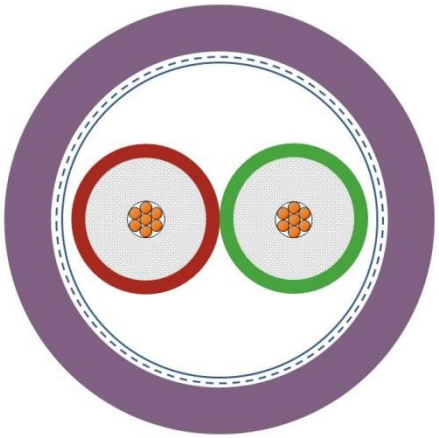
2170630	DATA SHEET	LAPP
valid from: 01.01.2019	UNITRONIC® BUS PB 105	

Application

Flame retardant and oil resistant field bus Data cable with high temperature resistant up to 105°C for Siemens system L2 DP acc. to DIN 19245, part 3 and EN 50 170 and for field bus system FIP (Factory Instrumentation Protocol) as well as for high performance data networks with 150Ohms 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 the data transmission.
The cable is suitable for permanent installation in dry and wet rooms. Due to it's double screening it is suitable for installation in electromagnetically demanding area.

Design



Conductor	bare copper, 0.22 mm² (24 AWG) 7 x 0.2, diameter 0.64 mm
Insulation	Foam-Skin PP (O9YS) core diameter app. 2.55 mm, cores red and green
Stranding	two cores together with two fillers (core-filler-core-filler)
Screen	plastic laminated aluminum foil, metal side outwards and on top braiding of tin copper wire
Taping	one layer non-woven tape
Outer sheath	PVC compound, violet similar to RAL 4001, outer diameter 8 mm max.

Electrical properties at 20°C

Conductor resistance	max. 186 Ω/km
Insulation resistance	min. 5 GΩ x km
Mutual capacitance	800 Hz nom. nF/km 28,5
Characteristic impedance	9,6 kHz 270Ω ± 27Ω 38,4 kHz 185Ω ± 18,5Ω 3 bis 20 MHz 150Ω ± 15Ω
Attenuation	9.6 kHz max. dB/100 m 0.3 38.4 kHz max. dB/100 m 0.4 4 MHz max. dB/100 m 2.5 16 MHz max. dB/100 m 4.9
Velocity of propagation	nom. 0.75c
Transfer impedance	20 MHz max. 10 mΩ/m
Test voltage	conductor/conductor 1500 V conductor/screen 1500 V

Mechanical and thermal properties

Minimum bending radius	for static: 45 mm for flexible: 65 mm
Temperature range	for static: - 30 °C up to +105 °C
Burning load	0.230 kWh/m
Flammability	flame retardant acc. to IEC 60332-1-2
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).