



UNITRONIC® BUS PB A 1 x 2 x 0,64

DB2170219

valid from: 17.11.2011

Application

Data cable with UL- and CSA approval for the fieldbus-system PROFIBUS DP, PROFIBUS FMS, SIEMENS SIMATIC® NET (acc. to DIN 19245, Teil 3 und EN 50170 Kabeltyp A) and for the fieldbus 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 1.5 Mbit/s, 2.5 Mbit/s and 12 Mbit/s, the transmission characteristics conform to the system and guarantee a high operating security during data transmission. It is suitable for interfaces RS 422 and RS 485.

The cable is intended for permanent installation in dry and damp interiors. With the double screening the cable is suitable for installation in electromagnetic demanding areas.

Approval: UL / cUL Type CMX acc. to UL 444 and CSA C22.2 No. 214-08

Design

Conductor	bare copper, nom. 0.64 mm Ø (22 AWG)
Insulation	Skin-Foam-Skin PE, core Ø nom. 2.55 mm
Core identification code	cores red and green
Stranding	2 cores together with 2 fillers
Wrapping	1 layer plastic-foil
Screening	plastic-laminated aluminium foil, side with metal outwards, braid of tinned copper wires, coverage min. 80%
Outer sheath	PVC, violet similar to RAL 4001, wall thickness nom. 1.0 mm, outer diameter: max. 8.0 mm

Electrical properties at 20° C

Resistance (loop)	max. 115 Ω/km
Insulation resistance	min. 5 GΩxkm
Mutual capacitance	ca. 28 nF/km (at 800 Hz)
Inductance	ca. 0.83 mH/km (at 800 Hz)
Characteristic impedance	9.6 kHz: 270 Ω ± 27 38.4 kHz: 185 Ω ± 18.5 3 bis 20 Mhz: 150 Ω ± 15
Line 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/100m 4 MHz: max. 2.2 dB/100 m 16 MHz: max. 4.2 dB/100 m
Velocity of propagation	nom. 81%
Transfer impedance up to 20 MHz	max. 5 mΩ/m
Operating peak voltage	225 V (not for power purposes)
Test voltage U _{eff.} core/core und core/screen	1500 V



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Mechanical and thermal properties

Minimum bending radius	10 x cable-diameter
Permissible temperature range	-40° C up to +80° C
Flame propagation	flame retardant acc. to IEC 60332-1-2/UL 1581 VW-1
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.