



<b>Data Sheet</b>	<b>2170343</b>
<b>UNITRONIC® BUS DeviceNet™ THIN (PVC) UL/CSA (CMG)</b>	Valid from: <b>26.10.2006</b>



## Design

### a) Pair 02YS(ST) 1X2X0.67/1.9-120

#### Wire

Stranded tinned copper wire 19 X 0.13

∅ 0.67 mm (0.026 in)

Insulation of foamed Polyethylene (PE) with skin

∅ 1.9 mm (0.075 in)

Wall thickness approx. 0.6 mm

2 wires, white (WH) and blue (BU) side by side

Alulaminated foil overlapped, applied longitudinally

### b) Pair LIY(ST) 1X2X0.38/1.4

#### Wire

Stranded tinned copper wire 19 X 0.16

∅ 0.75 mm (0.030 in)

Insulation of Polyvinylchloride (PVC)

∅ 1.4 mm (0,055 in)

Wall thickness approx. 0.3 mm

2 wires, red (RD) and black (BK) side by side

Alulaminated foil overlapped, applied longitudinally

## Core

Central element: Stranded tinned copper drain wire 0.38 mm<sup>2</sup> (19x0.16)

1 Pair 02YS(ST) 1X2X0.67/1.9-120 LI VZN

1 Pair LIY(ST) 1X2X0.38/1.4 VZN

Shield braiding of tinned copper wires 0.13 mm diameter,  
coverage approx. 70%

∅ 4.8 mm (0.189 in)

## Jacket

Polyvinylchloride (PVC) violet (VT)

Wall thickness approx. 1.05 mm

∅ 6.9 ±0.3 mm (0,272 ±0,012 in)

Marking: LAPP KABEL STUTTGART UNITRONIC® DeviceNet™ THIN (PVC) UL/CSA

1x2xAWG24 + 1x2xAWG22 (SHIELDED) \* (UL) E224252 CMG 75°C or PLTC FT4

Sun Res Oil Res \* ROHS ART. 2170343

prepared by: PD-KL: Hans Euler	Document: DB2170343EN	Page 1 of 2
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**Electrical data at 20°C**

Conductor resistance	(Pair to a)	≤	90	Ohm/km
Conductor resistance	(Pair to b)	≤	55	Ohm/km
Capacitance (1 kHz core/core)	(Pair to a)	≈	39.8	nF/km
Characteristic impedance (1 MHz)	(Pair to a)		(120 ±12)	Ohm
Signal run time	(Pair to a)	≤	4.46	ns/m
Capacity unbalanced to ground	(Pair to a)	≤	3937	pF/km
Operating voltage (peak)		≤	300	V
Insulation resistance		≥	20	MOhm*km
Test voltage (core/core/screen rms 50 Hz 1min)		=	2000	V

Frequency (kHz)	125	500	1000
Attenuation typ. (dB/100m)	0.95	1.64	2.29
(Pair to a) (dB/100ft)	(0.3)	(0.5)	(0.7)

**Mechanical and thermal characteristics**

- Conductor/Screen material acc. to DIN EN 13602 Cu-ETP-A...-B
- Insulation material acc. to DIN EN 50290-2-23 (VDE 0819), table 2/A (HD 624.3)
- Insulation material acc. to DIN EN 50290-2-21 (VDE 0819), compound type TI53 (HD 624.1)
- Jacket material acc. to DIN VDE 0207, compound type YM3
- Sunlight resistant acc. to UL 1581 Sec.1200
- Flame retardant acc. to UL 1685 (CSA FT 4)
- Oil resistant acc. to 1581 Sec. 480 (60°)

**Application / Special feature:**

NEC Class 2

Permissible temperature range : -20°C (-4°F) up to +80°C (+176°F)  
 min. bending diameter allowed : multiple 20 X ø  
 single 7.5 X ø

PVC weight with Phthalate : 27.3 kg/km  
 PVC weight without Phthalate : 2.9 kg/km  
 Weight approx. : 67 kg/km (45 lb/1000 ft)