Data Sheet	2170342
UNITRONIC® DeviceNet™ THICK (PVC) UL/CSA (CMG)	Valid from: **26.10.2006**

Design

a) Pair 02YS(ST) 1X2X1.3/3.8-120

Wire
Stranded tinned copper wire 19 X 0.25 ø 1.3 mm (0.051 in)
Insulation of foamed Polyethylene (PE) with skin ø 3.8 mm (0.150 in)
Wall thickness approx. 1.2 mm

2 wires, white (WH) and blue (BU) side by side
Alulaminated foil overlapped, applied longitudinally

b) Pair LIY(ST) 1X2X1.5/2.7

Wire
Stranded tinned copper wire 19 X 0.34 ø 1.7 mm (0.067 in)
Insulation of Polyvinylchloride (PVC) ø 2.7 mm (0.106 in)
Wall thickness approx. 0.5 mm

2 wires, red (RD) and black (BK) side by side
Alulaminated foil overlapped, applied longitudinally

Core
Central element: Stranded tinned copper drain wire 0.86 mm² (19x0.24)
1 Pair 02YS(ST) 1X2X1.3/3.8-120 LI VZN
1 Pair LIY(ST) 1X2X1.5/2.7 VZN
+ fillers
Shield braiding of tinned copper wires 0.13 mm diameter,
coverage approx. 70% ø 8.6 mm (0.339 in)

Jacket
Polyvinylchloride (PVC) violet (VT)
Wall thickness approx. 1.8 mm ø 12.2 ±0.3 mm (0.480 ±0.012 in)

Marking: LAPP KABEL STUTTGART **UNITRONIC® DeviceNet™ THICK (PVC) UL/CSA**
1x2xAWG18 + 1x2xAWG15 (SHIELDED) * (UL) E224252 CMG 75°C or PLTC FT4
Sun Res Oil Res I * ROHS ART. 2170342

Electrical data at 20°C

Conductor resistance	(Pair to a)	≤	22.6	Ohm/km
Conductor resistance	(Pair to b)	≤	11.7	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)	0.42	0.81	1.31
(Pair to a) (dB/100ft)	(0.1)	(0.2)	(0.4)

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 : 83.1 kg/km (55.7 lb/1000 ft)
PVC weight without Phthalate : 10,5 kg/km (7.0 lb /1000 ft)
Weight approx. : 192 kg/km (129 lb/1000 ft)