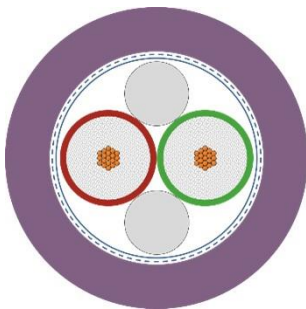


2170338	DATA SHEET	
valid from: 21.11.2022	UNITRONIC® BUS PB FESTOON 1x2x0.64	

Application

Field of use:	Connecting cable for the field-bus system PROFIBUS acc. to IEC 61158-2. Suitable for highly flexible applications like festoon systems.
Performance:	Screened foiled twisted pair cable, having a nominal impedance of 150 Ω. Designed for transmission rates of 9.6 Kbit/s up to 12 Mbit/s. Cable lengths up to 1200 m dependent on the transmission rate.
Characteristics:	flame retardant, no flame propagation, UV resistant
Applications:	PROFIBUS DP, PROFIBUS FMS, FIP, RS 485 and others



Design

Certification	E224262 (UL) CL3 SUN RES acc. to UL 13 E236660 c(UL)us CM 75°C acc. to UL 444 and CSA C22.2 No. 214 E63634 c(UL)us AWM Style 2463 AWM I/II A/B 80°C 600 V FT1 acc. to UL 758 and CSA C22.2 No. 210
Conductor	fine-wire stranded bare copper 23/19 AWG (0.64 mm)
Insulation	foam-skin polyolefine core diameter: nom. 2.6 mm
Core identification code	red and green
Stranding	two cores twisted to pair on top: non-woven tape (overlapping)
Screen	plastic laminated aluminium foil (overlapping) on top: braid of tinned copper wires (coverage: nom. 85 %)
Taping	non-woven tape (overlapping)
Outer sheath	PVC violet, similar RAL 4001 outer diameter: 8.0 mm ± 0.3 mm

Electrical properties at 20 °C

Loop resistance	≤ 138.4 Ω/km
Insulation resistance	≥ 5 GΩxkm
Mutual capacitance	nom. 30 nF/km (at 800 Hz)
Characteristic impedance	9.6 kHz: 270 Ω ± 27 Ω 38.4 kHz: 185 Ω ± 18.5 Ω 3 MHz – 20 Mhz: 150 Ω ± 15 Ω
Attenuation	9.6 kHz: ≤ 0.3 dB/100 m 38.4 kHz: ≤ 0.5 dB/100 m 200 kHz: ≤ 0.9 dB/100 m 4 MHz: ≤ 2.5 dB/100 m 16 MHz: ≤ 4.4 dB/100 m 20 MHz: ≤ 4.9 dB/100 m
Transfer impedance	1 MHz: ≤ 50 mΩ/m 10 MHz: ≤ 100 mΩ/m 20 MHz: ≤ 200 mΩ/m
Maximum operating voltage	IEC/EN: 125 V (not for power purposes)
Rated voltage	UL/CSA: 300 V acc. to UL 13 & UL 444

Creator: KIOS / PDC	Document: DB2170338EN	Page 1 of 2
Released: ALTE / PDC	Version: 01	

2170338	DATA SHEET	
valid from: 21.11.2022	UNITRONIC® BUS PB FESTOON 1x2x0.64	

Test voltage		600 V acc. to UL 758
	core/core:	2000 V
	core/screening:	2000 V

Mechanical and thermal properties

Minimum bending radius	fixed:	4 × outer diameter
	occasional flexing:	8 × outer diameter
	continuous flexing:	15 × outer diameter
Temperature range	fixed:	-40 °C up to +80 °C
	occasional flexing:	-10 °C up to +70 °C
	continuous flexing:	-10 °C up to +60 °C
	UL/CSA:	75 °C acc. to UL 13 & UL 444 80 °C acc. to UL 758
Flammability	flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2	
	FT1 (Vertical Flame Test) acc. to UL 758	
	UL Flame Exposure acc. to UL 444 §7.14.4 resp. UL 13 §28.2	
Weather and UV resistance	SUN RES acc. to UL 13 §29.1	
General requirements	These cables are conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances) and the LV-Directive 2014/35/EU (Low voltage Directive).	
Environmental information	These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).	

Creator: KIOS / PDC	Document: DB2170338EN	Page 2 of 2
Released: ALTE / PDC	Version: 01	