



<b>DATA SHEET</b>	2170234/235
<b>UNITRONIC® BUS PA 1 x 2 x 1,0mm<sup>2</sup></b>	valid from : 16.09.2003

## Application

Data cable for PROFIBUS PA field net according to IEC 1158-2. The cable is intended for fixed laying in dry and damp interiors and with the black outer sheath for laying outdoor.

## Design

Conductor	fine-wire stranded 1.0 mm <sup>2</sup> of 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 UV-resistant (Art. Nr. 2170235) Outer diameter 8,0 mm ± 0,4

Marking on the blue sheath:

LAPP KABEL STUTTGART UNITRONIC® BUS PA 1 x 2 x 1,0      ART. 2170234

Marking on the black sheath:

LAPP KABEL STUTTGART UNITRONIC® BUS PA 1 x 2 x 1,0      ART. 2170235

## 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 <sub>eff</sub> V	1500
	core/screen	U <sub>eff</sub> 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 acc. to VDE 0482, part 265-2-1 / IEC 60 332-1		

## General properties

All materials used and during manufacturing have to be **free of LBS** (e.g. silicone).  
LBS = substances destructive to lacquer-coatings.

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