



UNITRONIC® BUS PA FC 1 x 2 x 0,8

DB2170334

valid from: 12.07.2013

Application

Data cable for PROFIBUS PA field net according to IEC 61158-2.

The cable is intended for fixed laying in dry and damp interiors and with the black outer sheath for laying outdoors.

Approval: c(UL)us, type CMG acc. to UL 444 and CSA C22.2 No. 214-02

Design

Conductor	bare copper wire, nom. 1.05 mm Ø, 0,8 mm ²
Insulation	foam-skin PE, core Ø nom. 2.55 mm
Core identification code	cores red and green
Stranding	2 cores twisted to pair
Wrapping	1 layer plastic foil
Inner sheath	PVC
Screening	1 layer plastic-laminated aluminium foil (side with metal outwards), braid of tinned copper wires, coverage 85 % (nominal value)
Outer sheath	PVC lead-free, blue similar to RAL 5015 (art.-no.: 2170334) or black similar to RAL 9005 (art.-no.: 2170335), wall thickness nom. 0.95 mm, outer diameter: ca. 8.0 mm

Electrical properties at 20° C

Resistance (loop)	max. 44 Ω/km
Insulation resistance	min. 10 MΩxkm
Mutual capacitance	ca. 52 nF/km (at 800 Hz)
Inductance	ca. 0.65 mH/km (at 31.25 kHz)
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. 81%
Transfer impedance at 20 MHz	max. 10 mΩ/m
Operating peak voltage	100 V (not for power purposes)
UL-rating	600 V
Test voltage (DC, 3 seconds)	3600 V



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Mechanical and thermal properties

Minimum bending radius	static: 5 x cable Ø
Permissible temperature range	static: -40° C up to +80° C during installation: -5 °C up to +50 °C
Flame propagation	flame retardant acc. to UL 1685 (CSA FT 4)
UV-resistance	UV-resistant outer sheath acc. to EN 50283-4-17/VDE 0819-289-4-17
Oil resistance	acc. to UL 1581 Sec. 480 (60 °C)
General requirements	Dangerous and forbidden substances acc. to RoHS directive (2002/95/EG) are not allowed to the manufacturing.