

Suggested Copy for Lapp Limited in Farnell Catalogue

Unitronic® BUS L2/FIP-H 1x2x0.64mm

(Farnell: UNITRONIC PROFIBUS DP L2/FIP Halogen Free)

Application

Halogen free data cable for the SIEMENS field-net Sinec L2 DP (acc. to DIN 19245 part 3 and EN 50170), for fieldbus system F.I.P. (Factory Instrumentation Protocol) as well as for high performance data networks with 150 Ohms nominal impedance. The cable is designed for the system-defined transmission rates of 1.5 Mbit/s, 2.5 Mbit/s and 12 Mbit/s, the transmission characteristics conform to the system and guarantee a high operating security during data transmission.

The cable is intended for limited flexible use and for permanent installation in dry and damp interiors. Due to its double screening it is suitable for installation in electromagnetically demanding areas.

Design

Conductor	7-wired stranded of bare copper, 0,22 mm ² (24 AWG), 7x0.2
Insulation	foam-skin PE (02YS); core diameter approx 2.55 mm
Coding cores	red and green
Twisting	2 cores together with 2 fillers (core-filler-core-filler)
Wrapping	mylar wrap
Screening	aluminium-mylar tape wrap, metal-side outwards, on top a tinned copper wire braid
Sheath	halogen free, flame retardant compound HM2 acc. to VDE 0207, violet RAL 4001
Outer diameter	approx. 7.8 mm
Weight	approx. 55 kg/km net

Electrical characteristics at 20°C

Loop resistance		max. Ω/km	186
Screen resistance		max. Ω/km	10
Insulation resistance		min. GΩxkm	5
Mutual capacitance	at 800 Hz	nom. nF/km	28
Impedance	at 9.6 kHz	Ω	270 ± 27
		Ω	185 ± 18.5
		Ω	150 ± 15
Line attenuation	at 9.6 kHz max.	dB/100 m	0.3
		dB/100 m	0.4
		dB/100 m	2.5
		dB/100m	4.9
Transfer impedance	at 20 MHz max.	mΩ/m	10
Nominal velocity of propagation		nom.	0.81c
Peak operation voltage (not for purposes of power/high voltage current) V			250
Test voltage	core/core, core/screen	U _{eff} V	1500

Mechanical and thermal characteristics

Minimum bend radius	single bending	mm	45
	multiple bending	mm	65
Permissible pulling force		max. N	100
Permissible temperature range static		°C	-40 up to + 80
	flexible	°C	-5 up to + 50
Burning load kWh/m 0.32			
Flame retardant	acc. to IEC 60332-1 / V DE 0482, part 265-2-1		
Non-halogen verification	acc. to IEC 60754-1 / V DE 0472, part 815		
Low smoke	acc. to IEC 61 034		