

## ULTREX® VN Unshielded Tray Cable - TFN Insulation

ULTREX® VN Unshielded Tray Cable - TFN Insulation 18 AWG

Part Number: ULTREX® VN Unshielded Tray Cable - TFN Insulation 18 AWG

UL Type TC / TC-ER, TFN Insulation, 600 V, rated 90°C dry and wet - LEAD FREE - Exposed Run (ER) Rated\*\*

### Description

#### Applications

Nexans 600 V Ultrex VN Tray Cables are listed as type TC / TC-ER under UL 1277 Electrical Power and Control 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 2008 and NEC 2011. Cables with three or more conductors are UL listed for exposed runs (ER) when installed in accordance with NEC 2008 and NEC 2011 Article 336.10(7).



### Standards

**National**  
 ICEA S-73-532;UL 1277;UL 66

### Construction

#### Conductor:

Bare, annealed copper conforming to ASTM B3 and Class B stranded in accordance to ASTM B8, from 18 AWG to 16 AWG.

#### Insulation:

Flame-retardant PVC/Nylon type TFN per UL 66 for 18 AWG and 16 AWG.

#### Assembly:

Non-shielded: cables with 3 or more conductors and cabled in concentric layers with interstices filled with suitable fillers, as required. Two-conductor cables are supplied in a flat/parallel configuration. Ground wires, are sized as required by UL 1277 (refer to applicable product tables for the standard sizes provided). Sizes 14 AWG to 6 AWG have an insulated green ground wire. Size 4 AWG and larger have a bare ground wire. Where necessary, a binder tape of synthetic material assembles the core in a tight circular configuration.

Shielded: cabled in concentric layers with interstices filled with suitable fillers as required. 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, sequentially marked, 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.

NEXANS-C ULTREX-VN 600V TC-ER 3/C-12 AWG THHN/THWN-2 SUN RES DIR BUR (UL) ROHS (mm/dd/yyyy)

#### Conductor Identification:

18 AWG and 16 AWG: color coded per Method #1-E2 per ICEA S-73-532

See details in Conductor Identification Charts.

### Characteristics

#### Dimensional characteristics

Conductor cross-section (AWG)

18

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Multiconductor 18 AWG Type TFN - Insulation Thickness: 15 mils / .38mm PVC, 4 mils / .10mm Nylon Covering

Part Number	# of Conductors	Jacket Thickness		Nominal Diameter over Jacket		Approximate Net Cable Weight		Ampacity amps
		mils	mm	inches	mm	lb/kft	kg/km	
697151	2 Flat	45	1.14	0.180 x0.270	4.57 x 6.86	35	52	6.0
697359	3	45	1.14	0.288	7.31	45	67	6.0
697169	4	45	1.14	0.311	7.91	54	80	4.8
627448	5	45	1.14	0.337	8.56	66	98	4.8
627273	6	45	1.14	0.364	9.25	76	113	4.8
627281	7	45	1.14	0.364	9.25	82	122	4.2
-----	8	45	1.14	0.392	9.95	92	137	4.2
627901	9	45	1.14	0.421	10.69	108	160	4.2
669127	10	45	1.14	0.448	11.37	117	175	3.0
-----	11	45	1.14	0.454	11.53	122	182	3.0
697367	12	45	1.14	0.468	11.87	131	195	3.0
-----	13	45	1.14	0.476	12.08	139	207	3.0
-----	14	45	1.14	0.491	12.47	148	220	3.0
697177	15	45	1.14	0.504	12.79	184	274	3.0
697375	19	60	1.52	0.574	14.58	210	312	3.0
-----	20	60	1.52	0.590	14.99	217	323	3.0
697383	25	60	1.52	0.658	16.71	272	405	2.7
-----	30	60	1.52	0.701	17.80	308	458	2.7
626994	37	60	1.52	0.754	19.15	380	564	2.4
-----	40	60	1.52	0.782	19.86	397	591	2.4
-----	45	60	1.52	0.867	22.02	442	658	2.1
-----	50	80	2.03	0.898	22.80	516	768	2.1

**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 and bare or insulated grounds are also available.
- Cables with 3 or more conductors are UL listed for exposed runs (ER) when installed in accordance with NEC 2008 and NEC 2011 Article 336.10(7).
- Ampacities are in accordance with NEC 2008 and NEC 2011 Article 336.80, and Table 402.5 "Allowable Ampacity for Fixture Wires" at an ambient temperature of 30°C (with no load diversity).
- Ampacity for cables having more than three conductors have been derated as stated in NEC 2008 Article 392.11 or NEC 2011 Article 392.80(A), using the derating factors of NEC 2008 Table 310.15(B)(2)(a) or NEC 2011 Table 310.15(B)(3)(a). For load diversity of 50%, refer to NEC 2008 Table B.310.11 or NEC 2011 Table B.310.15(B)(2)(11).
- For correction factors for different ambient temperatures and ampacities at different conductor temperature ratings see NEC 2008 Table 310.16 or NEC 2011 Table 310.15(B)(16).
- Refer to NEC 2008 and NEC 2011 Article 240.4(D) for overcurrent protection requirements.

### Selling information

#### OPTIONS

The following constructions can be provided on special orders:

- \* Dow Construction
- \* DuPont Construction
- \* Composite Cable Construction
- \* Insulated Green Ground
- \* Different conductor identification methods

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\* 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.