

ÖLFLEX® TRAY II & ÖLFLEX® TRAY II CY

DB221803EN
valid from: 23rd June 2014**Application**

ÖLFLEX® TRAY II and ÖLFLEX® TRAY II CY are flexible, multi-conductor control cables rated for use at 600 and 1000 volts, 90 °C. Maintains approvals of UL TC-ER (Tray Cable for Exposed Run), PLTC-ER (Power-Limited Tray Cable for Exposed Run), MTW (Machine-Tool Wire), WTTC (Wind Turbine Tray Cable), DP-1 (Data-Processing), UL AWM Style 20886, c(UL) CIC/TC, CSA AWM I/II A/B FT4, and CE compliant. In addition these cables are highly oil resistant (UL OIL RES. I/II), and are approved for in-ground installation (Direct Burial) and outdoor use (SUN RES). ÖLFLEX® TRAY II and TRAY II CY can also be used in damp and moist applications as these cables are approved for use in wet environments (90°C Dry, 75° Wet rated). These cables are very durable and have excellent flexibility which helps to expedite installation and minimize labour costs. ÖLFLEX® TRAY II and TRAY II CY can be used in accordance with the National Electrical Code (NEC) Articles 336, 392, and 501 and also applicable sections of the Canadian Electrical Code (CEC) where CIC and TC are designated. The WTTC rating combined with FT4 high flammability provides for a wide suitability range for use in various Wind Turbine applications that are not only external but also include inside the actual tower. In cross section sizes $\geq 2.5\text{mm}^2 \sim 14\text{ AWG}$ up to 7 cores these cables are rated for Submersible Pump in that they are permitted for use in within well casings for wiring deep-well submersible water pumps. There is also full compliance with the NFPA 79 allowing use for machine wiring and use on the industrial platform floor. Other or generally recommended application fields:

- Industrial Infrastructure
- Automotive plants
- Tray wiring
- Anywhere VNTC®* cables are used

Technical data

Conductor	Bare single copper strands Flexing service per UL 1063 18 AWG/1 mm ² to 6 AWG/16 mm ² : Fine-wire stranding acc. to IEC 60228 conductor Class 5 with 18 AWG meeting only the nominal class 5 cross section and DC conductor resistance 4 AWG (21 mm ²) to 2 AWG (33.7 mm ²): Class K fine wire 1 AWG to 500 KCMIL: Stranded wire		
Design / Make-up	Cable is designed in accordance with the requirements of UL-Standard 1277 and with CSA standards C22.2 No. 230 & No. 239		
Core Insulation	Specially formulated PVC core insulation with added nylon skin		
Core identification	Black cores with white numbers and one green/yellow, protective PE earth/PG ground conductor in accordance with EN 50334 respectively VDE 0293-334 (2-core versions without PE/PG)		
Screen	Aluminium plated, laminated foil tape for improved shielding effectiveness under braid with 70% minimum coverage and made of tinned single copper strands (ÖLFLEX® TRAY II CY only)		
Outer Sheath	Special oil-resistant black PVC Pressure extruded		
Rated Voltage	1,000 V acc. WTTC 1,000 V AC acc. UL and CSA AWM 600 V acc. UL TC, MTW, DP-1, c(UL) CIC/TC		
Minimum bending radii	Fixed installation:	2 AWG & smaller: 1 AWG & larger: Shielded "CY" version always: Lapp internal cable attribute:	4 x OD** 6 x OD** 6 x OD** MP-03
Temperature Range	UL/CSA TC Fixed/stationary installation: Occasional flexing:	-25 °C to +90 °C -40 °C to + 90 °C -25°C to + 90°C	
Torsion movement in WTG	TW-0 (5,000 cycles at $\geq +5\text{ °C}$) (Lapp internal cable attribute) TW-2/WT-02 (2,000 cycles at $\geq -40\text{ °C}$) (Lapp internal cable attribute) $\pm 150\text{ °}/\text{m}$ of cable at 1 revolution per minute Tensile strain corresponding to 18 metres of free, vertical suspension		

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Flame/fire retardance	UL1581 section 1160, which exceeds IEC 60332-1 (conform to EN 60332-1) CSA FT4 FR-03 (Lapp internal cable attribute)	
Oil resistance	UL OIL RES. I & II OR-03 (Lapp internal cable attribute)	
Resistance to UV radiation	Sunlight Resistant per UL 1277	
Approvals	UL MTW (Machine-Tool Wire) per UL 1063 UL AWM 20886 (Appliance Wiring Material) per UL 758 UL Type TC (Tray Cable) - ER (Exposed Run) per UL 1277 DP-1 (Data Processing Cable) per UL 1690 UL PLTC (Power Limited Tray Cable) -ER (Exposed Run) per UL 13 UL ITC (Instrumentation Tray Cable) -ER (Exposed Run) per UL 2250 UL WTTC (Wind Turbine Tray Cable) per UL 2277 UL Submersible Pump sizes \geq 2.5mm ² ~ 14 AWG up to 7 cores P-07-KA050016-MSHA (shielded "CY" version only) c(UL) CIC/TC and FT4 CSA-AWM I/II A/B FT4	
UL and CSA File Numbers:	UL TC CSA AWM	E171371 LL94629
European conformities	Low-voltage EC directive 2006/95/EC (LVD): EU RoHS*** II directive 2011/65/EU:	Technical and legal CE compliance Chemical compliance with the hazardous substance restrictions of this directive

*VNTC® = registered trademark of General Cable

**OD = Outer cable diameter

***RoHS = Restriction of (the use of certain) Hazardous Substances in line with the European EU RoHS II directive 2011/65/EU