

ULTREX® VN Shielded Tray Cable

ULTREX® VN Shielded Tray Cable 10 AWG

Part Number: ULTREX® VN Shielded Tray Cable 10 AWG

Type THHN/THWN-2: UL Type TC, 600 V, rated 90°C wet and dry - LEAD FREE - Exposed Run (ER) Rated**

Description

Applications

Nexans 600 V Ultrex VN Tray Cables are listed as type TC under UL 1277 Electrical Power and Control Cables. THHN/THWN-2 cables #14 and larger meet UL 83 Thermoplastic-Insulated Wires and Cables. These cables may be installed in wet or dry locations; in cable trays, raceways and open air; and are suitable for exposure to weather, direct burial and for Class I, Div. 2 (also Zone 2) and Class II, Div. 2 hazardous locations per NEC.

**Cables with three or more conductors are UL listed for exposed runs (ER) when installed in accordance with NEC 336.10(7).

Construction

Conductor:

Bare, annealed copper conforming to ASTM B3 and B8, from #14 AWG to 500 kcmil. Compressed copper for #14 AWG through 500 kcmil.

Insulation:

Flame-retardant PVC/Nylon type THHN/THWN-2 per UL 83 for sizes #14 AWG to 500 kcmil.

Assembly:

Insulated conductors in shielded Ultrex VN are cabled in concentric layers. Fillers are inserted into interstices and a binder tape of synthetic material is used to assemble the core in a tight circular configuration. A helically wrapped aluminum tape, with synthetic backing, gives 100% shielding. A tinned copper drain wire is placed in contact with the aluminum side of the tape to lower the resistance and to assist in the termination of the shield.

Jacket:

UL listed sunlight and moisture resistant, black, flame retardant polyvinyl chloride (PVC) material meeting the requirements of UL 1277. A Nylon ripcord is included for ease of jacket removal. Jacket surface is printed with required UL / NEC code information and sequential footage markings.

Conductor Identification:

#14 AWG to #10 AWG: color coded per Method #1-E2 per ICEA S-73-532

See details in Conductor Identification Charts.



Standards

National ICEA S-73-532; UL 1277; UL 83

Characteristics

Dimensional characteristics

Conductor cross-section (AWG)

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Multiconductor 10 AWG Type THHN/THWN-2 Insulation Thickness: 20 mils / .51mm PVC, 4 mils / .10mm Nylon Drain Wire: 16 AWG (7w) Tinned Copper								
Part Number	# of Cond.	Jacket Thickness		Nominal Diameter over Jacket		Approximate Net Cable Weight		Ampacity (1, 3, 4)
		mils	mm	inches	mm	lb/kft	kg/km	amps
631028	2	45	1.14	0.428	10.87	127	189	40
687467	3	45	1.14	0.454	11.52	169	251	40
631036	4	45	1.14	0.496	12.61	195	290	32/40(2)
690057	5	60	1.52	0.574	14.57	278	414	32
-----	6	60	1.52	0.623	15.82	322	479	32
-----	7	60	1.52	0.623	15.82	363	540	28
-----	8	60	1.52	0.683	17.35	409	609	28
-----	9	60	1.52	0.736	18.69	456	679	28
-----	10	60	1.52	0.785	19.95	503	748	20
-----	11	60	1.52	0.797	20.24	545	811	20
689679	12	80	2.03	0.862	21.89	625	930	20
-----	13	80	2.03	0.877	22.27	661	984	20
-----	14	80	2.03	0.905	22.98	750	1116	20
-----	15	80	2.03	0.928	23.56	795	1173	20
-----	16	80	2.03	0.953	24.19	848	1262	20
-----	19	80	2.03	1.022	25.45	925	1376	20
-----	20	80	2.03	1.032	26.21	970	1443	20
-----	25	80	2.03	1.155	29.35	1190	1771	18
-----	30	80	2.03	1.235	31.36	1410	2098	18
-----	37	80	2.03	1.332	33.83	1710	2544	16
-----	40	80	2.03	1.383	35.13	1840	2738	16
-----	45	80	2.03	1.466	37.23	2055	3056	14
-----	50	80	2.03	1.522	38.65	2270	3378	14

Bend Radius: 5 x overall diameter installed / 8 x overall diameter during installation pull-in.

Notes:
 Dimensions and weights shown are nominal values. They are subject to standard industry tolerances.
 Cables with different conductor counts are also available.
 (1) Ampacities are in accordance with NEC Table 310.16 for conductors in a raceway or direct buried at 30°C ambient temperature and 90°C rated conductors. Ampacities for cables having more than three conductors have been derated per NEC Table 310.15 (B)(2)(a).
 (2) Where the 4th conductor is the neutral of a balanced 3 phase system.
 (3) For load diversity of 50%, refer to NEC Table B.310.11.
 (4) For correction factors to different ambient temperatures and ampacities for different conductor temperature ratings see NEC Table 310.16.
 NEC Article 240.4(D) requires that overcurrent protection not exceed 30 amperes for 10 AWG copper conductors. Exceptions to this may be covered in NEC 240.4(E) through (G).

Selling delivery information

Options

The following constructions can be provided on special orders:

- * Dow Construction
- * DuPont Construction
- * Composite Cable Construction

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* Insulated Green Ground

* Different conductor identification methods

* Use in Hazardous locations:

Please note that no investigation of these cables has been performed regarding the transmission of gases or vapors through the core. When these cables are used in hazardous locations they should be sealed properly as required by the NEC.