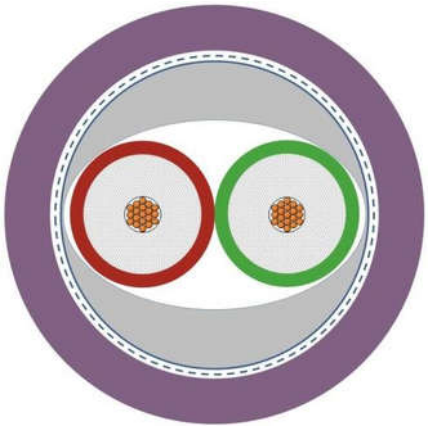
2170322	DATA SHEET	LAPP
valid from: 01.01.2019	UNITRONIC® BUS PB FD P FC 1x2x0,64	

Application

UNITRONIC® BUS PB FD P FC 1x2x0,64 is a field bus cable with 150 Ω nominal impedance and a length-related transmission rate by 93,75 kBit/s to 12 MBit/s. The oil resistant product has excellent shielding properties and is suitable for highly flexible applications (drag chains and frequently moved machine parts).

Design



Certification	UL/CSA type CMX acc. to UL 444 and CSA C22.2 No. 214
Conductor	stranded bare copper wire 19 x 0,140 mm, ⌀ approx. 0,67 mm
Insulation	foamed skin polyethylene (02YS), ⌀ 2,55 mm (nominal value)
Core identification code	red/green
Stranding	2 cores stranded to pair plastic tape (overlapping)
Inner sheath	PVC, nature, outer Ø approx. 5,40mm
Screen	aluminium laminated shield foil under braid, tinned coper wires, coverage 55 % ±5 %
Taping	(optional) thin non-woven tape, longitudinally applied
Outer sheath	PUR (TMPU), violet (similar RAL 4001), outer ⌀: 7,8 mm ± 0,2 mm

Electrical properties at 20°C

Insulation resistance	min. 5 GΩxkm
Inductance	nom. 1000 µH/km (800 Hz)
Characteristic impedance	270 Ω (±10%) (9,6 kHz) 185 Ω (±10%) (38,4 kHz) 150 Ω (±10%) (3-20) MHz
Attenuation	max. 0,3 dB/100m (9,6 kHz) max. 0,4 dB/100m (38,4 kHz) max. 0,9 dB/100m (200 kHz) max. 2,5 dB/100m (4 MHz) max. 4,9 dB/100m (16 MHz)
Near-end cross-talk	nom. 0,75
Signal transit time	nom. 450 ns/100m (3-20) MHz
Transfer impedance	max. 10 mΩ/m (up to 20,0 MHz)
Peak operating voltage	250 V (not for power applications)
Test voltage	core/core: 3600 V DC (3 seconds) core/screen: 3600 V DC (3 seconds)

We reserve all rights according to DIN ISO 16016.

Mechanical and thermal properties

Minimum bending radius	moved: 15 x cable ⌀
Temperature range	fixed installation: -40˚C up to +80˚C moved: -30˚C up to +70˚C
Flammability	acc. to UL 2556 Abs. 9.4 (VW-1)
Oil resistance	acc. to UL 13 Sec. 40 (60°)
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

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