated voltage             | 300 V acc. to UL 444  |
| Test voltage              | Core/Core: 1500 V AC<br>Core/Screen: 1000 V AC  |

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| Creator: TOGO / PDC  | Document: DB2170272EN | Page 1 of 2 |
| Released: ALTE / PDC | Version: 08           |             |

|                           |  |   |
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### Mechanical and thermal properties

|                                  |   |
|----------------------------------|---|
| Minimum bending radius           | fixed installation: 10× outer diameter<br>occasional flexing: 13× outer diameter<br>continuous flexing: 15× outer diameter  |
| Temperature range                | fixed installation: -40 °C up to +80 °C<br>occasional flexing: -30 °C up to +70 °C<br>continuous flexing: -30 °C up to +70 °C   |
| Flammability                     | flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2<br>VW-1 acc. to UL 1581 §1080  |
| Halogen free                     | acc. to VDE 0472-815  |
| General requirements             | This cable is conform to EU-Directive 2014/35/EU (Low Voltage Directive) and to EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances). |
| <b>Environmental information</b> | These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).  |

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|----------------------|-----------------------|-------------|
| Creator: TOGO / PDC  | Document: DB2170272EN | Page 2 of 2 |
| Released: ALTE / PDC | Version: 08           |             |