



Data Sheet	2170346
UNITRONIC® FD Y DeviceNet™ THICK (PVC) UL/CSA (CMG)	Valid from: 22.08.2005



Design

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

Wire

Stranded tinned copper wire 40 X 0.18

∅ 1.3 mm (0.051 in)

Insulation of foamed Polyethylene (PE) with skin

∅ 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 84 X 0.16

∅ 1.7 mm (0.067 in)

Insulation of Polyvinylchloride (PVC)

∅ 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

Plastic tape, conductive

Shield braiding of tinned copper wires 0.13 mm diameter,

coverage approx. 80%, plastic tape, overlapped

∅ 8.8 mm (0.346 in)

Jacket

Polyvinylchloride (PVC) violet (VT)

Wall thickness approx. 1.7 mm

∅ 12.2 ±0.3 mm (0.480 ±0.012 in)

Marking: LAPP KABEL STUTTGART **UNITRONIC® FD Y DeviceNet™ THICK (PVC) UL/CSA (CMG)**

1x2xAWG18 + 1x2xAWG15 (SHIELDED) * (UL) E224252 CMG 75°C or PLTC FT4

Sun Res Oil Res I * ROHS ART. 2170346

prepared by: PD-KL: Hans Euler	Document: DB2170346EN	Page 1 of 2
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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) (Pair to a) (dB/100ft)	0.42 (0.1)	0.81 (0.2)	1.31 (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:

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 : 79.2 kg/km (53.1 lb/1000 ft)
PVC weight without Phthalate : 10.5 kg/km (7.0 lb/1000 ft)
Weight approx. : 196 kg/km (131.4 lb/1000 ft)