AutomationDirect offers 300V UL Instrumentation Cable available with 18AWG and 16AWG conductors in 1, 2, 4, or 8 twisted pairs with an overall shield or in 2, 4, or 8 individually shielded twisted pairs with an overall shield. The overall shielded cables have an aluminum/polyester foil shield with 100% coverage and a tinned copper continuous drain wire for protection against external electrical noise interference. Cables with both individually shielded pairs and an overall shield have aluminum/polyester foil shields with 100% coverage complete with separate tinned copper continuous drain wires for maximum effectiveness against both external electrical noise interference and crosstalk between pairs. Individual conductor pairs are stranded bare copper with black and white premium grade PVC insulation and marked with alpha-numeric print for easy identification. The cable’s outer jacket is a black premium grade PVC that is sunlight and moisture resistant. A convenient 22AWG orange PVC insulated communications conductor is included on multi-pair cables. Cut to length in 1 foot increments with a 20 foot minimum length.

Our instrumentation cables are dual listed as UL 2250 Type ITC (Instrumentation Tray Cables) and UL 13 Type PLTC (Power Limited Tray Cables). Type ITC cables can be used for instrumentation and control circuits operating at 150 volts or less and 5 amperes or less as described in NEC Article 727. Type PLTC cables can be used for Class 2 and Class 3 remote-control, signaling, and power-limited circuits as described in NEC Article 725. Additionally these cables are permitted for use in hazardous locations as described in NEC Articles 501 through 505.

Features

- Typical applications include industrial instrumentation, control, alarm, audio, intercom, and energy management circuits
- Dual listed Type ITC and Type PLTC
- Suitable for use in hazardous locations
- 18AWG & 16AWG with 1, 2, 4 or 8 twisted pairs, overall shield or individually shielded pairs with overall shield
- Conductor pairs with black and white premium PVC insulation and alpha-numeric identification
- Communication (Talk) wire included on multi-pair cables for use during installation or instrument calibration
- Sunlight and moisture resistant PVC outer jacket with sequential foot markings
- Cut to length in 1 foot increments
- Low 20 foot minimum length
- Made in the USA

Click on the above thumbnail or go to https://www.automationdirect.com/VID-WD-0012 for a short introduction on our cut to length cable.
### 18AWG Instrumentation Cable - Overall Shield Specifications

<table>
<thead>
<tr>
<th>Conductor Gauge &amp; Stranding</th>
<th>18AWG Class B 7 stranded bare copper per ASTM B-3 and B-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage Rating</td>
<td>300V</td>
</tr>
<tr>
<td>Jacket Material</td>
<td>Sunlight resistant black PVC (polyvinyl chloride)</td>
</tr>
<tr>
<td>Conductor Insulation</td>
<td>PVC</td>
</tr>
<tr>
<td>Pair Lay Length</td>
<td>1.25 twists per inch</td>
</tr>
<tr>
<td>Resistance</td>
<td>6.6Ω/1000'@20°C per conductor</td>
</tr>
<tr>
<td>Capacitance</td>
<td>40.66 pf/ft</td>
</tr>
<tr>
<td>Inductance</td>
<td>0.0957 µH/ft</td>
</tr>
<tr>
<td>Conductor Markings</td>
<td>Black / White; Alpha-numeric print; alternate &amp; inverted @ 2.5 inch intervals</td>
</tr>
<tr>
<td>Temperature Rating</td>
<td>-30°C to 105°C (-22°F to 221°F)</td>
</tr>
<tr>
<td>Shield and Drain Wire</td>
<td>Overall aluminum polyester foil shield with a tinned copper drain wire</td>
</tr>
<tr>
<td>Communication Wire**</td>
<td>22AWG PVC (orange)</td>
</tr>
<tr>
<td>Min. Bend Radius</td>
<td>10x diameter</td>
</tr>
</tbody>
</table>

### Print Legend*

CCJ ROYAL 18 AWG XX SHIELDED PAIRS PVC/PVC TYPE PLTC/ITC E176494 (UL) 105C SUN RES FT4/IEEE 1202 --- SEQUENTIAL MARKING

### Flame Rating

Passes FT4/IEEE 1202 Flame Test
Passes IEEE 383 Flame Test (70,000btu)

### Applicable Standards

- UL Standard 13 Type PLTC
- UL Standard 2250 Type ITC
- EPA 40 CFR, Part 26, Subpart C, heavy metals per Table 1, TCLP method
- NEC Article 725 (Type PLTC)
- NEC Article 727 (Type ITC)
- Hazardous Locations:
  - NEC Article 501.10 (Class I, Div 2)
  - NEC Article 502.10 (Class II, Div 2)
- NEC Article 503.10 (Class III, Div 1 and 2)
- NEC Article 504 (Intrinsically Safe Systems)
- NEC Article 505.15 (Class I, Zone 2)

### Conductor Insulation

PVC

### Pair Lay Length

1.25 twists per inch

### Resistance

6.60Ω/1000' @ 20°C per conductor

### Capacitance

40.66 pf/ft

### Inductance

0.0957 µH/ft

### Conductor Markings

Black / White; Alpha-numeric print; alternate & inverted @ 2.5 inch intervals

### Temperature Rating

-30°C to 105°C (-22°F to 221°F)

### Shield and Drain Wire

Overall aluminum polyester foil shield with a tinned copper drain wire

### Communication Wire**

22AWG PVC (orange)

### Min. Bend Radius

10x diameter

### Part Number| Number of Pairs| AWG| Stranding| Overall Conductor Insulation Thickness (Mils)| Conductor Approx. O.D. (Inches)| Overall Jacket Thickness (Mils)| Nominal O.D. (Inches ±10%)| Installed Bend Radius (Inches)| Minimum Cut Length (ft)*| Approximate Weight (lb/ft)| Price per foot |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PLTC3-18-1S-1</td>
<td>1</td>
<td>18</td>
<td>7</td>
<td>0.052</td>
<td>52</td>
<td>0.258</td>
<td>2.58</td>
<td>20</td>
<td>0.04</td>
<td>$0.30</td>
</tr>
<tr>
<td>PLTC3-18-2S-1</td>
<td>2</td>
<td>18</td>
<td>7</td>
<td>0.052</td>
<td>52</td>
<td>0.385</td>
<td>3.85</td>
<td>20</td>
<td>0.07</td>
<td>$0.52</td>
</tr>
<tr>
<td>PLTC3-18-4S-1</td>
<td>4</td>
<td>18</td>
<td>7</td>
<td>0.052</td>
<td>52</td>
<td>0.440</td>
<td>4.40</td>
<td>20</td>
<td>0.11</td>
<td>$0.85</td>
</tr>
<tr>
<td>PLTC3-18-8S-1</td>
<td>8</td>
<td>18</td>
<td>7</td>
<td>0.052</td>
<td>52</td>
<td>0.575</td>
<td>5.75</td>
<td>20</td>
<td>0.20</td>
<td>$1.45</td>
</tr>
</tbody>
</table>

* XX = Number of shielded pairs

** Included on multi-pair cables

* See web store for maximum cut lengths

---

Please Note: Our prices on instrumentation 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.
16AWG Instrumentation Cable - Overall Shield Specifications

Conductor Gauge & Stranding
- 16AWG Class B 7 stranded bare copper per ASTM B-3 and B-8

Print Legend*
- CCI ROYAL 16 AWG XX SHIELDED PAIRS PVC/PVC TYPE PLTC/ITC E176494 (UL) 105C SUN RES FT4/IEEE 1202 --- SEQUENTIAL MARKING

Voltage Rating
- 300V

Flame Rating
- Passes FT4/EEE 1202 Flame Test
- Passes IEEE 383 Flame Test (70,000btu)

Jacket Material
- Sunlight resistant black PVC (polyvinyl chloride)

Conductor Insulation
- PVC

Pair Lay Length
- 1.25 twists per inch

Resistance
- 4.18Ω/1000' @ 20°C per conductor

Capacitance
- 48.51 pF/ft

Inductance
- 0.0895 µH/ft

Conductor Markings
- Black / White; Alpha-numeric print; alternate & inverted @ 2.5 inch intervals

Temperature Rating
- -30°C to 105°C (-22°F to 221°F)

Shield and Drain Wire
- Overall aluminum polyester foil shield with a tinned copper drain wire

Communication Wire**
- 22AWG PVC (orange)

Min. Bend Radius
- 10x diameter

Voltage Rating
- 300V

Flame Rating
- Passes FT4/EEE 1202 Flame Test
- Passes IEEE 383 Flame Test (70,000btu)

Jacket Material
- Sunlight resistant black PVC (polyvinyl chloride)

Conductor Insulation
- PVC

Pair Lay Length
- 1.25 twists per inch

Resistance
- 4.18Ω/1000' @ 20°C per conductor

Capacitance
- 48.51 pF/ft

Inductance
- 0.0895 µH/ft

Conductor Markings
- Black / White; Alpha-numeric print; alternate & inverted @ 2.5 inch intervals

Temperature Rating
- -30°C to 105°C (-22°F to 221°F)

Shield and Drain Wire
- Overall aluminum polyester foil shield with a tinned copper drain wire

Communication Wire**
- 22AWG PVC (orange)

Min. Bend Radius
- 10x diameter

* XX = Number of shielded pairs
** Included on multi-pair cables

16AWG Instrumentation Cable - Overall Shield specifications

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Number of Pairs</th>
<th>AWG</th>
<th>Stranding</th>
<th>Overall Conductor Insulation Thickness (Mils)</th>
<th>Conductor Approx. O.D. (Inches)</th>
<th>Overall Jacket Thickness (Mils)</th>
<th>Nominal O.D. (Inches ±10%)</th>
<th>Installed Bend Radius (Inches)</th>
<th>Minimum Cut Length (ft)</th>
<th>Approximate Weight (lb/ft)</th>
<th>Price per foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLTC3-16-1S-1</td>
<td>1</td>
<td>16</td>
<td>7</td>
<td>15</td>
<td>0.0152</td>
<td>0.282</td>
<td>2.82</td>
<td>20</td>
<td>0.05</td>
<td>$0.39</td>
<td></td>
</tr>
<tr>
<td>PLTC3-16-2S-1</td>
<td>2</td>
<td>16</td>
<td>7</td>
<td>15</td>
<td></td>
<td>0.407</td>
<td>4.07</td>
<td>20</td>
<td>0.08</td>
<td>$0.66</td>
<td></td>
</tr>
<tr>
<td>PLTC3-16-4S-1</td>
<td>4</td>
<td>16</td>
<td>7</td>
<td>15</td>
<td>0.0152</td>
<td>0.516</td>
<td>5.16</td>
<td>20</td>
<td>0.16</td>
<td>$1.13</td>
<td></td>
</tr>
<tr>
<td>PLTC3-16-8S-1</td>
<td>8</td>
<td>16</td>
<td>7</td>
<td>15</td>
<td>0.0152</td>
<td>0.662</td>
<td>6.62</td>
<td>20</td>
<td>0.27</td>
<td>$1.64</td>
<td></td>
</tr>
</tbody>
</table>

* See web store for maximum cut lengths

Please Note: Our prices on instrumentation 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.

For the latest prices, please check AutomationDirect.com.
# 18AWG Instrumentation Cable - Individual and Overall Shields

## 18AWG Instrumentation Cable - Individual and Overall Shields Specifications

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Number of Pairs</th>
<th>AWG</th>
<th>Stranding</th>
<th>Overall Conductor Insulation Thickness (Mils)</th>
<th>Conductor Approx. O.D. (Inches)</th>
<th>Overall Jacket Thickness (Mils)</th>
<th>Nominal O.D. (Inches ±10%)</th>
<th>Installed Bend Radius (Inches)</th>
<th>Minimum Cut Length (ft)</th>
<th>Approximate Weight (lb/ft)</th>
<th>Price per foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLTC3-18-2SS-1</td>
<td>2</td>
<td>18</td>
<td>7</td>
<td>0.0152</td>
<td>52</td>
<td>0.401</td>
<td>4.01</td>
<td>20</td>
<td>0.08</td>
<td>$0.60</td>
<td></td>
</tr>
<tr>
<td>PLTC3-18-4SS-1</td>
<td>4</td>
<td>18</td>
<td>7</td>
<td>0.0152</td>
<td>65</td>
<td>0.490</td>
<td>4.90</td>
<td>20</td>
<td>0.14</td>
<td>$0.92</td>
<td></td>
</tr>
<tr>
<td>PLTC3-18-8SS-1</td>
<td>8</td>
<td>18</td>
<td>7</td>
<td>0.0152</td>
<td>65</td>
<td>0.605</td>
<td>6.05</td>
<td>20</td>
<td>0.23</td>
<td>$1.55</td>
<td></td>
</tr>
</tbody>
</table>

* XX = Number of shielded pairs

** Included on multi-pair cables

* See web store for maximum cut lengths

---

Please Note: Our prices on instrumentation 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.
# 16AWG Instrumentation Cable - Individual and Overall Shields

## Specifications

**Conductor Gauge & Stranding**
- 16AWG Class B 7 stranded bare copper per ASTM B-3 and B-8

**Voltage Rating**
- 300V

**Jacket Material**
- Sunlight resistant black PVC (polyvinyl chloride)

**Conductor Insulation**
- PVC

**Pair Lay Length**
- 1.25 twists per inch

**Resistance**
- 4.18Ω/1000' @ 20°C per conductor

**Capacitance**
- 48.51 pF/ft

**Inductance**
- 0.0895 µH/ft

**Conductor Markings**
- Black / White; Alpha-numeric print; alternate & inverted @ 2.5 inch intervals

**Temperature Rating**
- -30°C to 105°C (-22°F to 221°F)

**Shield and Drain Wire**
- Individual and overall aluminum polyester foil shield with a tinned copper drain wire

**Communication Wire**
- 22AWG PVC (orange)

**Min. Bend Radius**
- 10x diameter

**Print Legend**
- CCI ROYAL 16 AWG XX SHIELDED PAIRS PVC/PVC TYPE PLTC/ITC E176494 (UL) 105C SUN RES FT4/IEEE 1202 --- SEQUENTIAL MARKING

**Flame Rating**
- Passes FT4/IEEE 1202 Flame Test
- Passes IEEE 383 Flame Test (70,000btu)

**Applicable Standards**
- UL Standard 13 Type PLTC
- UL Standard 2250 Type ITC
- EPA 40 CFR, Part 26, Subpart C, heavy metals per Table 1, TCLP method
- NEC Article 725 (Type PLTC)
- NEC Article 727 (Type ITC)
- Hazardous Locations:
  - NEC Article 501.10 (Class I, Div 2)
  - NEC Article 502.10 (Class II, Div 2)
  - NEC Article 503.10 (Class III, Div 1 and 2)
  - NEC Article 504 (Intrinsically Safe Systems)
  - NEC Article 505.15 (Class I, Zone 2)

## Table

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Number of Pairs</th>
<th>AWG</th>
<th>Stranding</th>
<th>Overall Conductor Insulation Thickness (Mils)</th>
<th>Conductor Approx. O.D. (Inches)</th>
<th>Overall Jacket Thickness (Mils)</th>
<th>Nominal O.D. (Inches ±10%)</th>
<th>Installed Bend Radius (Inches)</th>
<th>Minimum Cut Length (ft)*</th>
<th>Approximate Weight (lb/ft)</th>
<th>Price per foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLTC3-16-2SS-1</td>
<td>2</td>
<td>16</td>
<td>7</td>
<td>15</td>
<td>0.0152</td>
<td>52</td>
<td>0.443</td>
<td>4.43</td>
<td>20</td>
<td>0.11</td>
<td>$0.75</td>
</tr>
<tr>
<td>PLTC3-16-4SS-1</td>
<td>4</td>
<td>16</td>
<td>7</td>
<td>15</td>
<td>0.0152</td>
<td>65</td>
<td>0.539</td>
<td>5.39</td>
<td>20</td>
<td>0.18</td>
<td>$1.20</td>
</tr>
<tr>
<td>PLTC3-16-8SS-1</td>
<td>8</td>
<td>16</td>
<td>7</td>
<td>15</td>
<td>0.0152</td>
<td>75</td>
<td>0.690</td>
<td>6.90</td>
<td>20</td>
<td>0.32</td>
<td>$2.15</td>
</tr>
</tbody>
</table>

* See web store for maximum cut lengths

---

Please Note: Our prices on instrumentation 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.

---

For the latest prices, please check AutomationDirect.com.