

ULTREX® VN Shielded Tray Cable

ULTREX® VN Shielded Tray Cable 14 AWG

Part Number: ULTREX® VN Shielded Tray Cable 14 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 14 AWG Type THHN/THWN-2 Insulation Thickness: 15 mils / .38mm PVC, 4 mils / .10mm Nylon Drain Wire: 16 AWG (7w) Tinned Copper								
Part Number	# of Conductors	Jacket Thickness		Nominal Diameter over Jacket		Approximate Net Cable Weight		Ampacity (1, 3, 4)
		mils	mm	inches	mm	lb/kft	kg/km	amps
697698	2	45	1.14	0.324	8.23	69	103	25.0
627117	3	45	1.14	0.342	8.67	86	129	25.0
669085*	3	45	1.14	0.342	8.67	86	129	25.0
627794	4	45	1.14	0.371	9.42	107	159	20.0/25.0(2)
631085	5	45	1.14	0.403	10.24	128	190	20.0
-----	6	45	1.14	0.437	11.10	148	220	20.0
627125	7	45	1.14	0.437	11.10	163	243	17.5
-----	8	45	1.14	0.478	12.14	186	277	17.5
631093	9	60	1.52	0.514	13.06	206	307	17.5
-----	10	60	1.52	0.578	14.68	243	362	12.5
-----	11	60	1.52	0.586	14.88	261	388	12.5
631101	12	60	1.52	0.603	15.31	283	421	12.5
-----	13	60	1.52	0.613	15.57	298	443	12.5
-----	14	60	1.52	0.632	16.06	318	473	12.5
-----	15	60	1.52	0.648	16.46	337	501	12.5
-----	16	60	1.52	0.665	16.89	358	533	12.5
631119	19	60	1.52	0.699	17.75	413	615	12.5
-----	20	60	1.52	0.719	18.27	432	643	12.5
-----	25	60	1.52	0.804	20.42	529	787	11.3
-----	30	80	2.03	0.898	22.82	653	972	11.3
-----	37	80	2.03	0.965	24.51	789	1174	10.0
-----	40	80	2.03	1.000	25.40	848	1262	10.0
-----	45	80	2.03	1.057	26.84	943	1403	8.8
-----	50	80	2.03	1.095	27.81	1033	1537	8.8

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.
 *Color Code for PN669085 is E1 (black, white, red) not E2.
 (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 15 amperes for 14 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

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- * Composite Cable Construction
- * 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.