



## UNITRONIC® BUS PB FC 1x2x0,64

DB2170820

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**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.

Approvals: c(UL)us CMG 75 °C acc. to UL 444; (UL) CL3 acc. to UL 13

**Design**

Conductor	bare copper wire, ca. 0,64 mm $\phi$
Insulation	foam-skin polyolefin, core $\phi$ ca. 2.55 mm
Core identification code	a-core red, b-core green
Stranding	2 cores stranded to pair
Wrapping	plastic tape
Inner sheath	PVC, outer $\phi$ ca. 5,5 mm
Screening	aluminized foil <u>on top:</u> braid of tinned copper wires, coverage ca. 60 %
Outer sheath	PVC, violet (similar to RAL 4001), outer $\phi$ : ca. 8.0 mm

**Electrical properties at 20° C**

Resistance (loop)	max. 110 $\Omega$ /km
Insulation resistance	min. 5 G $\Omega$ km
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 $\Omega$
Line 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 (50 Hz, 1 min)	core/core: 2000 V core/screen: 2000 V

**Mechanical and thermal properties**

Minimum bending radius	8 x outer diameter
Permissible temperature range	-40 °C up to +80 °C
Sunlight resistance	sunlight resistant acc. to UL 1581 Sec. 1200
Flame propagation	flame retardant acc. to IEC 60332-3-24, FT4 (vertical tray) acc. to UL 1685
General requirements	Dangerous and forbidden substances acc. to RoHS directive 2011/65/EU regarding Restriction of the use of certain hazardous substances (RoHS) are not allowed to the manufacturing.