# Data communication systems

Bus system PROFIBUS-DP/FMS/FIP • Fixed Installation

⊛ **LAPP**

## UNITRONIC® BUS PB
PROFIBUS cables for fixed applications



### Info
- Lapp Kabel is a member of the PROFIBUS User Organisation (PNO)
- A for Advanced here: UL and CSA certifications

### Application range
- For fixed installation Maximum electromagnetic screening
- Dry or damp rooms
- Item nos. 2170233, 2170333, 2170820, 2170824, 2170826 are all UV-resistant

### Product features
- These bus cables can be used for PROFIBUS-DP as well as for PROFIBUS-FMS and FIP
- Based on the bit rates listed, in accordance with PNO specifications the following maximum cable lengths for a bus segment apply (cable type A, PROFIBUS-DP):
  93.75 kbit/s = 1200 m
  187.5 kbit/s = 1000 m
  500 kbit/s  = 400 m
  1.5 Mbit/s  = 200 m
  12.0 Mbit/s = 100 m

### Norm references / Approvals
- In accordance with DIN 19245 and EN 50170, e.g. for SIEMENS SIMATIC NET, also suitable for FIP (Factory Instrumentation Protocol)
- See below for UL certification type

### Product Make-up
- FC: Fast Connect cable design
- P: Polyurethane H: Halogen-free
- PE: polyethylene outer sheath, black
- 7-W: 7-wire, e.g. for applications where vibrations occur
- COMBI: Data transmission and power supply in one cable

### Technical data

**Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000830
ETIM 5.0/6.0 Class-Description: Data cable

**Mutual capacitance**
(800 Hz): max. 30 nF/km

**Peak operating voltage**
(not for power applications) 250 V

**Conductor resistance**
(loop): max. 186 Ω/km. see also datasheet

**Minimum bending radius**
Fixed installation: see data sheet

**Test voltage**
Core/core: 1500 V rms

**Characteristic impedance**
150 ± 15 Ω

| Article number | Article designation | Number of pairs and conductor diameter (mm) | Outer diameter [mm] | Copper index (kg/km) | Weight (kg/km) |
|---|---|---|---|---|---|
| **Conventional cable makeup** | | | | | |
| 2170220 | UNITRONIC® BUS PB | 1 x 2 x 0.64 | 8 | 30.1 | 74 |
| 2170233 | UNITRONIC® PB PE | 1 x 2 x 0.64 | 8 | 30.1 | 57 |
| 2170226 | UNITRONIC® BUS PB H 7-W | 1 x 2 x 0.64 | 8 | 30.1 | 55 |
| 2170225 | UNITRONIC® BUS PB COMBI 7-W | 1 x 2 x 0,64 Ø + 3 x 1,0 mm² | 9.8 | 59 | 92 |
| **Conventional cable makeup - UL/CSA CMX certification** | | | | | |
| 2170219 | UNITRONIC® BUS PB A | 1 x 2 x 0.64 | 8 | | 57 |
| **Conventional cable makeup - UL/CSA CMG certification** | | | | | |
| 2170824 | UNITRONIC® BUS PB 7-W A | 1 x 2 x 0.64 | 8 | 30.1 | 55 |
| **Fast Connect** | | | | | |
| 2170333 | UNITRONIC® BUS PB PE FC | 1 x 2 x 0.64 | 8 | 26 | 67 |
| **Fast Connect - UL/CSA CMX certification** | | | | | |
| 2170330 | UNITRONIC® BUS PB P FC | 1 x 2 x 0.64 | 8 | 26 | 71 |
| **Fast Connect cable makeup - UL/CSA CMG certification** | | | | | |
| 2170820 | UNITRONIC® BUS PB FC | 1 x 2 x 0.64 | 8 | 26 | 84 |
| 2170826 | UNITRONIC® BUS PB 7-W FC | 1 x 2 x 0.64 | 8 | 26 | 67 |
| 2170326 | UNITRONIC® BUS PB-H FC | 1 x 2 x 0.64 | 8 | 26 | 72 |

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
SIMATIC NET® is a registered trademark of Siemens AG
Lapp Kabel is a member of the PROFIBUS user organisation (PNO)
Photographs and graphics are not to scale and do not represent detailed images of the respective products.

### Similar products

### Accessories
- Sub-D Bus-Connectors