

UNITRONIC® BUS PB

For PROFIBUS-DP/FMS/FIP bus systems; stationary applications; 150 Ω



UNITRONIC® BUS PB cables are designed for automation networks requiring fast and reliable data exchange between controllers and field devices. Additional styles are available upon request (e.g., armored, high temperature, direct burial for outdoor, PROFIBUS PA for intrinsic safety).

Recommended applications


Automation devices like sensors, actuators, PLCs, and PCs in dry or damp environments; PROFIBUS-DP/FMS/FIP bus systems

Max. cable length by bit rate for one bus segment

| Communication rate | Length of cable segment | |
|--------------------|-------------------------|------|
| | ft | m |
| 93.75 Kbps | 3936 | 1200 |
| 187.5 Kbps | 3280 | 1000 |
| 500 Kbps | 1312 | 400 |
| 1.5 Mbps | 656 | 200 |
| 12.0 Mbps | 328 | 100 |

Cable attributes page 648
See attribute list by part number on page 166

Complete the installation
 SKINTOP® MS-SC page 522
 EPIC® DATA connectors page 179

ÖLFLEX® CONNECT solution
 PROFIBUS cordsets page 626

Construction

Conductors: solid and stranded bare copper

Insulation: polyethylene

Shielding: specially designed foil/tinned copper braid

Jacket: PVC, PUR, or halogen-free; violet • reinforced jacket: PVC; black


Application advantage


- Maximum EMI protection
- Fast connect style for quick installation
- Communication rate up to 12.0 Mbit/s
- LAPP is a member of the PROFIBUS User Organization (PNO)
- Call your sales representative for additional styles

Approvals





Technical data

 **Minimum bend radius:**
- for installation: 10 x cable diameter

 **Temperature range:**
- PVC & PUR: -40°C to +80°C
- halogen-free: -30°C to +80°C

 **Characteristic impedance:** 150 Ω ± 15 Ω

 **Nominal capacitance:** 9 pF/ft

 **Color code:** red & green pair

 **Approvals:** UL: CMG (see table below)
CMX (see table below)
CL3 (2170824, 2170820)
Canada: c(UL) CMG (see table below)
c(UL) CMX (see table below)

| Part number | Jacket material | Conductor description | Approvals | Nominal outer diameter | | Copper weight lbs/mft | Approx. weight lbs/mft | SKINTOP® MS-SC PG thread |
|--------------------------------|-----------------|-----------------------|------------|------------------------|-----|-----------------------|------------------------|--------------------------|
| | | | | in | mm | | | |
| 2170220 | PVC | 22 AWG/1pr | — | 0.315 | 8 | 20 | 50 | 53112220 |
| 2170219 | PVC | 22 AWG/1pr | UL/CSA CMX | 0.315 | 8 | 20 | 38 | 53112220 |
| 2170824* | PVC | 24 AWG/1pr, 7 wire | UL/CSA CMG | 0.315 | 8 | 20 | 37 | 53112220 |
| Fast connect | | | | | | | | |
| 2170820 | PVC | 22 AWG/1pr | UL/CSA CMG | 0.315 | 8 | 17 | 56 | 53112220 |
| 2170853 | halogen-free | 22 AWG/1pr | UL/CSA CMG | 0.315 | 8 | 20 | 50 | 53112220 |
| 2170326 | halogen-free | 22 AWG/1pr | — | 0.315 | 8 | 20 | 50 | 53112220 |
| 2170330 | PUR | 22 AWG/1pr | UL/CSA CMX | 0.315 | 8 | 20 | 50 | 53112220 |
| 2170826 | PVC | 24 AWG/1pr, 7 wire | UL/CSA CMG | 0.315 | 8 | 20 | 45 | 53112220 |
| Reinforced black jacket | | | | | | | | |
| 2170223 | PVC | 22 AWG/1pr | — | 0.370 | 9.4 | 20 | 74 | 53112220 |
| 2170236 | PVC/PE | 22 AWG/1pr | — | 0.374 | 9.5 | 20 | 59 | 53112220 |

*For applications where vibrations occur