
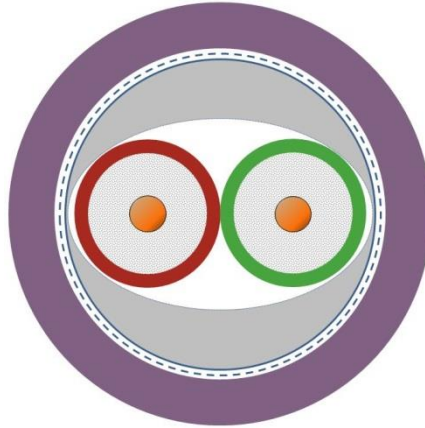


2170820	<b>DATA SHEET</b>	
valid from: 01.01.2019	<b>UNITRONIC® BUS PB FC 1X2X0,64 1X2X0,64</b>	

## Application

Flame retardant data cable for the fieldbus system PROFIBUS DP and PROFIBUS FMS (Siemens SIMATIC NET). The cable is for applications with fixed installation and has got a "fast connect" design. It 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. The cable is designed for applications in dry and damp interiors, outdoors and in rough industrial environment.

## Design




Certification	c(UL)us CMG 75 °C acc. to UL 444; (UL) CL3 acc. to UL 13
Conductor	bare copper wire, ca. 0,64 mm $\varnothing$
Insulation	foam skin polyolefin, core $\varnothing$ ca. 2.55 mm
Core identification code	a-core red, b-core green
Stranding	two cores twisted to pair
Inner sheath	PVC, outer diameter ca. 5,5 mm
Screen	aluminized foil on top: braid of tinned copper wires, coverage ca. 60 %
Taping	plastic tape
Outer sheath	PVC compound, violet (similar to RAL 4001), outer diameter: ca. 8.0 mm

## Electrical properties at 20°C

Loop resistance	max. 110 $\Omega$ /km
Insulation resistance	min. 5 G $\Omega$ xkm
Mutual capacitance	ca. 30 nF/km (at 1 kHz)
Characteristic impedance	9.6 kHz: 270 $\Omega$ $\pm$ 27 $\Omega$ 38.4 kHz: 185 $\Omega$ $\pm$ 18.5 $\Omega$ 3 up to 20 Mhz: 150 $\Omega$ $\pm$ 15 $\Omega$
Attenuation	9.6 kHz: max. 0.25 dB/100 m 38.4 kHz: max. 0.4 dB/100 m 4 MHz: max. 2.2 dB/100 m 16 MHz: max. 4.2 dB/100 m
Test voltage	conductor/conductor 2000 V conductor/screen 2000 V

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### Mechanical and thermal properties

Minimum bending radius	Minimum bending radius 8 x outer diameter
Temperature range	from -40 °C up to +80 °C
Flammability	flame retardant acc. to IEC 60332-3-24, FT4 (vertical tray) acc. to UL 1685
UV resistance	sunlight resistant acc. to UL 1581 Sec. 1200
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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