

UNITRONIC® FD CP (TP) plus

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

UNITRONIC® FD CP (TP) plus: Low-frequency PUR data cable UL AWM CMX VW-1 Halogen-free, Highly flexible Drag chain, Screened Twisted pair, Low capacitance, -40°C

Info

Flexible at low temperatures

Low capacitance

Halogen-free



Wind Energy



Halogen-free



Cold-resistant



Mechanical resistance



Oil-resistant



Power chain



Interference signals



Torsion-resistant

Last Update (01.09.2020)

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

PN 0456 / 02_03.16

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Benefits

Wide temperature range for applications in harsh climatic environments

Decoupling of circuits by means of twisted-pair (TP) design (crosstalk effects)

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, per NFPA 79, Section 12.9.2 (condition 3 under 12.9.2: Thru 1 mm² and <16 AWG)

Application range

Suitable for use in measuring, control and regulating circuits

Linear robots, automated handling equipment

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

For use in chain/carrier: Please respect the assembly guidelines listed in Appendix T3

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

Product features

Halogen-free, has low capacitance and is flexible down to -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, commonly for outdoor use (not in North America) thanks to UV and ozone resistance

Flame retardance: IEC 60332-1-2, VW-1, FT2

Designed for 10 million alternating bending cycles and horizontal travel distances up to 100 meter

Norm references / Approvals

cULus CMX certified by UL (UL: E236660)

cRUus AWM certified by UL (UL: E63634): UL AWM Style 21576 and AWM A/B I/II

Product Make-up

Extra-fine wire strand made of bare copper wires

Core insulation: Based on Polyolefin

TP structure

Non-woven wrapping

Tinned-copper braiding

Outer sheath made of special PUR compound

Outer sheath colour: grey (RAL 7001)

Technical Data

| | |
|---------------------------|--|
| Classification ETIM 5: | ETIM 5.0 Class-ID: EC000104 ETIM 5.0 Class-Description: Control cable |
| Classification ETIM 6: | ETIM 6.0 Class-ID: EC000104 ETIM 6.0 Class-Description: Control cable |
| Core identification code: | DIN 47100, refer to Appendix T9 |
| Mutual capacitance: | Up to 0.5 mm ² : 60 nF/km Up to 1.0 mm ² : 70 nF/km |
| Inductivity: | approx. 0.65 mH/km |
| Conductor stranding: | Stranded, extra-fine wire From 0.5 mm ² : extra-fine wire according to IEC 60228 class 6 |
| 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 |

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| | |
|--------------------|---|
| Test voltage: | Core/core: 1500 V rms Core/screen: 500 V |
| Temperature range: | Flexing: -40°C to +80°C Fixed installation: -40°C to +80°C cULus CMX: max. +75°C cRUus AWM: max. +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. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.

Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths

Packaging size: coil \leq 30 kg or \leq 250 m, otherwise drum

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

Photographs and graphics 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.

UNITRONIC® FD CP (TP) plus

| Article number | Number of pairs and mm ² per conductor | Outer diameter [mm] | Copper index (kg/km) | Weight (kg/km) |
|----------------------------|---|---------------------|----------------------|----------------|
| UNITRONIC® FD CP (TP) plus | | | | |
| 0030910 | 2 x 2 x 0.14 | 5.9 | 19.4 | 42 |
| 0030911 | 3 x 2 x 0.14 | 6.2 | 23.4 | 47 |
| 0030912 | 4 x 2 x 0.14 | 6.7 | 27.1 | 59 |
| 0030913 | 5 x 2 x 0.14 | 7.3 | 37.4 | 68 |
| 0030914 | 6 x 2 x 0.14 | 7.5 | 49.4 | 91 |
| 0030915 | 8 x 2 x 0.14 | 8.8 | 54.8 | 109 |
| 0030916 | 10 x 2 x 0.14 | 10.1 | 60.1 | 120 |
| 0030962 | 1 x 2 x 0.25 | 4.7 | 14 | 27 |
| 0030919 | 2 x 2 x 0.25 | 6.6 | 32 | 60 |
| 0030920 | 3 x 2 x 0.25 | 7 | 38.4 | 72 |
| 0030921 | 4 x 2 x 0.25 | 7.6 | 43.2 | 85 |
| 0030922 | 5 x 2 x 0.25 | 8.5 | 51.5 | 92 |
| 0030923 | 6 x 2 x 0.25 | 8.8 | 71.8 | 114 |
| 0030924 | 8 x 2 x 0.25 | 10.3 | 74.4 | 155 |
| 0030925 | 10 x 2 x 0.25 | 11.8 | 90 | 186 |
| 0030926 | 14 x 2 x 0.25 | 12 | 111.2 | 219 |
| 0030963 | 1 x 2 x 0.34 | 5.1 | 20 | 36 |
| 0030928 | 2 x 2 x 0.34 | 7.3 | 41 | 69 |
| 0030929 | 3 x 2 x 0.34 | 8 | 52 | 101 |
| 0030930 | 4 x 2 x 0.34 | 8.7 | 59 | 106 |
| 0030932 | 6 x 2 x 0.34 | 10 | 86.2 | 165 |
| 0030934 | 10 x 2 x 0.34 | 13.7 | 131.1 | 274 |
| 0030964 | 1 x 2 x 0.5 | 5.5 | 22 | 47 |
| 0030937 | 2 x 2 x 0.5 | 8.3 | 50 | 99 |
| 0030938 | 3 x 2 x 0.5 | 8.8 | 71.8 | 130 |
| 0030939 | 4 x 2 x 0.5 | 9.8 | 74.4 | 148 |
| 0030940 | 5 x 2 x 0.5 | 10.7 | 84.5 | 168 |
| 0030941 | 6 x 2 x 0.5 | 11.3 | 99.6 | 194 |
| 0030942 | 8 x 2 x 0.5 | 13.2 | 144.3 | 284 |
| 0030943 | 10 x 2 x 0.5 | 15.2 | 176 | 343 |
| 0030944 | 14 x 2 x 0.5 | 15.5 | 215.4 | 401 |
| 0030965 | 1 x 2 x 0.75 | 5.9 | 34 | 61 |
| 0030946 | 2 x 2 x 0.75 | 9 | 60 | 112 |

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|----------------|---|---------------------|----------------------|----------------|
| 0030947 | 3 x 2 x 0.75 | 9.8 | 85.7 | 157 |
| 0030948 | 4 x 2 x 0.75 | 10.7 | 93.6 | 172 |
| 0030950 | 6 x 2 x 0.75 | 12.3 | 130.4 | 231 |
| 0030951 | 8 x 2 x 0.75 | 14.7 | 192.2 | 342 |
| 0030952 | 10 x 2 x 0.75 | 16.7 | 258 | 390 |
| 0030953 | 14 x 2 x 0.75 | 17 | 316.6 | 545 |
| 0030955 | 1 x 2 x 1.0 | 6.3 | 42 | 71 |
| 0030956 | 2 x 2 x 1.0 | 9.9 | 73 | 129 |
| 0030957 | 3 x 2 x 1.0 | 10.5 | 93.6 | 169 |
| 0030958 | 4 x 2 x 1.0 | 11.8 | 117.8 | 204 |
| 0030959 | 5 x 2 x 1.0 | 13.1 | 139 | 237 |

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