
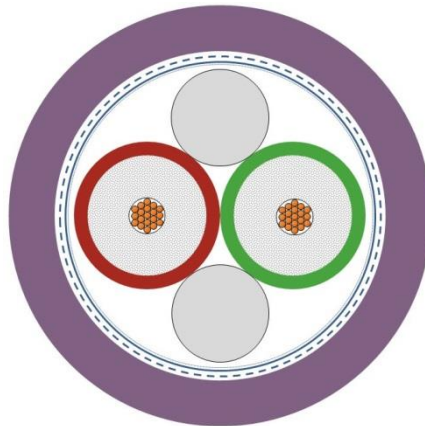


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| 2170331 | DATA SHEET |  |
| valid from: 12.05.2020 | UNITRONIC® BUS PB FESTOON | |

Application


UNITRONIC® BUS PB FESTOON is a flexible and flame retardant data cable for the following field bus systems: PROFIBUS DP, PROFIBUS FMS (Siemens SIMATIC NET) acc. to EN 61158-2 cable type A, and for field bus system FIP (Factory Instrumentation Protocol) as well as for high performance data networks with 150 Ohms nominal impedance. The cable is designed for the system-defined transmission rates of 9.6 Kbit/s up to 12 Mbit/s, the transmission characteristics are conform to the system and guarantee a high operating security during the data transmission.

Design



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| Certification | UL PLTC acc. to UL 13 UL CMG 75 °C acc. to UL 444 |
| Conductor | fine-wire strands bare copper conductor Ø 0.64 mm |
| Insulation | Skin-Foam-Skin PE core ø approx. 2.6 mm |
| Core identification code | red and green |
| Stranding | two cores twisted to a pair, with fillers on top: plastic tape (overlapping) |
| Screen | plastic laminated aluminium foil (overlapping) on top: braid of tinned copper wires (coverage approx. 70 %) |
| Outer sheath | PVC violet, similar RAL 4001 outer Ø: 8.0 mm (± 0.3 mm) |

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Electrical properties at 20°C

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| Loop resistance | max. 133 Ω/km |
| Specific volume resistivity | min. 16000 MΩ*km |
| Mutual capacitance | nom. 28 nF/km (at 800 Hz) |
| Inductance | 750 μH/km |
| Characteristic impedance | 9.6 kHz: 270 Ω ± 27 Ω 38.4 kHz: 185 Ω ± 18.5 Ω 3 bis 20 MHz: 150 Ω ± 15 Ω |
| Attenuation | 9.6 kHz: max. 0.25 dB/100 m 38.4 kHz: max. 0.4 dB/100 m 200 kHz: max. 0.9 dB/100 m 4 MHz: max. 2.2 dB/100 m 16 MHz: max. 4.2 dB/100 m |
| Velocity of propagation | 0,81 c |
| Peak operating voltage | VDE: 250 V (not for power purposes) UL: 600 V |
| Test voltage | core/core: 2000 V core/screening: 2000 V |

Mechanical and thermal properties

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| Minimum bending radius | fixed installation: 5 x cable Ø continous flexing: 10 x cable Ø |
| Temperature range | fixed installation: -40 °C bis +80 °C continous flexing: -30 °C bis +70 °C |
| Flammability | FT 4 acc. to UL 1685 |
| UV resistance | SUN RES acc. to UL 1581 §1200 |
| Oil resistance | OIL RES acc. To UL 758 §15 (60 °C) |
| General requirements | RoHS: All homogeneous materials of all articles must not contain the substances of Annex II of the European Directive 2011/65/EU (RoHS) in excess of the concentration limits listed therein. Exemptions are allowable for the applications listed in Annexes III and IV of the same Directive. |
| Environmental information | These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS). |

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