

UNITRONIC® BUS PB YY 1 x 2 x 0,64
DB2170236
 valid from: 29.11.2011
Application

Fieldbus cable for the Siemens field network SIMATIC NET (acc. to DIN 19245 part 3 and EN 50170), for 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 are conform to the system and guarantee a high operating security during data transmission.

Due to its double screening it is suitable for installation in electromagnetically demanding areas. The cable is intended for permanent installation inside and outside as well as for underground burial. The outer sheath is unaffected by atmospheric UV-radiation at above-ground installation.

Design

Conductor	bare copper wire, nom. 0.64 mm Ø
Insulation	skin-foam-skin PE, alternatively foam-skin, core Ø nom. 2.55 mm
Core identification code	cores red similar to RAL 3000 and green similar to RAL 6018
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 nom. 85%
Inner sheath	PVC, lead free, shore hardness A 77 ± 3, violet similar to RAL 4001, wall thickness nom. 0.9 mm, outer diameter: max. 8.0 mm
Outer sheath	PVC, lead free, shore hardness A 77 ± 3, black similar to RAL 9005, wall thickness nom. 0.9 mm, outer diameter: ca. 9.4 mm

Electrical properties at 20° C

Resistance (loop)	max. 110 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/100 m 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. 10 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 static: 10 x cable Ø

Permissible temperature range static: -40° C up to +80° C

General requirements Dangerous and forbidden substances acc. to RoHS directive (2002/95/EG) are not allowed to the manufacturing.