



Data Sheet	2170347
UNITRONIC® FD Y DeviceNet™ THIN (PVC) UL/CSA (CMG)	Valid from: 26.10.2006



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 mm² (19x0.16)

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

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

Plastic tape, conductive

Shield braiding of tinned copper wires 0.13 mm diameter,
coverage approx. 80%, plastic tape, overlapped

∅ 5.0 mm (0.197 in)

Jacket

Polyvinylchloride (PVC) violet (VT)

Wall thickness approx. 0.95 mm

∅ 6.9 ±0.3 mm (2.717 ±0.012 in)

Marking: LAPP KABEL STUTTGART UNITRONIC® FD Y DeviceNet™ THIN (PVC) UL/CSA
1x2xAWG24 + 1x2xAWG22 (SHIELDED) * (UL) E224252 CMG 75°C or PLTC FT4
Sun Res Oil Res ROHS ART. 2170347



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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:

Highly flexible application
 NEC Class 2

Permissible temperature range : -10°C (+14°F) up to +80°C (+176°F)
 min. bending diameter allowed : multiple 15 X ø
 single 7.5 X ø

PVC weight with Phthalate : 23.9 kg/km (16.0 lb/1000 ft)
 PVC weight without Phthalate : 0 kg/km (0.0 lb/1000 ft)
 Weight approx. : 70 kg/km (46.9 lb/1000 ft)