

UNITRONIC® FD CP (TP) plus

DB003096 1
valid from: 14.09.2012**Application**

UNITRONIC® FD CP (TP) plus is a high flexible, screened and twisted pair data cable with an outer sheath of PUR. The cable with low capacitance is designed especially for use in power chains, automatic manipulators, in permanently moved machines parts.

The cable is increased oil-, abrasion- and cut resistant, in addition microbe- and hydrolysis resistant. It is cold-resistant and for harsh environmental conditions.

Decoupling by means of twisted pair cable design and the screen protects against interference.

This cable is suitable for torsion application in wind turbines (WTG). The torsional load is limited to applications, as they typically occur in the loop of a wind turbine.

Approbation: c(UL)us, Type CMX according to UL 444 and CSA C22.2 No. 214-02

Design

Design	based on standard VDE 0812
Conductor	superfine wire strands of bare copper wires
Insulation	special Polyolefin-based compound
Core identification code	according to DIN 47100
Stranding	cores twisted to pairs, pairs are stranded in layers, wrapping with fleece on the outer layer
Screen	Braiding with tinned copper wires, wrapping with fleece on the screen
Outer sheath	special PUR-based compound, flame retardant, halogen free colour: grey (RAL 7001)

Electrical properties at 20°

Specific insulation resistance	> 5 G Ω x km
Mutual capacitance	up to 0.5 mm ² : approx. 60 nF/km up to 1 mm ² : approx. 70 nF/km
Inductivity	approx. 0.65 mH/km
Peak working voltage	250 V (not for power applications)
Test voltage	C/C: 1500 V C/S: 500 V

Mechanical and thermal properties

Bending radius	7.5 x cable \emptyset
Temperature range	Flexing: - 40 °C up to +80 °C Fixed installation: - 40 °C up to +80 °C up to +75 °C acc. to UL/CSA
Torsion movement in WTG	TW-0 (5000 cycles at \geq +5 °C) TW-2 (2000 cycles at \geq -40 °C) \pm 150 °/m at 1 revolution per minute
Flammability	flame retardant acc. to IEC 60 332-1-2 and VW-1 acc. to UL-158 1