



DATA SHEET	2170223
UNITRONIC® BUS Yv L2/FIP 1 x 2 x 0,64	valid from : 08.07.2004

Application

UNITRONIC® BUS Yv L2/F.I.P. is a data cable for the SIEMENS field-net Sinec L2 DP (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.

Due to it's double screening it is suitable for installation in electromagnetically demanding areas. The cable is intended for limited flexible use and for permanent installation inside and outside as well as for underground burial. The outer sheath is unaffected by atmospheric UV-radiation at above-ground installation.

Design

Conductor	single wire of bare copper, 0.64mm Ø (22AWG)
Insulation	foam-skin PE (02YS); core diameter approx 2.5mm
Coding	cores red and green
Twisting	2 cores together with 2 fillers (core-filler-core-filler)
Wrapping	mylar wrap
Screening	aluminum-mylar tape wrap, metal-side outwards on top a tinned-copper wire braid
Sheath	PVC, YM1 to VDE 0207, part 5; black, flame retardant, outer diameter max. 7.8 mm
Weight	approx 112 kg/km net
Marking on the sheath:	

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Electrical properties s at 20°C

Loop resistance		max. Ω/km	115
Screen resistance		max. Ω/km	10
Insulation resistance		min. GΩxkm	5
Mutual capacitance	at 800 Hz	nom. nF/km	30
Impedance	at 9.6 kHz	Ω	270 ± 27
	at 38.4 kHz	Ω	185 ± 18.5
	at 3 to 20 MHz	Ω	150 ± 15
Line attenuation	at 9.6 kHz	max. dB/100 m	0.25
	at 38.4 kHz	max. dB/100 m	0.4
	at 4 MHz	max. dB/100 m	2.2
	at 16 MHz	max. dB/100 m	4.2
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	70
	multiple bending	mm	150
Permissible pulling force		N	100
Permissible temperature range	static	°C	- 40 up to + 80
	flexible	°C	- 5 up to + 50
Burning load		kWh/m	approx.0.377
Flammability	flame retardant to VDE 0482, part 265-2-1 / IEC 60 332-1		

elaborated by: TE-K: N. Ensslen	Document: DB2170223_2EN	page 1 of 1
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