



<b>DATA SHEET</b>	<b>2170350</b>
<b>UNITRONIC® BUS FF 3</b> <b>UL/CSA (CMG/PLTC) 1x2x1.1 + 1.1</b>	Valid from: <b>26.10.2006</b>



### Cable design

#### Wire LIY 0.8/2.0

Stranded bare copper wire 41 X 0.16  
Insulation of Polyvinylchloride (PVC)  
Wall thickness approx. 0.45 mm

∅ 1.1 mm (0.043 in)  
∅ 2.0 mm (0.079 in)

#### Screened pair 2X (ST) 2X1.1/2.85-100

Wire

Stranded bare copper wire 41 X 0.16  
Insulation of irradiated Polyethylene (XLPE)  
Wall thickness approx. 0.88 mm

∅ 1.1 mm (0,043 in)  
∅ 2.85 mm (0,112 in)

2 wires, blue (BU) and brown (BN) twisted to a pair  
Alulaminated foil overlapped

#### Core

1 screened pair blue (BU) / brown (BN)  
1 wire LIY 0.8/2.0 green/yellow (GNYE)  
Stranded tinned copper drain wire 0.5 mm<sup>2</sup>  
Alulaminated foil overlapped  
Shield braiding of tinned copper wires 0.15 mm diameter  
Coverage approx. 90%

∅ 6.4 mm (0.252 in)

#### Jacket

Polyvinylchloride (PVC) yellow (YE)  
Wall thickness approx. 0.7 mm

∅ (7.9 ±0.3) mm (0.311 ±0.012 in)

Marking: LAPP KABEL STU<sup>U</sup>TGART UNITRONIC® BUS FF 3 UL/CSA  
1 X 2 X 1.1 + 1 x 1.1 \* 19AWG (SHIELDED) (UL) E224252 CMG 105°C or PLTC  
FT4 Sun Res \* ROHS ART. 2170350

prepared by: PD-KL Hans Euler	Document: DB2170350EN	Page 1 of 2
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**Electrical data at 20°C**

Conductor resistance	≤	24	Ohm/km
Insulation resistance	≥	20	MOhm*km
Operating voltage (peak)	≤	300	V
Test voltage (core/core/screen rms 50Hz 1min)	=	1500	V

**Screened pair**

Characteristic impedance (31.25 kHz)	(100 ±20)	Ohm
Capacitance (1 kHz core/core)	≈	65 nF/km
Capacitance (1 kHz core/screen)	≈	135 nF/km
Inductance (1 MHz)	≈	0.48 μH/m
Capacity unbalanced to ground	≤	2 nF/km
Attenuation (39 kHz)	≤	3.4 dB/km
Propagation delay change 0.25 * f <sub>r</sub> to 1.25 * f <sub>r</sub>	≤	1.7 μs/km

**Mechanical and thermal characteristics**

Conductor material acc. to DIN EN 13602 Cu-ETP-A...  
Screen material acc. to DIN EN 13602 Cu-ETP-A...-B  
Insulation material acc. to DIN EN 50290-2-21 (VDE 0819), compound type TI53 (HD 624.1)  
Insulation material acc. to DIN EN 50290-2-23 (VDE 0819), table L/MD (HD 624.3)  
Jacket material acc. to DIN EN 50290-2-22 (VDE 0819), compound type TM52 (HD 624.2)  
Flame retardant acc. to UL 1685 (CSA FT 4)  
Oil resistant acc. to 1581 Sec. 480 (60°)

UL File No. E224252 CMG

UL File No. E224262 PLTC

**Other characteristics**

Flame retardant acc. to IEC 60332-3-24 (CAT. C)  
Sunlight resistant acc. to UL 1581 Sec.1200  
RoHS compliant

Permissible temperature range : -25 °C (-13 °F) up to 105 °C (221 °F)  
Minimum bending radius allowed : repeated 7.5X ø , single 5X ø  
Weight approx. : 84 kg/km (56,3 lb/1000ft)