



UNITRONIC® BUS LD

Cables for bus systems RS485/RS422



Info

LD is a LAPP abbreviation for long distance

Benefits

- Suitable for multiple Bus systems based on RS485 / RS422

Application range

- For fixed installation
Maximum electromagnetic screening
- Bus cables for bus systems such as e.g. Modbus, SUCOnet P, Modulink P, VariNet-P)
- Dry or damp rooms

Product features

- The stated bit rates result in the following cable lengths (maximum) of one bus segment:
- 9.6-93.75 kbit/s = 1200m
- 187.5 kbit/s = max. 1,000 m
- 500 kBit/s = max. 400 m
- Flame-retardant according IEC 60332-1-2

Norm references / Approvals

- UL variant has approval: UL/CSA type CMX acc. to UL 444 and CSA C22.2 no. 214-02

Design

- Stranded bare 7-wire conductor, colour-coded according to DIN 47100
- Copper braid
- PVC sheath
- Colour: violet (RAL 4001)
- UNITRONIC® BUS LD A as UNITRONIC® BUS LD, but with UL/CSA approval

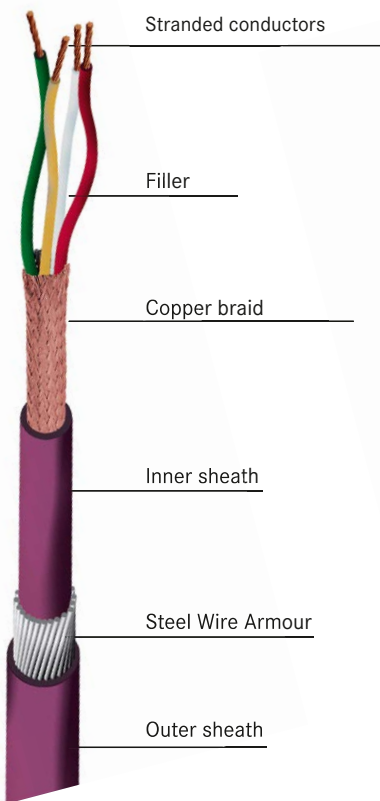
Technical data

- Mutual capacitance**
(800 Hz): max. 60 nF/km
- Peak operating voltage**
(not for power applications) 250 V
- Conductor resistance**
(loop): max. 186 ohm/km
- Minimum bending radius**
8 x outer diameter
- Test voltage**
Core/core: 1500 V rms
- Temperature range**
Fixed installation: -40°C to +80°C
Flexing: -5°C to +70°C
- Characteristic impedance**
100 - 120 Ohm

Article Number	Number of pairs and mm ² per conductor	Approx Outer Diameter (mm)	Copper index (kg/km)	Approx Weight (kg/km)
for fixed installation				
2170203	1 x 2 x 0,22	5,7	18,0	37
2170204	2 x 2 x 0,22	7,1	28,0	45
2170205	3 x 2 x 0,22	7,2	37,0	72
For fixed installation - UL/CSA CMX approval				
2170803	1 x 2 x 0,22	5,7	18,0	39

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 LD

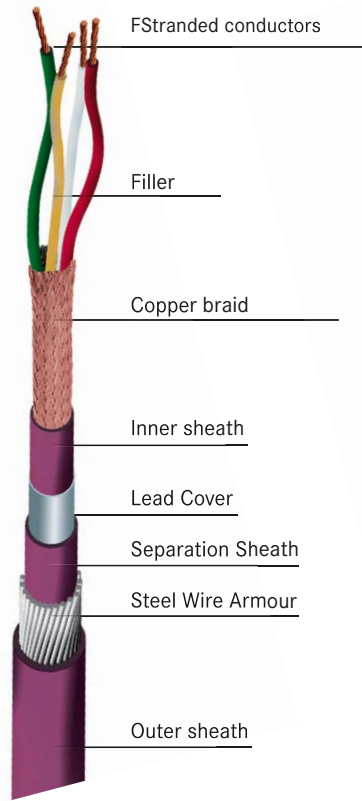
Cable for bus systems RS485/RS422 with steel wire armouring (SWA)

■ 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 LD

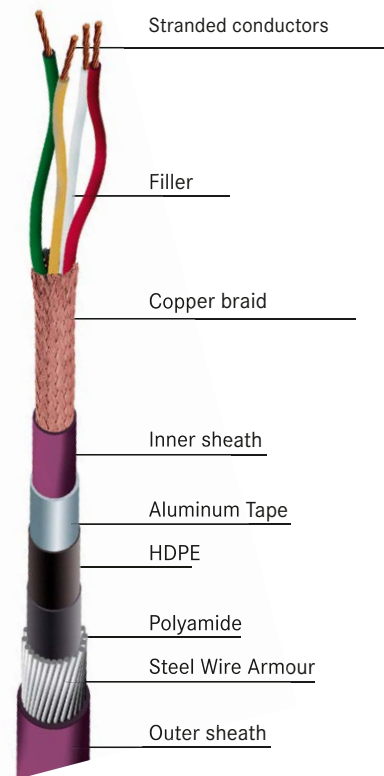
Cable for bus systems RS485/RS422 with extruded lead armouring for chemical protection

■ 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 LD

Cable for bus systems RS485/RS422 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

Photographs are not to scale and do not represent detailed images of the respective products.