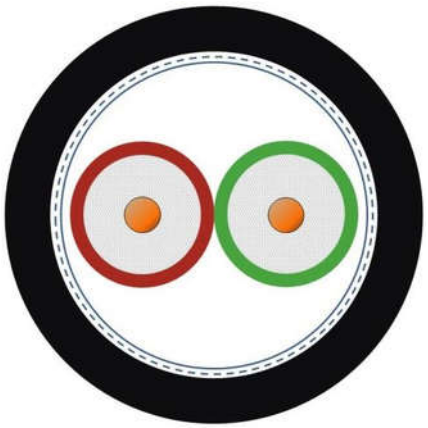
2170223	DATA SHEET	LAPP
valid from: 01.01.2019	UNITRONIC® BUS PB Yv 1 x 2 x 0,64	

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 it´s 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
Screen	plastic-laminated aluminium foil, side with metal outwards, braid of tinned copper wires, coverage nom. 85%
Outer sheath	PVC, lead free, shore hardness A 77 ± 3, black similar to RAL 9005, wall thickness nom. 1.8 mm, outer diameter: ca. 9.4 mm

Electrical properties at 20°C

Loop resistance	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 Ω 38,4 kHz: 185 Ω ± 18 Ω 3 up to 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/10 0m
Velocity of propagation	nom. 81%
Transfer impedance	max. 10 mΩ/m
Peak operating voltage	225 V (not for power purposes)

We reserve all rights according to DIN ISO 16016.

Test voltage	conductor/conductor 1500 V conductor/screen 1500 V

Mechanical and thermal properties

Minimum bending radius	static: 10 x cable Ø
Temperature range	static: -40° C up to +80° C
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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