

2170352	DATA SHEET	
valid from: 01.02.2019	UNITRONIC® BUS FF 2 1X2X1.1	

Application

FOUNDATION Fieldbus cable for use in Process Automation - UL-verified
Used in intrinsically safe areas, especially in the field of Process Automatio. UL/CSA-approval.
This cable has an armouring which provides a safe solution taking mechanical stress etc. into account.
Temperature range from -40 °C up to +105°C

Design

Certification	C(UL)US CMG or (UL) CL3 FT4 SUN RES
Conductor	bare copper, stranded wire (37 x 0.17 mm), approx. 1.15 mm \varnothing
Insulation	irradiated Polyethylene XLPE, core \varnothing approx. 2.85 mm
Core identification code	blue and brown
Stranding	2 cores twisted to pairs
Screen	1 layer plastic-laminated aluminium foil (overlapping) on top: stranded, tinned copper drain wire, approx. 0.5 mm ² on top: braid of tinned copper wires, coverage approx. 85%
Taping	plastic tape
Outer sheath	PVC, yellow, outer \varnothing : approx. 7.9 mm

Electrical properties at 20°C

Conductor resistance	max. 24 Ω /km
Specific volume resistivity	min. 20 M Ω *km
Inductance	approx. 0.75 μ H/m (31.25 kHz)
Capacitive coupling	conductor/conductor nom. 65 nF/km (1 kHz)
	conductor/screen nom. 125 nF/km (1 kHz)
Characteristic impedance	100 Ω (\pm 20) (31.25 kHz)
Attenuation	nom. < 3,4 dB/km (39 kHz)
Peak operating voltage	300 V (not for power applications)
Test voltage	conductor/conductor 1500 V conductor/screen 1500 V

Mechanical and thermal properties

Minimum bending radius	fixed use 5 x cable \varnothing flexible use 10 x cable \varnothing
Temperature range	- 40 ° C up to +105 ° C
Flammability	flame retardant acc. to UL1685 / CSA FT4
UV resistance	Sunlight resistance acc. to UL1581 Sec. 1200
Oil resistance	acc. To UL1581 Sec.480 (60°)
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

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