



UNITRONIC® BUS PB FD Y HYBRID

DB2170875

valid from: 06.08.2012

Application

UNITRONIC® BUS PB FD Y HYBRID is a highly flexible bus cable with 150 Ω impedance and with integrated control cores. The cable is suitable for applications in power chains.

Design

Data cores	inner conductor	bare copper, fine-wire stranded (19 x 0.14), ca. 0.67 mm ø
	insulation	Foam-Skin PE, ca. 2.56 mm ø
	number of cores	2
	colors	red and green
	stranding	twisted to pair
	wrapping	plastic foil, overlapping
	screening	plastic-laminated aluminum foil, overlapping <u>on top:</u> braid of tinned copper wire, coverage 65 % ±5 %
Control cores	conductor	bare copper, fine-wire stranded (84 x 0.15 mm), ca. 2.4 mm ø
	insulation	PVC, black, wall-thickness ca. 0.4 mm, ca. 2.4 mm ø
	core identification	numbered: 1-2-3-4
Stranding		screened pair and 4 control cores are twisted together with yarn to round cable core
Wrapping		plastic foil, overlapping
Outer sheath		PVC, violet, wall-thickness ca. 1.0 mm, outer Ø: ca. 11.0 mm



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Technical data

Data cores	conductor resistance (loop)	138 Ω/km
	Capacitance	30 nF/km (at 1 kHz)
	rel. velocity of propagation	ca. 81 %
	test voltage	core/core: 2000 V core/screen: 2000 V
	attenuation	9.6 kHz: max. 3 dB/km 38.4 kHz: max. 4 dB/km 4 MHz: max. 25 dB/km 16 MHz: max. 49 dB/km
	characteristic impedance	9.6 kHz: max. 270 Ω ±27 Ω 31.25 kHz – 38.4 kHz: max. 185 Ω ±18,5 Ω 3 Mhz – 20 MHz: max. 150 Ω ±15 Ω
	Control cores	Conductor resistance
Insulation resistance		min. 20 MΩxkm
operating voltage		600 V (not for power purposes)
ampacity		max. 12 A (up to 25 °C)
Mechanical and thermal characteristics	Minimum bending radius	power chains: 7.5 x min. cable ø (moved) 1 million bending cycles acceleration: 2.5 m/s ² fixed: 5 x cable ø
	Temperature range	-5° C up to +80° C
	Flame propagation	flame retardant acc. to UL 1685 (CSA FT 4)
	Sunlight resistance	sunlight resistant acc. to UL 1581 Sec. 1200
	Oil resistance	oil resistant acc. to UL 1581 Sec. 480 (60 °C)
	General requirements	Dangerous and forbidden substances acc. to RoHS directive (2002/95/EG) are not allowed to the manufacturing.