



UNITRONIC® BUS PA

Cables for bus system PROFIBUS-PA



Info

PA = Process Automation Variant with UL/CSA CMG

Benefits

- FC (Fast Connect) version is oil and UV-resistant

Application range

- Process-automation application for connecting sensors and actuators - including areas with risks of explosion.
- Fixed installation

Product features

- Bit rate = 31.25 kbit/s. Transmission technology RS485 also possible but bit rate is limited to 1.5 Mbit/s
- Maximum cable length is dependent on several factors (e.g. supply voltage, current demand).
- Technical Data: refer to the overview on "UNITRONIC® Bus Cables"
- Flame-retardant according IEC 60332-1-2

Norm references / Approvals

- PROFIBUS® PA is standardised in EN 50170 as PROFIBUS® DP and PROFIBUS® FMS
- Transmission technology for PROFIBUS-PA in accordance with international standard IEC 61158-2
- FC variant with UL/CSA approval (CMG / PLTC)

Design

- UNITRONIC® BUS PA (BU/BK)
Stranded conductor, core colours: red and green, copper braiding, PVC sheath, colour: blue (intrinsically safe area), colour: black (non-intrinsically safe area)
- UNITRONIC® BUS PA FC (BU/BK)
Solid core, UL/CSA CMG approval and "Fast Connect" cable design, which enables rapid connection of the IDC connector (Insulation Displacement Connection).

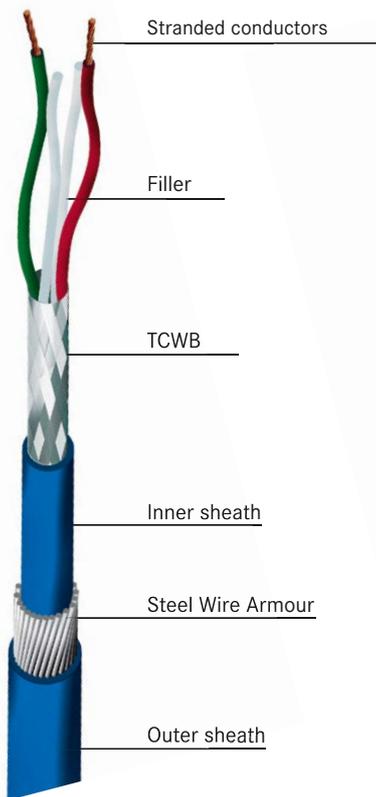
Technical data

- Peak operating voltage:**
(not for power applications) 250 V
- Conductor resistance:**
(loop): max. 44 ohm/km
- Minimum Bending Radius:**
10 x outer diameter
- Test voltage:**
C/C 1500 V x 1 minute
- Temperature range:**
Fixed installation: -30°C to +80°C
During installation: -5°C to +50°C
- Characteristic impedance:**
100 ± 20 Ohm

Article Number	Number of pairs and cable diameter per conductor in mm	Outer diameter (mm)	Copper index (kg/km)	Approx Weight (kg/km)
For fixed installation - conventional cable assembly				
2170234	1 x 2 x 1,3	8,0	45,0	84
2170235	1 x 2 x 1,3	8,0	45,0	84
For fixed installation - "Fast Connect" cable assembly - UL/CSA CMG approval				
2170334	1 x 2 x 1.00	8,0	45,5	103
2170335	1 x 2 x 1.00	8,0	45,5	103

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request. Photographs are not to scale and do not represent detailed images of the respective products

AVAILABLE ALSO IN: Special armouring



UNITRONIC® ARMOUR SWA BUS PA

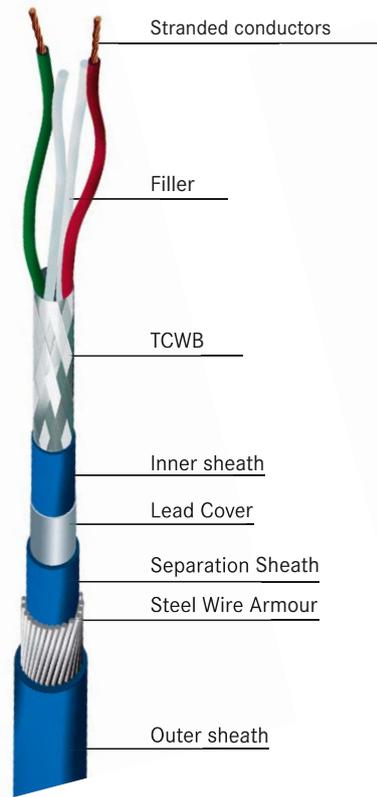
Cables for bus systems profibus -PA with steel wire armouring (SWA)

■ Benefits

- High mechanical protection against accidental impacts
- Excellent rodent protection
- Suitable for direct burial
- UV and water-resistant

■ Application range

- Heavy industrial areas
- For indoor or outdoor use
- Methods of deployment: empty plastic pipes, ducts and trays



UNITRONIC® ARMOUR SWA LEAD BUS PA

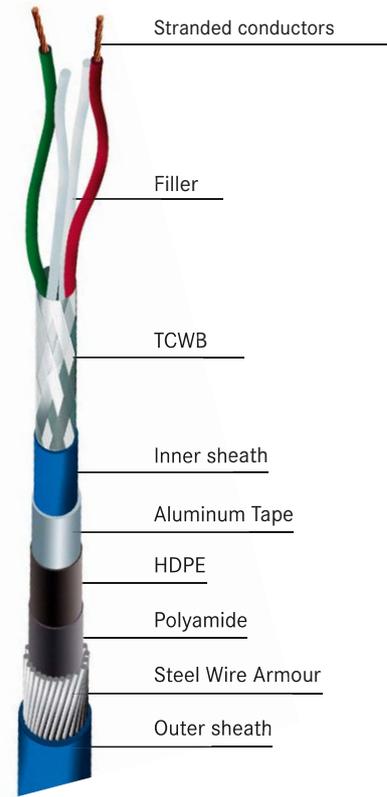
Cables for bus systems profibus -PA with extruded lead armouring for chemical protection

■ Benefits

- Protection against hydrocarbons and other chemicals
- Excellent rodent protection
- High mechanical protection against accidental impacts

■ Application range

- Harsh oil and chemical environments
- Heavy industrial areas
- For direct burial, especially in the presence of oil and aggressive chemical substances



UNITRONIC® ARMOUR SWA AL/HDPE/PA BUS PA

Cables for bus systems profibus -PA with aluminum tape and additional HDPE and PA sheaths for water and chemical protection

■ Benefits

- Aluminum tape acts as a barrier to prevent water penetration
- Cost-effective protection against hydrocarbons and other aggressive chemicals (EN 50288-7)
- High mechanical protection

■ Application range

- Harsh oil and chemical environments
- Heavy industrial areas
- For direct burial, especially in the presence of oil and aggressive chemical substances

Inner and outer sheath materials are based on the area of installation:

- For outdoors, PE or PVC is used
- For indoor use, where flame retardance is required, LSZH material is used

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