

HELUDATA® ROBOFLEX® PUR UL/CSA



Data cable



TECHNICAL DATA

PUR robot cable acc. to UL-Std. 758 (AWM) Style 21209, CSA-Std. C22.2 No. 210 - AWM I/II A/B

| | |
|-------------------------------|---|
| Temperature range | flexible -30°C to +90°C fixed -40°C to +90°C |
| Nominal voltage | VDE AC U ₀ /U 300/300 V UL (AWM) AC 300 V |
| Test voltage core/core | 2000 V |
| Minimum bending radius | fixed 5x Outer-Ø flexible: see properties |

■ CABLE STRUCTURE

- Copper wire bare, extra finely stranded
- Wire structure:
0.25 mm²: approx. 32 x 0.1 mm
0.34 mm²: approx. 42 x 0.1 mm
- Core insulation: PP
- Core identification acc. to DIN 47100, colour coded
- x = without protective conductor
- Stranding:
2 - 7 core(s): cores stranded into one layer with an optimally matched lay length
12 - 25 core(s): cores stranded into bundles with optimally matched lay lengths; bundles stranded together around a tensile core
- Fleece wrapping
- Outer sheath: Special grade of full polyurethane acc. to DIN VDE 0207-363-10-2 / DIN EN 50363-10-2 (compound type TMPU)
- Sheath colour: black (RAL 9005)
- Length marking: in metres

■ PROPERTIES

- resistant to: oil, UV radiation, ozone, oxygen, weathering effects, hydrolysis, microbes, coolants, hydraulic fluids, acids, alkalis, greases, seawater and wastewater
- highly abrasion-resistant, notch-resistant, tear-resistant, cut-resistant, wear-resistant, low adhesion
- smooth, high-quality core insulation for eased sliding and optimized core stranding ensure long service-life within applications that request combined bending and torsion movements
- for outdoor use

- torsion rated
- suitable for use in drag chains
- Torsion parameters
Acceleration (max.): 60 °/s²
Velocity (max.): 180 °/s
Minimum bending radius: 10x Outer-Ø
Torsional stress up to 180 °/m: 10 Mio. Cycles (max.)
Torsional stress up to 360 °/m: 5 Mio. Cycles (max.)
- Drag chain parameters
Acceleration (max.): 10 m/s²
Velocity (max.), unsupported: 3 m/s
Velocity (max.), gliding: 2 m/s
Traverse path (max.): 10 m
Minimum bending radius (Traverse path ≤ 3m): 10x Outer-Ø
Minimum bending radius (Traverse path > 3m): 12.5x Outer-Ø
Bending cycles (max.): 10 Mio.
- halogen-free
- the materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers

■ TESTS

- halogen-free acc. to DIN VDE 0482-754-1 / DIN EN 60754-1 / IEC 60754-1
- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2, UL VW-1, CSA FT1
- oil-resistant acc. to DIN VDE 0473-811-404 / DIN EN 60811-404 / IEC 60811-404
- UV-resistant acc. to DIN EN ISO 4892-2
- weather-resistant acc. to DIN EN ISO 4892-2

■ APPLICATION

Data cable to transmit data and monitoring signals specifically designed for combined torsion and bending movements; for use in assembly and welding robots, in material handlings and automation centres, in transport and conveyor systems, on rotary and swivel tables and wherever a defined cable routing with only alternating bending movements is not applicable, but 3D-movements and torsional load have an impact on the cable; for applications with the highest requirements on mechanical, chemical and thermal resilience.

■ NOTES

- the conductor is metrically (mm²) constructed, AWG numbers are approximated, and are for reference only
- for use in energy supply systems:
1) the assembly instructions must be observed
2) for special applications, we recommend contacting us and using our data entry form for energy supply systems

| Part no. | No. cores x cross-sec. mm ² | AWG, approx. | Outer Ø mm, approx. | Cu-weight kg/km | Weight kg/km, approx. |
|----------|--|--------------|---------------------|-----------------|-----------------------|
| 11022005 | 7 x 0.25 | 24 | 6.3 | 17.1 | 49.0 |
| 11022007 | 12 x 0.25 | 24 | 8.6 | 30.8 | 82.0 |
| 11022008 | 25 x 0.25 | 24 | 11.7 | 64.3 | 151.0 |
| 11022009 | 2 x 0.34 | 22 | 4.9 | 6.4 | 27.0 |

| Part no. | No. cores x cross-sec. mm ² | AWG, approx. | Outer Ø mm, approx. | Cu-weight kg/km | Weight kg/km, approx. |
|----------|--|--------------|---------------------|-----------------|-----------------------|
| 11022010 | 3 x 0.34 | 22 | 5.1 | 9.6 | 32.0 |
| 11022013 | 7 x 0.34 | 22 | 6.6 | 22.4 | 57.0 |
| 11022014 | 12 x 0.34 | 22 | 9.1 | 40.5 | 96.0 |

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