2170350	DATA SHEET	LAPP
valid from: 01.02.2019	UNITRONIC®BUS FF 3 1X2X1.1 +1.1	

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.
Temperature range from -40 °C bis +105°C

Design

Certification	cUL CMG - certified 75°C or CL2 FT4, Sun Res, Oil Res
Conductor	Stranded bare copper wire 41 X 0.16 ⌀ approx. 1,1 mm
Insulation	LIY-wire Insulation of Polyvinylchloride (PVC) ⌀ 2,0 mm (nominal value) power cores: Insulation of irradiated Polyethylene (XLPE) ⌀ 2,85 mm (nominal value)
Core identification code	LIY-wire green/yellow power cores: blue and brown
Stranding	screened power pair (aluminium laminated foil) twisted together with LIY-wire to the core
Screen	aluminium laminated foil with braid of tinned copper wires, coverage approx. 90 % and drain wire Stranded tinned copper drain wire 0.5 mm²
Outer sheath	PVC, yellow, outer Ø: 7,9 mm ± 0,3 mm

Electrical properties at 20°C

Conductor resistance	max. 24 Ω/km
Specific volume resistivity	200 MΩ*km
Inductance	0.48 mH/km (1 kHz)
Capacitive coupling	conductor/conductor nom. 65 nF/km (1 kHz) conductor/screen nom. 135 nF/km (1 kHz)
Characteristic impedance	100 Ω (±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 Ø repeated use 7.5 x cable Ø
Temperature range	- 25° C up to +105° C
Flammability	flame retardant acc. to UL1685 / CSA FT4 and IEC60332-3-24
UV resistance	Sunlight resistance acc. to UL1581 Sec. 1200
Oil resistance	nach 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).