

ULTREX® VN Unshielded Tray Cable - With Ground

Ultrrex VN Unshielded Tray Cable 3 Conductors With Ground

Part Number: Ultrrex VN Unshielded Tray Cable 3 Conductors with Ground

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 Ultrrex 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 3 or more conductors are UL listed for exposed runs (ER) when installed in accordance with NEC Article 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 non-shielded Ultrrex VN cables with 3 or 4 conductors are twisted together with fillers inserted into interstices. A binder tape of synthetic material is used to assemble the core in a tight circular configuration. Ground wires are sized as required by UL 1277. Sizes #14 AWG to #6 AWG have an insulated green ground wire. Sizes #4 AWG and larger have a bare ground wire.

Jacket:

UL listed sunlight and moisture resistant, black, 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 through 500 kcmil: color coded per Method #1-E2 per ICEA S-73-532

See details in Conductor Identification Charts.

Standards

National ICEA S-73-532; ICEA S-95-658; UL 1277; UL 83

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Characteristics

Construction characteristics

Number of conductors

3

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| Part Number | Conductor Size (AWG/kcmil) | Ground Size (AWG) | Insulation Thickness PVC/Nylon | | Jacket Thickness | | Nominal Diameter over Jacket | | Approximate Net Cable Weight | | Ampacity (1,2,3) |
|-------------|----------------------------|-------------------|--------------------------------|----------|------------------|------|------------------------------|-------|------------------------------|-------|------------------|
| | | | mils | mm | mils | mm | inches | mm | lb/kft | kg/km | |
| 664995 | 14 | 14 | 15/4 | .38/.10 | 45 | 1.14 | 0.364 | 9.25 | 91 | 135 | 25 |
| 685578 | 12 | 12 | 15/4 | .38/.10 | 45 | 1.14 | 0.408 | 10.36 | 126 | 188 | 30 |
| 665000 | 10 | 10 | 20/4 | .51/.10 | 45 | 1.14 | 0.459 | 11.66 | 191 | 284 | 40 |
| 680747 | 8 | 10 | 30/5 | .76/.13 | 60 | 1.52 | 0.610 | 15.49 | 302 | 449 | 55 |
| 680749 | 6 | 8 | 30/5 | .76/.13 | 60 | 1.52 | 0.725 | 18.42 | 422 | 628 | 75 |
| 658948* | 4 | 8 | 40/6 | 1.02/.15 | 80 | 2.03 | 0.857 | 21.77 | 647 | 963 | 95 |
| 658955* | 2 | 6 | 40/6 | 1.02/.15 | 80 | 2.03 | 0.996 | 25.30 | 963 | 1433 | 130 |
| 680752 | 1 | 6 | 50/7 | 1.27/.18 | 80 | 2.03 | 1.108 | 28.14 | 1156 | 1720 | 150 |
| 658963* | 1/0 | 6 | 50/7 | 1.27/.18 | 80 | 2.03 | 1.207 | 30.66 | 1451 | 2159 | 170 |
| 665018 | 2/0 | 6 | 50/7 | 1.27/.18 | 80 | 2.03 | 1.297 | 32.94 | 1738 | 2586 | 195 |
| 216341 | 3/0 | 4 | 50/7 | 1.27/.18 | 80 | 2.03 | 1.410 | 35.81 | 2122 | 3158 | 225 |
| 665026 | 4/0 | 4 | 50/7 | 1.27/.18 | 80 | 2.03 | 1.530 | 38.86 | 2576 | 3834 | 260 |
| 665034 | 250 | 4 | 60/8 | 1.52/.20 | 110 | 2.79 | 1.657 | 42.09 | 3029 | 4508 | 290 |
| 665042 | 350 | 3 | 60/8 | 1.52/.20 | 110 | 2.79 | 1.961 | 49.81 | 4347 | 6469 | 350 |
| 665059 | 500 | 2 | 60/8 | 1.52/.20 | 110 | 2.79 | 2.234 | 56.74 | 5819 | 8660 | 430 |

* DOW construction cables.

Bend Radius: 5 x overall diameter installed (up to 2.0") / 6 x overall diameter installed (over 2.0")
 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.

(2)For correction factors to different ambient temperatures and ampacities for different conductor temperature ratings see NEC Table 310.16.

(3)NEC 240-4(D) requires that overcurrent protection not exceed 15 amperes for 14 AWG copper conductors, 20 amperes for 12 AWG copper conductors and 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
- * 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.