

## Leitungen nach ausländischen Normen / Cables according to foreign standards

### TRAY

Anschluss- und Steuerleitung, PVC, 0.6/1 kV  
\*Anschluss- und Steuerleitung, PVC, 0.6/1 kV



#### Verwendung:

Industriemaschinen; Anlagenbau  
TC-ER (Tray Cable Exposed Run) Zulassung für freie, offene Verlegung zwischen Kabelpritsche und Industriemaschine/Anlage gemäß NEC Artikel 336.10(7)  
Windkraftanlagen: USA Wind Turbine Tray Cable (WTTC)  
Class 1, Div. 2 gemäß NEC "National Electrical Code" Art. 336, 392, 501  
Außen- und erdverlegbar  
Nutzen:  
Breite Einsatzmöglichkeit durch mehrfache Approbationen  
Kostensparende, einfache Installation durch Verzicht auf geschlossene Kabelsysteme (geeignet für offene Verlegung)  
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#### Aufbau:

- Feindrähtige Litze aus blanken Kupferdrähten
- Klassifikation: ETIM 5.0 Class-ID: EC000104
- ETIM 5.0 Class Description: Steuerleitung
- Torsionsanwendung in WKA: TW-0 & TW-2, siehe Anhang T0
- Produkteigenschaften:
- Flammwidrig nach CSA FT4
- Kältebeständig
- Mechanische Beständigkeit
- UL Vertical-Tray Flame Test
- Außenbereich geeignet
- Ölbeständig nach UL OIL RES I & II
- Wasserbeständig UL Wet Approval 75°C
- UV-beständig UL SUN RES
- Geeignet für Torsionsanwendungen, die im Loop von Windkraftanlagen (WKA) typisch sind.

#### Application:

Industrial machinery; plant engineering  
TC-ER (Tray Cable Exposed Run) approval for open wiring between cable tray and industrial machines/plants acc. to NEC 336.10(7)  
Wind turbines: USA Wind Turbine Tray Cable (WTTC)  
Class 1, Div. 2 in accordance with NEC "National Electrical Code" Art. 336, 392, 501  
Suitable for outdoor use and direct burial  
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#### Construction:

- Fine-wire strand made of bare copper wires
- Classification: ETIM 5.0 Class-ID: EC000104
- ETIM 5.0 Class-Description: Control cable
- Torsion movement in WTG: tw-0 & TW-2, refer to Appendix T0
- Product features:
- Flame-retardant according to CSA FT4
- Cold-resistant
- Mechanical resistance
- UL Vertical-Tray Flame Test
- Suitable for outdoor use
- Oil-resistant according to UL OIL RES I & II
- Water-resistant, UL Wet Approval 75 °C
- UV-resistant UL SUN RES
- Suitable for torsional applications which are typical for the loop in wind turbine generators (WTG).

## Technische Daten:

Leiter Werkstoff	Kupfer
Leiterklasse	
Aderisolationwerkstoff	PVC+Nylonhülle (PA skin)
Aderkennung	Schwarz mit weißen Nummern
Verseilung	Feindrähtige Kupferlitze
Außenmantelwerkstoff	PVC Spezialmischung
Mantelfarbe	schwarz
Nennspannung [V]	UL/CSA: 600 V (TC, MTW, CIC) WTTTC 100V UL/CSA: 1000 V (AWM) VDE U0/U: 600/1000
Prüfspannung [V]	
Leiterwiderstand	
Isolationswiderstand	
Strombelastbarkeit	
kleinster Biegeradius fest [xd]	
kleinster Biegeradius bewegt [xd]	
Betriebstemp. fest min/max [C]	-40°C bis +90
Betriebstemp. bew. min/mac [C]	-25°C bis +90
Temperatur am Leiter max.	
Brandverhalten	
Normen	Zertifizierungen: UL MTW (Machine-tool Wire) [E155920]; UL AWM (ApplianceWiring Material-Component) style 20886 (+150°C) [E100338]; UL Wet Approval 75°C; UL Type TC (Tray Cable) -ER (Exposed Run) [E171371] or DP-1; PLTC (Power Limited Tray Cable) -ER (Exposed Run); UL ITC (Instrumentation Tray Cable) -ER (Exposed Run); UL WTTTC (FT4) [E323700]; OIL RES. I, OIL RES. II; P-07-KA050016-MSHA (ÖLFLEX TRAY II CY); c(UL) CIC / TC and FT4; CSA-AWM I (internal wiring) /II (external wiring) A (dry)/ B (wet); FT4 (hoch flammwidrig).

## Technical Data:

Conductor Material	Copper
Conductor class	*
core insulation	PVC+nylon sheath (PA skin)
core identification	Black with white numbers
stranding	Fine copper wire strands
outer sheath	Special PVC compound
sheath colour	black
rated voltage [V]	UL/CSA: 600 V (TC, MTW, CIC) WTTTC 100V UL/CSA: 1000 V (AWM) VDE U0/U: 600/1000
testing voltage [V]	*
conductor resistance	*
insulation resistance	*
current carrying capacity	*
min. bending radius fixed [xd]	*
min. bending radius moved [xd]	*
working temp fixed min/max [C]	-40°C till +90
working temp moved min/mac [C]	-25°C up to +90
temp at conductor max.	*
burning behaviour	*
Approvals	Approvals: UL MTW (Machine-tool Wire) [E155920]; UL AWM (ApplianceWiring Material-Component) style 20886 (+150°C) [E100338]; UL Wet Approval 75°C; UL Type TC (Tray Cable) -ER (Exposed Run) [E171371] or DP-1; PLTC (Power Limited Tray Cable) -ER (Exposed Run); UL ITC (Instrumentation Tray Cable) -ER (Exposed Run); UL WTTTC (FT4) [E323700]; OIL RES. I, OIL RES. II; P-07-KA050016-MSHA (ÖLFLEX TRAY II CY); c(UL) CIC / TC and FT4; CSA-AWM I (internal wiring) /II (external wiring) A (dry)/ B (wet); FT4 (highly flame-retardant).

## Kontakt:

## Kabel / Cable

Art Nr. Part No.	Adern x Querschnitt no. of cores x cross section	Außen Ø ca. mm outer Ø ca. mm	CU Gewicht kg/100m copper weight kg/100m	Gewicht kg/100m weight kg/100m
131030100TRAY	3 x 1	7.5	2.88	8.50
131030150TRAY	3 x 1.5	8.3	4.30	10.30
131030250TRAY	3 x 2.5	9.2	7.20	13.00
131040100TRAY	4 x 1	8.1	3.84	9.80
131040150TRAY	4 x 1.5	8.9	5.80	12.40
131040250TRAY	4 x 2.5	10.0	9.60	15.90
131040400TRAY	4 x 4	11.7	15.30	22.60
131040600TRAY	4 x 6	14.7	23.10	39.40
131041000TRAY	4 x 10	17.9	38.40	61.50
131041600TRAY	4 x 16	22.8	61.50	86.40
	4 x 25 AWG4	27.8	96.00	141.80
	4 x 35 AWG2	32.3	134.40	207.70
131050100TRAY	5 x 1	8.8	4.80	11.50
131050150TRAY	5 x 1.5	9.7	7.20	14.60
131050250TRAY	5 x 2.5	10.8	12.00	19.10
131050400TRAY	5 x 4	12.8	19.20	27.90
131050600TRAY	5 x 6	16.0	28.80	47.20
131051000TRAY	5 x 10	19.6	48.00	77.10
131051600TRAY	5 x 16	24.9	76.80	108.00
131051600TRAY	5 x 16	24.9	76.80	108.00
131070100TRAY	7 x 1	9.5	6.70	14.90
131070150TRAY	7 x 1.5	10.5	10.10	18.90
131070250TRAY	7 x 2.5	11.8	16.80	25.20
131070400TRAY	7 x 4	14.8	26.90	38.40
	7 x 6	17.4	40.50	66.10
131080150TRAY	8 x 1.5	11.3	11.60	20.30
131090100TRAY	9 x 1	10.9	8.70	16.70
131090150TRAY	9 x 1.5	12.1	13.00	25.50
131090250TRAY	9 x 2.5	14.5	21.60	33.50
131120100TRAY	12 x 1	12.1	11.50	25.50
131120150TRAY	12 x 1.5	14.4	17.30	32.80
131120250TRAY	12 x 2.5	16.2	28.80	45.90
131180100TRAY	18 x 1	14.9	17.30	36.50
131180150TRAY	18 x 1.5	16.6	25.90	43.10
131180250TRAY	18 x 2.5	18.7	43.20	65.40
131250100TRAY	25 x 1	16.9	24.00	47.90

Art Nr. Part No.	Adern x Querschnitt no. of cores x cross section	Außen Ø ca. mm outer Ø ca. mm	CU Gewicht kg/100m copper weight kg/100m	Gewicht kg/100m weight kg/100m
131250150TRAY	25 x 1.5	18.8	36.00	59.20
131250250TRAY	25 x 2.5	22.5	60.00	87.40
131410150TRAY	41 x 1.5	25.0	59.10	93.10
131500150TRAY	50 x 1.5	26.6	72.00	113.20

### Kontakt: