

# Vinyl Nylon Tray Cable (VNTC) Control Cable



Click on the above thumbnail or go to  
<https://www.automationdirect.com/VID-WD-0016>  
for a short introduction on our cut to length cable



## Overview

Vinyl Nylon Tray Cable (VNTC) 600 Volt Type TC-ER control cables from AutomationDirect are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 75°C in wet locations and 90°C in dry locations, 130°C for emergency overload, and 150°C for short circuit conditions. For use in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10. Silicone Free

## Features

- 18AWG to 10AWG, 3 to 24 conductors
- Unshielded constructions
- Type TC-ER Control Cable 600Volt Copper Conductors
- Polyvinyl Chloride (PVC) with nylon layer Insulation THHN Polyvinyl Chloride (PVC) Jacket
- Control Cable Conductor Identification Method 1 Table 2
- Silicone Free
- Cut to length in 1 foot increments
- Low 20 foot minimum length
- Made in the USA

| Control Cable Conductor Identification Method 1 Table 2* |               |        |                  |               |        |
|----------------------------------------------------------|---------------|--------|------------------|---------------|--------|
| Conductor Number                                         | Primary Color | Stripe | Conductor Number | Primary Color | Stripe |
| 1                                                        | Black         | —      | 19               | Orange        | Blue   |
| 2                                                        | Red           | —      | 20               | Yellow        | Blue   |
| 3                                                        | Blue          | —      | 21               | Brown         | Blue   |
| 4                                                        | Orange        | —      | 22               | Black         | Orange |
| 5                                                        | Yellow        | —      | 23               | Red           | Orange |
| 6                                                        | Brown         | —      | 24               | Blue          | Orange |
| 7                                                        | Red           | Black  | 25               | Yellow        | Orange |
| 8                                                        | Blue          | Black  | 26               | Brown         | Orange |
| 9                                                        | Orange        | Black  | 27               | Black         | Yellow |
| 10                                                       | Yellow        | Black  | 28               | Red           | Yellow |
| 11                                                       | Brown         | Black  | 29               | Blue          | Yellow |
| 12                                                       | Black         | Red    | 30               | Orange        | Yellow |
| 13                                                       | Blue          | Red    | 31               | Brown         | Yellow |
| 14                                                       | Orange        | Red    | 32               | Black         | Brown  |
| 15                                                       | Yellow        | Red    | 33               | Red           | Brown  |
| 16                                                       | Brown         | Red    | 34               | Blue          | Brown  |
| 17                                                       | Black         | Blue   | 35               | Orange        | Brown  |
| 18                                                       | Red           | Blue   | 36               | Yellow        | Brown  |

\* ICEA Method 1 Table 2 does not provide a green or green/yellow conductor for ground



- 1. Conductor: 7 strands class B compressed bare copper per ASTM B3 and ASTM B8 for 14, 12, and 10 AWG cables. 26 strands class K bare copper per ASTM B3 and B174 for 16 AWG cables
- 2. Insulation: Polyvinyl Chloride (PVC) with nylon layer 19 Mils thick for 18, 16, 14, 12 AWG cables and 24 Mils for 10 AWG cables, Type TFFN/TFN for 18 and 16 AWG cable and Type THHN or THWN for 14, 12 and 10 AWG cables
- 3. Filler: Polypropylene filler on cables with 5 or less conductors
- 4. Binder: Polyester flat thread binder tape applied for cables with more than 5 conductors
- 5. Overall Jacket: Polyvinyl Chloride (PVC) Jacket

# 18 Gauge VNTC Cable (Unshielded)

| 18 Gauge VNTC Cable Specifications (Unshielded) |                                                                                  |                             |                                                                                                                                                                    |
|-------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conductor Gauge &amp; Stranding</b>          | 18AWG 7/26 bare copper, Class K                                                  | <b>Applicable Standards</b> | ASTM B3 Standard Specification for Soft or Annealed Copper Wire                                                                                                    |
| <b>Voltage Rating</b>                           | 600V (Type TC-ER)                                                                |                             | ASTM B8 Concentric-Lay-Stranded Copper Conductors                                                                                                                  |
| <b>Resistance</b>                               | 6.53 $\Omega$ /kft*                                                              |                             | UL 83 Thermoplastic Insulated Wires and Cables Type THHN                                                                                                           |
| <b>Operating Temperature</b>                    | -40°C to 90°C (-40°F to 194°F)                                                   |                             | UL 1277 Electrical Power and Control Tray Cables                                                                                                                   |
| <b>Jacket Material</b>                          | Polyvinyl chloride (PVC) jacket                                                  |                             | UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test                                                                                                  |
| <b>Conductor Insulation</b>                     | 0.015 Inch, PVC + 0.004 Inch, NYLON                                              |                             | ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 2                                                                                              |
| <b>Filler</b>                                   | Polypropylene filler on cables with 5 or less conductors                         |                             | ICEA S-73-532 Standard for Control                                                                                                                                 |
| <b>Binder</b>                                   | Polyester flat thread binder tape applied for cables with more than 5 conductors |                             | ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy                                                          |
| <b>Conductor Markings</b>                       | Control Cable Conductor Identification Method 1 Table 2                          | <b>Approvals**</b>          | IEEE 1202 FT4 Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)                                                                        |
| <b>Temperature Rating</b>                       | 75°C (167°F) Wet, 90°C (194°F) Dry                                               |                             | UL (E75755)                                                                                                                                                        |
| <b>Flame Rating</b>                             | FT4                                                                              | <b>Sample Print Legend</b>  | SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil]<br>CU THHN PVC/PVC 600V Type TC-ER For CT USE<br>SUN. RES. For DIRECT BURIAL FT4 YEAR (NESC)<br>[SEQUENTIAL FEET MARKS] |

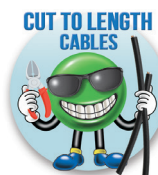
\* Per ASTM B174

\*\* To obtain the most current agency approval information, see Agency Approval Checklist section on the specific part number's web page at [www.AutomationDirect.com](http://www.AutomationDirect.com)

| 18 Gauge VNTC Cable (Unshielded)                                                   |                      |     |        |                                               |                                 |                                   |                                         |                           |                            |                |
|------------------------------------------------------------------------------------|----------------------|-----|--------|-----------------------------------------------|---------------------------------|-----------------------------------|-----------------------------------------|---------------------------|----------------------------|----------------|
| Part Number                                                                        | Number of Conductors | AWG | Strand | Overall Conductor Insulation Thickness (Mils) | Overall Jacket Thickness (Mils) | Nominal O.D. (Inches $\pm 10\%$ ) | Minimum Installed Bend Radius (inches)* | Minimum Cut Length (ft)** | Approximate Weight (lb/ft) | Price per foot |
|  |                      |     |        |                                               |                                 |                                   |                                         |                           |                            |                |
| <a href="#">VNTC-18-3-BK-1</a>                                                     | 3                    | 18  | 7      | 15                                            | 45                              | 0.350                             | 1.1                                     | 20                        | 0.05                       | \$0.43         |
| <a href="#">VNTC-18-6-BK-1</a>                                                     | 6                    |     |        |                                               |                                 | 0.453                             | 1.4                                     | 20                        | 0.08                       | \$0.67         |
| <a href="#">VNTC-18-8-BK-1</a>                                                     | 8                    |     |        |                                               |                                 | 0.490                             | 1.6                                     | 20                        | 0.09                       | \$0.86         |
| <a href="#">VNTC-18-10-BK-1</a>                                                    | 10                   |     |        |                                               |                                 | 0.551                             | 1.8                                     | 20                        | 0.12                       | \$1.04         |
| <a href="#">VNTC-18-12-BK-1</a>                                                    | 12                   |     |        |                                               |                                 | 0.573                             | 1.8                                     | 20                        | 0.13                       | \$1.28         |
| <a href="#">VNTC-18-19-BK-1</a>                                                    | 19                   |     |        |                                               |                                 | 0.705                             | 2.3                                     | 20                        | 0.21                       | \$2.13         |
| <a href="#">VNTC-18-24-BK-1</a>                                                    | 24                   |     |        |                                               |                                 | 0.826                             | 2.6                                     | 20                        | 0.26                       | \$2.52         |

\* Installed bend radius  $\geq 4 \times$  diameter

\*\* See web store for maximum cut lengths



Please Note: Our prices on flexible control cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

# 16 Gauge VNTC Cable (Unshielded)

| 16 Gauge VNTC Cable Specifications (Unshielded) |                                                                                  |                             |                                                                                                                                                                    |
|-------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conductor Gauge &amp; Stranding</b>          | 16AWG 7/24 bare copper, Class K                                                  | <b>Applicable Standards</b> | ASTM B3 Standard Specification for Soft or Annealed Copper Wire                                                                                                    |
| <b>Voltage Rating</b>                           | 600V (Type TC-ER)                                                                |                             | ASTM B8 Concentric-Lay-Stranded Copper Conductors                                                                                                                  |
| <b>Resistance</b>                               | 4.18 Ω/kft*                                                                      |                             | UL 83 Thermoplastic Insulated Wires and Cables Type THHN                                                                                                           |
| <b>Operating Temperature</b>                    | -40°C to 90°C (-40°F to 194°F)                                                   |                             | UL 1277 Electrical Power and Control Tray Cables                                                                                                                   |
| <b>Jacket Material</b>                          | Polyvinyl chloride (PVC) jacket                                                  |                             | UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test                                                                                                  |
| <b>Conductor Insulation</b>                     | 0.015 Inch, PVC + 0.004 Inch, NYLON                                              |                             | ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 2                                                                                              |
| <b>Filler</b>                                   | Polypropylene filler on cables with 5 or less conductors                         |                             | ICEA S-73-532 Standard for Control                                                                                                                                 |
| <b>Binder</b>                                   | Polyester flat thread binder tape applied for cables with more than 5 conductors |                             | ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy                                                          |
| <b>Conductor Markings</b>                       | Control Cable Conductor Identification Method 1 Table 2                          | <b>Approvals**</b>          | IEEE 1202 FT4 Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)                                                                        |
| <b>Temperature Rating</b>                       | 75°C (167°F) Wet, 90°C (194°F) Dry                                               |                             | UL (E75755)                                                                                                                                                        |
| <b>Flame Rating</b>                             | FT4                                                                              | <b>Sample Print Legend</b>  | SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil]<br>CU THHN PVC/PVC 600V Type TC-ER For CT USE<br>SUN. RES. For DIRECT BURIAL FT4 YEAR (NESC)<br>[SEQUENTIAL FEET MARKS] |

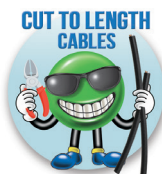
\* Per ASTM B174

\*\* To obtain the most current agency approval information, see Agency Approval Checklist section on the specific part number's web page at [www.AutomationDirect.com](http://www.AutomationDirect.com)

| 16 Gauge VNTC Cable (Unshielded)                                                   |                      |     |        |                                               |                                 |                             |                                         |                           |                            |                |
|------------------------------------------------------------------------------------|----------------------|-----|--------|-----------------------------------------------|---------------------------------|-----------------------------|-----------------------------------------|---------------------------|----------------------------|----------------|
| Part Number                                                                        | Number of Conductors | AWG | Strand | Overall Conductor Insulation Thickness (Mils) | Overall Jacket Thickness (Mils) | Nominal O.D. (Inches ± 10%) | Minimum Installed Bend Radius (inches)* | Minimum Cut Length (ft)** | Approximate Weight (lb/ft) | Price per foot |
|  |                      |     |        |                                               |                                 |                             |                                         |                           |                            |                |
| <a href="#">VNTC-16-3-BK-1</a>                                                     | 3                    | 16  | 7      | 19                                            | 45                              | 0.368                       | 1.2                                     | 20                        | 0.06                       | \$0.59         |
| <a href="#">VNTC-16-4-BK-1</a>                                                     | 4                    |     |        |                                               |                                 | 0.398                       | 1.3                                     | 20                        | 0.07                       | \$0.69         |
| <a href="#">VNTC-16-5-BK-1</a>                                                     | 5                    |     |        |                                               |                                 | 0.432                       | 1.4                                     | 20                        | 0.08                       | \$0.84         |
| <a href="#">VNTC-16-7-BK-1</a>                                                     | 7                    |     |        |                                               |                                 | 0.466                       | 1.5                                     | 20                        | 0.11                       | \$1.18         |
| <a href="#">VNTC-16-9-BK-1</a>                                                     | 9                    |     |        |                                               |                                 | 0.539                       | 1.7                                     | 20                        | 0.14                       | \$1.50         |
| <a href="#">VNTC-16-12-BK-1</a>                                                    | 12                   |     |        |                                               |                                 | 0.604                       | 1.9                                     | 20                        | 0.17                       | \$1.85         |
| <a href="#">VNTC-16-19-BK-1</a>                                                    | 19                   |     |        |                                               | 60                              | 0.746                       | 2.4                                     | 20                        | 0.27                       | \$3.36         |

\* Installed bend radius ≥ 4x diameter

\*\* See web store for maximum cut lengths



Please Note: Our prices on flexible control cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

# 14 Gauge VNTC Cable (Unshielded)

| 14 Gauge VNTC Cable Specifications (Unshielded) |                                                                                  |                             |                                                                                                                                                                                                  |
|-------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conductor Gauge &amp; Stranding</b>          | 14AWG 7/22 bare copper, Class K                                                  | <b>Applicable Standards</b> | ASTM B3 Standard Specification for Soft or Annealed Copper Wire                                                                                                                                  |
| <b>Voltage Rating</b>                           | 600V (Type TC-ER)                                                                |                             | ASTM B8 Concentric-Lay-Stranded Copper Conductors                                                                                                                                                |
| <b>Resistance</b>                               | 2.63 $\Omega$ /kft*                                                              |                             | UL 83 Thermoplastic Insulated Wires and Cables Type THHN                                                                                                                                         |
| <b>Operating Temperature</b>                    | -40°C to 90°C (-40°F to 194°F)                                                   |                             | UL 1277 Electrical Power and Control Tray Cables                                                                                                                                                 |
| <b>Jacket Material</b>                          | Polyvinyl chloride (PVC) jacket                                                  |                             | UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test                                                                                                                                |
| <b>Conductor Insulation</b>                     | 0.015 Inch, PVC + 0.004 Inch, NYLON                                              |                             | ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 2                                                                                                                            |
| <b>Filler</b>                                   | Polypropylene filler on cables with 5 or less conductors                         |                             | ICEA S-73-532 Standard for Control                                                                                                                                                               |
| <b>Binder</b>                                   | Polyester flat thread binder tape applied for cables with more than 5 conductors |                             | ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy                                                                                        |
| <b>Conductor Markings</b>                       | Control Cable Conductor Identification Method 1 Table 2                          | <b>Approvals**</b>          | IEEE 1202 FT4 Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)                                                                                                      |
| <b>Temperature Rating</b>                       | 75°C (167°F) Wet, 90°C (194°F) Dry                                               |                             | UL (E75755)                                                                                                                                                                                      |
| <b>Flame Rating</b>                             | FT4                                                                              |                             | <b>Sample Print Legend</b><br>SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil]<br>CU THHN PVC/PVC 600V Type TC-ER For CT<br>USE SUN. RES. For DIRECT BURIAL FT4 YEAR<br>(NESC) [SEQUENTIAL FEET MARKS] |

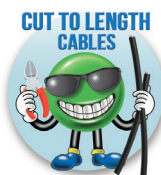
\* Per ASTM B174

\*\* To obtain the most current agency approval information, see Agency Approval Checklist section on the specific part number's web page at [www.AutomationDirect.com](http://www.AutomationDirect.com)

| 14 Gauge VNTC Cable (Unshielded)                                                    |                      |     |        |                                               |                                 |                                   |                                         |                           |                            |                |
|-------------------------------------------------------------------------------------|----------------------|-----|--------|-----------------------------------------------|---------------------------------|-----------------------------------|-----------------------------------------|---------------------------|----------------------------|----------------|
| Part Number                                                                         | Number of Conductors | AWG | Strand | Overall Conductor Insulation Thickness (Mils) | Overall Jacket Thickness (Mils) | Nominal O.D. (Inches $\pm 10\%$ ) | Minimum Installed Bend Radius (inches)* | Minimum Cut Length (ft)** | Approximate Weight (lb/ft) | Price per foot |
|  |                      |     |        |                                               |                                 |                                   |                                         |                           |                            |                |
| <a href="#">VNTC-14-3-BK-1</a>                                                      | 3                    | 14  | 7      | 19                                            | 45                              | 0.405                             | 1.3                                     | 20                        | 0.08                       | \$0.77         |
| <a href="#">VNTC-14-4-BK-1</a>                                                      | 4                    |     |        |                                               |                                 | 0.437                             | 1.4                                     | 20                        | 0.09                       | \$0.91         |
| <a href="#">VNTC-14-5-BK-1</a>                                                      | 5                    |     |        |                                               |                                 | 0.475                             | 1.5                                     | 20                        | 0.11                       | \$1.19         |
| <a href="#">VNTC-14-7-BK-1</a>                                                      | 7                    |     |        |                                               |                                 | 0.516                             | 1.7                                     | 20                        | 0.15                       | \$1.72         |
| <a href="#">VNTC-14-12-BK-1</a>                                                     | 12                   |     |        |                                               | 60                              | 0.710                             | 2.3                                     | 20                        | 0.26                       | \$2.85         |

\* Installed bend radius  $\geq 4 \times$  diameter

\*\* See web store for maximum cut lengths



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# 12 Gauge VNTC Cable (Unshielded)

| 12 Gauge VNTC Cable Specifications (Unshielded) |                                                                                  |                             |                                                                                                                                                                                                  |
|-------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conductor Gauge &amp; Stranding</b>          | 12AWG 7/20 bare copper, Class K                                                  | <b>Applicable Standards</b> | ASTM B3 Standard Specification for Soft or Annealed Copper Wire                                                                                                                                  |
| <b>Voltage Rating</b>                           | 600V (Type TC-ER)                                                                |                             | ASTM B8 Concentric-Lay-Stranded Copper Conductors                                                                                                                                                |
| <b>Resistance</b>                               | 1.66 Ω/kft*                                                                      |                             | UL 83 Thermoplastic Insulated Wires and Cables Type THHN                                                                                                                                         |
| <b>Operating Temperature</b>                    | -40°C to 90°C (-40°F to 194°F)                                                   |                             | UL 1277 Electrical Power and Control Tray Cables                                                                                                                                                 |
| <b>Jacket Material</b>                          | Polyvinyl chloride (PVC) jacket                                                  |                             | UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test                                                                                                                                |
| <b>Conductor Insulation</b>                     | 0.015 Inch, PVC + 0.004 Inch, NYLON                                              |                             | ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 2                                                                                                                            |
| <b>Filler</b>                                   | Polypropylene filler on cables with 5 or less conductors                         |                             | ICEA S-73-532 Standard for Control                                                                                                                                                               |
| <b>Binder</b>                                   | Polyester flat thread binder tape applied for cables with more than 5 conductors |                             | ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy                                                                                        |
| <b>Conductor Markings</b>                       | Control Cable Conductor Identification Method 1 Table 2                          | <b>Approvals**</b>          | IEEE 1202 FT4 Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)                                                                                                      |
| <b>Temperature Rating</b>                       | 75°C (167°F) Wet, 90°C (194°F) Dry                                               |                             | UL (E75755)                                                                                                                                                                                      |
| <b>Flame Rating</b>                             | FT4                                                                              |                             | <b>Sample Print Legend</b><br>SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil]<br>CU THHN PVC/PVC 600V Type TC-ER For CT<br>USE SUN. RES. For DIRECT BURIAL FT4 YEAR<br>(NESC) [SEQUENTIAL FEET MARKS] |

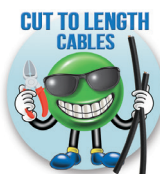
\* Per ASTM B174

\*\* To obtain the most current agency approval information, see Agency Approval Checklist section on the specific part number's web page at [www.AutomationDirect.com](http://www.AutomationDirect.com)

| 12 Gauge VNTC Cable (Unshielded)                                                   |                      |     |        |                                               |                                 |                             |                                         |                           |                            |                |
|------------------------------------------------------------------------------------|----------------------|-----|--------|-----------------------------------------------|---------------------------------|-----------------------------|-----------------------------------------|---------------------------|----------------------------|----------------|
| Part Number                                                                        | Number of Conductors | AWG | Strand | Overall Conductor Insulation Thickness (Mils) | Overall Jacket Thickness (Mils) | Nominal O.D. (Inches ± 10%) | Minimum Installed Bend Radius (inches)* | Minimum Cut Length (ft)** | Approximate Weight (lb/ft) | Price per foot |
|  |                      |     |        |                                               |                                 |                             |                                         |                           |                            |                |
| <a href="#">VNTC-12-3-BK-1</a>                                                     | 3                    | 12  | 7      | 19                                            | 45                              | 0.450                       | 1.4                                     | 20                        | 0.10                       | \$1.08         |
| <a href="#">VNTC-12-4-BK-1</a>                                                     | 4                    |     |        |                                               |                                 | 0.490                       | 1.6                                     | 20                        | 0.13                       | \$1.38         |
| <a href="#">VNTC-12-5-BK-1</a>                                                     | 5                    |     |        |                                               |                                 | 0.539                       | 1.7                                     | 20                        | 0.16                       | \$1.68         |

\* Installed bend radius ≥ 4x diameter

\*\* See web store for maximum cut lengths



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# 10 Gauge VNTC Cable (Unshielded)

| 10 Gauge VNTC Cable Specifications (Unshielded) |                                                                                  |                             |                                                                                                                                                                    |
|-------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conductor Gauge &amp; Stranding</b>          | 10 AWG 7/18 bare copper, Class K                                                 | <b>Applicable Standards</b> | ASTM B3 Standard Specification for Soft or Annealed Copper Wire                                                                                                    |
| <b>Voltage Rating</b>                           | 600V (Type TC-ER)                                                                |                             | ASTM B8 Concentric-Lay-Stranded Copper Conductors                                                                                                                  |
| <b>Resistance</b>                               | 1.04 $\Omega$ /kft*                                                              |                             | UL 83 Thermoplastic Insulated Wires and Cables Type THHN                                                                                                           |
| <b>Operating Temperature</b>                    | -40°C to 90°C (-40°F to 194°F)                                                   |                             | UL 1277 Electrical Power and Control Tray Cables                                                                                                                   |
| <b>Jacket Material</b>                          | Polyvinyl chloride (PVC) jacket                                                  |                             | UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test                                                                                                  |
| <b>Conductor Insulation</b>                     | 0.020 Inch, PVC + 0.004 Inch, NYLON                                              |                             | ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 2                                                                                              |
| <b>Filler</b>                                   | Polypropylene filler on cables with 5 or less conductors                         |                             | ICEA S-73-532 Standard for Control                                                                                                                                 |
| <b>Binder</b>                                   | Polyester flat thread binder tape applied for cables with more than 5 conductors |                             | ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy                                                          |
| <b>Conductor Markings</b>                       | Control Cable Conductor Identification Method 1 Table 2                          |                             | IEEE 1202 FT4 Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)                                                                        |
| <b>Temperature Rating</b>                       | 75°C (167°F) Wet, 90°C (194°F) Dry                                               | <b>Approvals**</b>          | UL (E75755)                                                                                                                                                        |
| <b>Flame Rating</b>                             | FT4                                                                              | <b>Sample Print Legend</b>  | SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil]<br>CU THHN PVC/PVC 600V Type TC-ER For CT USE<br>SUN. RES. For DIRECT BURIAL FT4 YEAR (NESC)<br>[SEQUENTIAL FEET MARKS] |

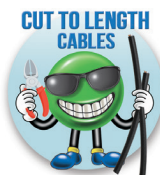
\* Per ASTM B174

\*\* To obtain the most current agency approval information, see Agency Approval Checklist section on the specific part number's web page at [www.AutomationDirect.com](http://www.AutomationDirect.com)

| 10 Gauge VNTC Cable (Unshielded)                                                   |                      |     |        |                                               |                                 |                                   |                                         |                           |                            |                |
|------------------------------------------------------------------------------------|----------------------|-----|--------|-----------------------------------------------|---------------------------------|-----------------------------------|-----------------------------------------|---------------------------|----------------------------|----------------|
| Part Number                                                                        | Number of Conductors | AWG | Strand | Overall Conductor Insulation Thickness (Mils) | Overall Jacket Thickness (Mils) | Nominal O.D. (Inches $\pm 10\%$ ) | Minimum Installed Bend Radius (inches)* | Minimum Cut Length (ft)** | Approximate Weight (lb/ft) | Price per foot |
|  |                      |     |        |                                               |                                 |                                   |                                         |                           |                            |                |
| <a href="#">VNTC-10-3-BK-1</a>                                                     | 3                    | 10  | 7      | 24                                            | 45                              | 0.541                             | 1.7                                     | 20                        | 0.16                       | \$1.57         |
| <a href="#">VNTC-10-4-BK-1</a>                                                     | 4                    |     |        |                                               |                                 | 0.591                             | 1.9                                     | 20                        | 0.20                       | \$2.04         |
| <a href="#">VNTC-10-5-BK-1</a>                                                     | 5                    |     |        |                                               |                                 | 0.650                             | 2.1                                     | 20                        | 0.24                       | \$2.59         |

\* Installed bend radius  $\geq 4 \times$  diameter

\*\* See web store for maximum cut lengths



Please Note: Our prices on flexible control cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.