



DATA SHEET	2170227
UNITRONIC® BUS FD P COMBI L2/FIP 1 x 2 x 0.64 Ø	valid from : 08.07.2004

Application

UNITRONIC® BUS FD P COMBI L2/FIP field bus cable with nominal impedance of 150 Ω and with integrated power supply for the bus logic.
The cable is intended for high flexible application in power chains.

Design

Data transmission pairs	stranded conductor: bare copper, 0.25 mm ² (24AWG) insulation: foam skin O2YS or O9YS, core diameter approx. 2.55 mm core colour: red and green
Power supply cores	stranded conductor: bare copper 1.0 mm ² (18AWG) insulation: PP alternative PE core colour: green/yellow, black and blue cable core: 2 cores 0.25 mm ² twisted to a pair taping with one layer of non woven tape pair screening: plastic laminated aluminium foil, overlapped, metal side outwards braid of tinned copper, coverage 85% ± 5 stranding. screened data pair with 3 cores 1.0 mm ² stranded taping with one layer of non woven tape sheath: PUR, flame retardant, halogen free, wall thickness 1.1 mm, violet RAL 4001, outer diameter 10.0 mm

LAPP KABEL STUTTGART **UNITRONIC® BUS FD P COMBI L2/FIP** 1 x 2 x 0,64 + 3 x 1,0 ART. 2170227

Electrical properties at 20° C

Data transmission pairs:	Loop resistance	max. Ω/km	145
	Screen resistance	max. Ω/km	10
	Insulation resistance	min. GΩxkm	5
	Mutual capacitance at 800 Hz	nom. nF/km	28
	Impedance at 9.6 Hz	Ω	270 ± 27
			at 30.25 kHz Ω 185 ± 18.5
			at .20 MHz Ω 150 ± 15
	Line attenuation at 9.6 kHz	max. dB/100 m	0.3
			at 38.4 kHz max. dB/100 m 0.5
			at 4 MHz max. dB/100 m 2.5
			at 16 MHz max. dB/100 m 4.9
	Transfer impedance at 20 MHz	max.Ω/km	10
	Nominal velocity of propagation	nom.	0,81c
Cores power supply:	Conductor resistance	max.Ω/km	19.5
	Insulation resistance	min. MΩx km	20
Cable core:			
Peak operation voltage (not for purposes of power/high voltage current)		U _{eff} V	100
Test voltage	core/core	U _{eff} V	600
	core/screen		

Mechanical and thermal characteristics

Minimum bend radius	flexible	mm	145
Pulling force		min. N	100
Temperature range	static	°C	- 40 up to + 80
	flexible	°C	- 5 up to + 50
Burning load		kWh/m	approx. 0,265
Flammability	flame retardant to VDE 0482, part 265-2-1 / IEC 60 332-1		

elaborated by: TE-K: M. Steinberg	Document: DB2170227_2EN	page 1 of 1
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