



DATA SHEET	2170834/835
UNITRONIC® BUS PA UL /CSA 1 x 2 x 1,0mm	valid from : 30.10.2006

Application

Data cable for PROFIBUS PA field net according to IEC 601158-2. The cable is intended for fixes laying in dry and damp interiors and with the black outer sheath for laying outdoor.

Design

Conductor	fine-wire stranded 1.0 mmØof bare copper
Insulation	Foam-skin (O2YS), core diameter approx. 2,55 mm
Coding	cores red and green
Twisting	2 cores together with 2 fillers
Wrapping	1 layer plastic foil
Screening	braid of tinned copper wires, coverage 85 % ± 5
Sheath	PVC, blue RAL 5015 (Art. Nr. 2170234) or black RAL, UV-resistant (Art. Nr. 2170235) Outer diameter 8,0 mm ± 0,4

Marking on the blue sheath:

LAPP KABEL STU^TGART **UNITRONIC® BUS PA (BU) UL/USA** 1 x 2 x 1,0 ROHS c(UL)us CMX
E224252 ROHS ART. 2170834 RV MM

Marking on the black sheath:

LAPP KABEL STU^TGART **UNITRONIC® BUS PA (BK) UL/CSA** 1 x 2 x 1,0 ROHS c(UL)us CMX
E224252 ROHS ART. 2170835 RV MM

Electrical characteristics at 20°C

Loop resistance		max. Ω/km	44
Insulation resistance		min. GΩxkm	5
Mutual capacitance	at 800 Hz	nom. nF/km	52
Inductance	800 Hz	mH/km	ca. 0.4
Impedance	at 31.25 kHz	Ω	100 ± 20
	at 1.0 MHz	nom.Ω	80
Line attenuation	at 39 kHz	max. dB/100 m	0.3
	at 100 kHz	max. dB/100 m	0.35
	at 1 MHz	max. dB/100 m	1,2
nominal velocity of propagation		nom. %	79
Transfer impedance	at 30 MHz	max. mΩ/m	250
peak operation voltage (not for purposes of power/high voltage current)		V	100
test voltage	core/core	U _{eff} V	1500
	core/screen	U _{eff} V	1500

Mechanical and thermal characteristics

minimum bend radius	after installation	mm	65
permissible temperature range	during installation	°C	- 5 to + 60
	after installation	°C	- 30 to + 80
Flame propagation	flame retardant VW-1 acc. to UL1581 IEC 60332-1		

elaborated by: TE-K: N. Ensslen /A. Khan	Document: DB2170234-5EN	page 1 of 1
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General requirements

- PWIS** All materials used for the cable and during manufacturing must be **free of PWIS** (Paint-Wetting impairment Substances e.g. silicone).
- RoHS directive** Dangerous and forbidden substances acc. to RoHS directive (2002/95 EG) are not allowed to the manufacturing.

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