UNITRONIC® BUS PA 1 x 2 x 1,0

DB2170234
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Application

Data cable for PROFIBUS PA field net according to IEC 61158-2.
The cable is intended for fixes laying in dry and damp interiors and with the black outer sheath for laying outdoors.

Design

Conductor	bare copper, nom. 1,0 mm^2, ca. 1.32 mm ⌀, fine-wire stranded
Insulation	foam-skin PE, core ∅ nom. 2,5 mm
Core identification code	cores red and green
Stranding	2 cores together with two fillers
Wrapping	1 layer PETP plastic foil
Screening	braid of tinned copper wires, coverage 85 % (nominal value)
Outer sheath	PVC lead-free, blue similar to RAL 5015 or black similar to RAL 9005, wall thickness nom. 1,0 mm, outer diameter: 8,0 mm

Electrical properties at 20° C

Resistance (loop)	max. 44 Ω/km
Insulation resistance	min. 5 GΩxkm
Mutual capacitance	A / A: ca. 50 nF / km A / S: ca. 80 nF / km (at 800 Hz)
Inductance	800 Hz: ca. 0,4 mH / km
Characteristic impedance	31,25 kHz: 100 Ω ± 20% ≥ 1 MHz: nom. 80 Ω
Line attenuation	39 kHz: max. 0,3 dB / 100 m 100 kHz: nom. 0,35 dB / 100 m 1 MHz: nom. 1,2 dB / 100 m
Velocity of propagation	nom. 79%
Transfer impedance up to 30 MHz	max. 250 mΩ/m
Operating peak voltage	250 V (not for power purposes)
Test voltage $U_{eff.}$ core / core and core / screen	1500 V

Mechanical and thermal properties

Minimum bending radius	static: 65 mm
Permissible temperature range	during installation: -5° C up to +60° C static: -40° C up to +80° C
Flame propagation	flame retardant acc. to IEC 60332-1-2
General requirements	Dangerous and forbidden substances acc. to RoHS directive (2002 / 95 / EG) are not allowed to the manufacturing.