



<b>DATA SHEET</b>	<b>2170322</b>
<b>UNITRONIC® BUS FD P L2/FIP FC UL/CSA (CMX) 1x2xAWG22/19</b>	Valid from:  22.08.2005

**Cable design**

Stranded bare copper wire 19 X 0.14 ø 0.67 mm ( 0,03 in)  
 Insulation of foamed Polyethylene (PE) ø 2.56 mm ( 0,10 in)

**Core**

2 wires, RD and GN twisted to a pair  
 Plastic tape, overlapped  
 Jacket: Polyvinylchloride (PVC) ø 5.4 mm (0,213 in)  
 Plastic tape, overlapped  
 Alulaminated foil overlapped  
 Shield braiding of tinned copper wires 0.15 mm diameter  
 Coverage approx. 70% ø 6.3 mm ( 0,25 in)

**Jacket:**

Polyurethane (PUR) violet (VT) RAL 4001  
 Wall thickness approx. 0.8 mm ø (8.0 ±0.4) mm (0,315 ±0,016 in)

Marking: LAPP KABEL STUTTGART **UNITRONIC® BUS FD P L2/FIP FC UL/CSA (CMX)**  
 1 x 2 x 0,64 \* (UL) CMX 75 °C AWG22 (SHIELDED) E224252 \* ROHS ART. 2170322

**Electrical data at 20°C**

Loop resistance	≤	133	Ohm/km
Screen resistance	≤	15	Ohm/km
Insulation resistance	≥	16000	MOhm*km
Characteristic impedance			
3 - 20 MHz		(150 ± 15)	Ohm
31.25 - 38.4 kHz		(185 ± 18.5)	Ohm
9.6 kHz		(270 ± 27)	Ohm

**Attenuation**

16 MHz	≤	49	dB/km
4 MHz	≤	25	dB/km
38.4 kHz	≤	4	dB/km
9.6 kHz	≤	3	dB/km

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Inductance	at 31.25 kHz	≈	1000	μH/km
Capacitance	at 1 kHz		28	nF/km
Capacitance unbalance to ground		≤	1500	pF/km
Operating voltage (effective value)		≤	100	V
Rel. velocity of propagation		≈	81	%
Test voltage			3600	V DC 3 sec

#### Mechanical and thermal characteristic

Conductor material acc. to DIN EN 13602 Cu-ETP-A...  
Screen material acc. to DIN EN 13602 Cu-ETP-A...-B  
Insulating material acc. to DIN EN 50290-2-23 (VDE 0819), table 2 column A (HD 624.3)  
Jacket material acc. F45052-F5 100 (similar to DIN VDE 0282)  
Cold bend test acc. DIN IEC 60811-1-4 ; after 16 hour storage at -40° C  
Flame test acc. to IEC 60332-1

Trailing cable for following requirements

- minimum bending radius allowed: 15 x outer diameter (= 120mm)  
(must not fall below 120mm)
- not adapted/suitable for garland mounting (festoon)

UL FILE No. E224252

#### Application / Special feature:

Trailing cable  
Mineral oil and fats resistance  
“Fast Connect” cable design

Permissible temperature range : -40°C (-104°F) up to +80°C (+176°F)  
Tensile strength : ≤ 100 N

PVC weight with Phthalate : 17.8 kg/km  
PVC weight without Phthalate : 0.0 kg/km  
Weight approx. : 74 kg/km (52 lb/1000ft)

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