

## UNITRONIC® FD CP plus

Screened highly flexible data transmission cable with PUR outer sheath - UL/CSA-listed

UNITRONIC® FD CP plus: Low-frequency PUR data cable UL AWM 1000V VW-1 Halogen-free, Highly flexible, energy/ drag chain, low capacitance, screened, -40°C/ +90°C

### Info

Flexible at cold temperatures

Low capacitance

Halogen-free



Torsion-resistant



Interference signals



Power chain



Oil-resistant



Mechanical resistance



Halogen-free



Wind Energy



Cold-resistant

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Product Management [www.lappkabel.de](http://www.lappkabel.de)

You can find the current technical data in the corresponding data sheet.

PN 0456 / 02\_03.16

## UNITRONIC® FD CP plus

### Benefits

Wide temperature range for applications in harsh climatic environments

Overall shield minimises electrical interference

UL AWM voltage rating 1000V in case of internal wiring allows for internal laying next to power cables with applied UL rating of 1kV

In the USA inside of industrial machines, according to NFPA 79, 2015 ed., 12.9.2 (exception 3 under 12.9.2: Up to 1 mm<sup>2</sup> and <16 AWG)

### Application range

Multifunctional use, e.g. in the packaging industry and storage and retrieval units

Suitable for use in measuring, control and regulating circuits

Drag chain use - in case of horizontal installation travel distances up to 100 m.

...No use inside drag chains in the USA since the UL AWM Style 21576 does not allow external wiring/ interconnection

For use in drag chains: Please observe the assembly guidelines in table T3

Suitable for torsional applications which are typical for the loop in wind turbine generators (WTG)

### Product features

Halogen-free, low capacitance and flexible at temperatures as low as -40°C

PUR outer sheath, tear- and notch-resistant, resistant to mineral oils and abrasion when used in power chains

Low-adhesive surface, resistant to hydrolysis and microbes, oil-resistant

Flame retardance: IEC 60332-1-2, VW-1 according to UL 1581, FT2 (Horizontal Flame Test)

Designed for 5 to 10 million alternating bending cycles in the drag chain

### Norm references / approvals

cULus CMX (communications cable listing) according to UL 444 and CSA C22.2 no. 214, certified by UL (UL file no. of U.I. Lapp GmbH: E236660)

cULus AWM/ Recognized certification (by UL/UL file no. for U.I. Lapp GmbH: E63634): UL AWM Style 21576 according to UL 758 and AWM A/B I/II according to CSA C22.2 no. 210-11

### Design

Extra-fine wire strand made of bare copper wires

Polyolefin-based core insulation

Fleece wrapping

Tinned-copper braiding

Outer sheath made of special PUR compound

Outer sheath colour: grey (RAL 7001)

**UNITRONIC® FD CP plus****Technical Data**

Classification:	ETIM 5.0 Class-ID: EC000104 ETIM 5.0 Class-Description: Control cable
Core identification code:	DIN 47100, refer to appendix T9
Operating capacitance:	C/C approx. 60 nF/km
Peak operating voltage:	Peak: 250 V (not for power use or continuous operating voltage to ground above 49 VAC or 74 VDC)
Inductance:	approx. 0.65 mH/km
Conductor design:	Stranded, extra-fine wire
Torsion movement in WTG:	TW-0 & TW-2, refer to Appendix T0
Minimum bending radius:	Flexing: 7.5 x outer diameter Fixed installation: 4 x outer diameter
Test voltage:	Core/Core: 1500 V eff. Core/Shield: 500 V
Temperature range:	Flexing: -40°C to +80°C Fixed installation: -40°C to +80°C cULus CMX: +75°C cULus AWM: +80 °C

**Note**

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; see catalogue appendix T17 for the application and definition of "Metal price basis" and "Metal index"

Please find our standard lengths at: [www.lappkabel.de/en/cable-standardlengths](http://www.lappkabel.de/en/cable-standardlengths)

Packaging: Ring ≤ 30 kg or ≤ 250 m, otherwise drum

Please specify the preferred packaging (e.g. 1 x 500 m drum or 5 x 100 m rings)

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

\* Prices are net prices without VAT and surcharges. Sale to business customers only.

Article number	Number of cores and mm <sup>2</sup> per conductor	Outer diameter (mm)	Copper index (kg/km)
UNITRONIC® FD CP plus			
0028880	2 x 0.14	4.3	11.2
0028881	3 x 0.14	4.5	14.1
0028882	4 x 0.14	4.8	15.5
0028883	5 x 0.14	5.1	18.3
0028884	7 x 0.14	5.7	27.8
0028885	10 x 0.14	6.7	39.3
0028886	14 x 0.14	6.8	45.3
0028887	18 x 0.14	7.4	54.1
0028888	25 x 0.14	8.9	68.4
0028889	2 x 0.25	4.9	14.9
0028890	3 x 0.25	5.1	18.8
0028891	4 x 0.25	5.5	21.3
0028892	5 x 0.25	5.9	31
0028893	7 x 0.25	6.7	39.6
0028894	10 x 0.25	8.2	53.9
0028895	14 x 0.25	8.3	64.2
0028896	18 x 0.25	9.1	78.4
0028897	25 x 0.25	11	101
0028898	2 x 0.34	5.3	18.1
0028899	3 x 0.34	5.6	28.7
0028900	4 x 0.34	6	35.7
0028901	5 x 0.34	6.5	39.1
0028902	7 x 0.34	7.4	52.7
0028903	10 x 0.34	9.1	67.4
0028904	14 x 0.34	9.2	85.8
0028905	18 x 0.34	10.3	99.7
0028906	25 x 0.34	12.5	155

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