2-NORM TRAY TC-ER MTW UL/CSA

0,6/1kV (IEC), 600V (UL:TC-ER & MTW), 1.000V (UL: WTTC & AWM)
unshielded, grey, UL/CSA, NFPA 79 2007, CPR Eca

APPLICATION

Increased oil-resistant power and control cable designed for installation in cable trays or ducts, particularly suited for machines and systems targeting the North American market. Ideal for medium mechanical stress environments and is suitable for both fixed and flexible applications that involve free movement without tensile stress or forced guidance. It can be installed in dry, damp, or wet conditions, including environments with water-oil mixtures. TC-ER (Tray Cable – Exposed Run) certification, allows a free, open installation between cable trays and industrial machines or plants as per NEC 336.10(7).

SPECIAL FEATURES

- Increased oil resistance due to a specialized PVC outer sheath, which also offers substantial resistance to acids and alkalis.
- Oil resistance in accordance with UL OIL RES I; water resistance per UL wet approval at 75°C.
- Approved by UL/CSA for use up to 600 V, or 1000 V for parallel installation with other cables operating at the same voltage.
- TC-ER (Tray Cable - Exposed Run) certification, except for 2-core configurations, which do not have ER approval.
- WTTC (Wind Turbine Tray Cable) certification.
- Complies with UL standards for machine tools (Machine Tool Wire).

REMARKS

- Complies with RoHS and the 2014/35/EU Directive (Low Voltage Directive) CE.
- LABS-/silicone-free (during production).
- UL listed in accordance with UL1277+1063 and UL/CSA recognized per UL Style 10012+2587.
- Complies with NFPA 79 2007 wiring standards and NEC 336.10 (7) Class 1, Div. 2 according to NEC (National Electric Code) Art. 336, 392, 501.

PRODUCT DETAILS

DESIGN

Conductor material	bare copper strand
Conductor class	acc. to IEC 60228 cl. 5, UL 83 standard
Core insulation	PVC
Core identification	acc. to DIN VDE 0293, black cores with white numerals with GNYE from 3 cores
Stranding	stranded in layers
Outer sheath material	PVC
Outer sheath color	grey, RAL 7001

ELECTRICAL PROPERTIES

Rated voltage	600 V (TC und MTW); 1000 V (WTTC & AWM); IEC: 0,6/1 kV
Testing voltage	6 kV
Conductor resistance	acc. to IEC 60228 cl. 5

MECHANICAL & DYNAMIC PROPERTIES

Min. bending radius fixed	4 x d
Min. bending radius moved	13 x d

THERMAL PROPERTIES

Operat. temp. fixed min/max	-40 °C / +90 °C
Operat. temp. moved min/max	-5 °C / +90 °C

FIRE BEHAVIOR

Burning behavior	flame-retardant acc. to IEC 60332-1, IEC 60332-3A and UL category FT4/IEEE

CHEMICAL RESISTANCE & OTHER

Oil resistance	UL 1277 and UL 1063 (oil-resistant acc. to UL OIL RES I and water-resistant, UL wet approval 75 °C)

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STANDARDS & APPROVALS

Standards UL 1277, UL 1063 (MTW), NEC 336.10 (7) class1, Div. 2 in acc. to NEC Art. 336, 392, 501
Approvals UL listed acc. to UL 1277 and 1063 - UL/CSA recognized acc. to UL 10012 and 2587

ITEM OVERVIEW

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Item no.	Dimension [n x mm²]	Conductor structure	Outer-Ø [mm] nom.	Outer-Ø. [inch] nom.	Weight [≈lbs/mft]
1003402	2 X 1 (AWG 18)	► AWG 18 (~ 32/AWG 32) - 1 mm²	7,9	0,311	58,5
1003568	3 G 1 (AWG 18)	► AWG 18 (~ 32/AWG 32) - 1 mm²	8,3	0,327	68,5
1005425	3 X 1 (AWG 18)	► AWG 18 (~ 32/AWG 32) - 1 mm²	8,3	0,327	68,1
1004069	4 G 1 (AWG 18)	► AWG 18 (~ 32/AWG 32) - 1 mm²	9,1	0,359	84,0
1004170	5 G 1 (AWG 18)	► AWG 18 (~ 32/AWG 32) - 1 mm²	9,9	0,390	100,8
1004135	7 G 1 (AWG 18)	► AWG 18 (~ 32/AWG 32) - 1 mm²	10,8	0,426	146,5
1004136	12 G 1 (AWG 18)	► AWG 18 (~ 32/AWG 32) - 1 mm²	14,7	0,579	225,1
1004137	18 G 1 (AWG 18)	► AWG 18 (~ 32/AWG 32) - 1 mm²	17,1	0,674	313,2
1004138	25 G 1 (AWG 18)	► AWG 18 (~ 32/AWG 32) - 1 mm²	19,5	0,768	414,6
1004858	34 G 1 (AWG 18)	► AWG 18 (~ 32/AWG 32) - 1 mm²	23,8	0,938	602,8
1004139	2 X 1,5 (AWG 16)	► AWG 16 (~ 28/AWG 30) - 1,5 mm²	8,6	0,339	71,2
1004140	3 G 1,5 (AWG 16)	► AWG 16 (~ 28/AWG 30) - 1,5 mm²	9,1	0,359	85,3
1004141	4 G 1,5 (AWG 16)	► AWG 16 (~ 28/AWG 30) - 1,5 mm²	9,9	0,390	104,2
1004142	5 G 1,5 (AWG 16)	► AWG 16 (~ 28/AWG 30) - 1,5 mm²	10,8	0,426	125,7
1004143	7 G 1,5 (AWG 16)	► AWG 16 (~ 28/AWG 30) - 1,5 mm²	11,8	0,465	182,8
1004374	8 G 1,5 (AWG 16)	► AWG 16 (~ 28/AWG 30) - 1,5 mm²	14,6	0,575	239,9
1004144	12 G 1,5 (AWG 16)	► AWG 16 (~ 28/AWG 30) - 1,5 mm²	16,1	0,634	282,9
1004145	18 G 1,5 (AWG 16)	► AWG 16 (~ 28/AWG 30) - 1,5 mm²	18,8	0,741	399,2
1004146	25 G 1,5 (AWG 16)	► AWG 16 (~ 28/AWG 30) - 1,5 mm²	22,6	0,890	569,2
1004147	2 X 2,5 (AWG 14)	► AWG 14 (~ 46/AWG 30) - 2,5 mm²	9,4	0,370	92,1
1004148	3 G 2,5 (AWG 14)	► AWG 14 (~ 46/AWG 30) - 2,5 mm²	9,9	0,390	111,6
1004149	4 G 2,5 (AWG 14)	► AWG 14 (~ 46/AWG 30) - 2,5 mm²	10,8	0,426	137,8
1004150	5 G 2,5 (AWG 14)	► AWG 14 (~ 46/AWG 30) - 2,5 mm²	11,9	0,469	168,7
1004151	7 G 2,5 (AWG 14)	► AWG 14 (~ 46/AWG 30) - 2,5 mm²	13,0	0,512	264,1
1004375	8 G 2,5 (AWG 14)	► AWG 14 (~ 46/AWG 30) - 2,5 mm²	16,0	0,630	328,6
1004152	12 G 2,5 (AWG 14)	► AWG 14 (~ 46/AWG 30) - 2,5 mm²	17,7	0,697	381,7
1004153	18 G 2,5 (AWG 14)	► AWG 14 (~ 46/AWG 30) - 2,5 mm²	20,8	0,820	542,3
1004154	3 G 4 (AWG 12)	► AWG 12 (~ 52/AWG 28) - 4 mm²	11,3	0,445	155,2
1004155	4 G 4 (AWG 12)	► AWG 12 (~ 52/AWG 28) - 4 mm²	12,4	0,489	194,9
1004156	5 G 4 (AWG 12)	► AWG 12 (~ 52/AWG 28) - 4 mm²	14,4	0,567	254,7
1004157	7 G 4 (AWG 12)	► AWG 12 (~ 52/AWG 28) - 4 mm²	15,7	0,619	369,6
1004167	3 G 6 (AWG 10)	► AWG 10 (~ 78/AWG 28) - 6 mm²	12,5	0,493	206,3
1004158	4 G 6 (AWG 10)	► AWG 10 (~ 78/AWG 28) - 6 mm²	14,5	0,571	275,5
1004159	5 G 6 (AWG 10)	► AWG 10 (~ 78/AWG 28) - 6 mm²	15,9	0,626	336,7
1004168	3 G 10 (AWG 8)	► AWG 8 (~ 74/AWG 26) - 10 mm²	17,0	0,670	364,9
1004160	4 G 10 (AWG 8)	► AWG 8 (~ 74/AWG 26) - 10 mm²	18,6	0,733	456,3
1004161	5 G 10 (AWG 8)	► AWG 8 (~ 74/AWG 26) - 10 mm²	20,6	0,812	564,5
1004169	3 G 16 (AWG 6)	► AWG 6 (~ 115/AWG 26) - 16 mm²	20,7	0,816	559,8
1004162	4 G 16 (AWG 6)	► AWG 6 (~ 115/AWG 26) - 16 mm²	23,8	0,938	745,2
1004163	5 G 16 (AWG 6)	► AWG 6 (~ 115/AWG 26) - 16 mm²	26,3	1,036	915,3
1004164	4 G 25 (AWG 4)	► AWG 4 (~ 182/AWG 26) - 25 mm²	27,3	1,076	1.054,4
1004165	4 G 35 (AWG 2)	► AWG 2 (~ 259/AWG 26) - 35 mm²	30,2	1,190	1.371,6
1004166	4 G 50 (AWG 1)	► AWG 1 (~ 646/AWG 28) - 50 mm²	36,7	1,446	1.993,8
1005166	4 G 70 (AWG 2/0)	► AWG 2/0 (~ 969/AWG 28) - 70 mm²	41,7	1,643	2.668,5
1005427	4 G 95 (AWG 3/0)	► AWG 3/0 (~ 1.280/AWG 28) - 95 mm²	46,7	1,840	3.493,1
1005858	4 G 120 (AWG 4/0)	► AWG 4/0 (~ 1.653/AWG 28) - 120 mm²	49,3	1,942	4.145,6
1006013	4 G 150 (250 MCM)	► 250 kcmil (~ 2.026/AWG 28) - 150 mm²	54,9	2,163	5.173,7