# 300V CU PVC TRIADS PVC TOS Instrumentation

Type PLTC/ITC Instrumentation Cable 300 Volt Copper Conductors PVC Insulated Singles Overall Shield TOS. PVC Jacket Heat, Moisture, and Sunlight Resistant RoHS rated for -30°C to 105°C




Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B stranded bare copper per ASTM B3 and B8
2. **Insulation:** Twisted triad with Premium Grade Polyvinyl Chloride (PVC) Black/White/Red alpha-numeric print alternate and inverted. 1-ONE, 2-TWO.
3. **Overall Drain Wire:** Tinned Copper
4. **Overall Shielded:** 100% coverage aluminum/polyester foil shield with a drain wire as shown in step 3
5. **Rip Cord:** Rip cord under jacket for ease of removal
6. **Jacket:** Black sunlight, and moisture resistant Polyvinyl Chloride (PVC)

## APPLICATIONS AND FEATURES:

Southwire's Instrumentation Cables Type PLTC per UL 13 and Type ITC per UL 2250 are suitable for installations as outlined in NEC Article 336 for process control and instrumentation, control circuits for operation and interconnection of protective and signaling devices and for general use in manufacturing, industrial and commercial distribution systems. Cables are constructed with 7-strand copper conductors insulated with nylon covered PVC. The triad conductors are colored black, white, red and alpha-numeric printed. Each triad has an aluminum polyester foil with 100% coverage and a tinned drain wire. The overall assembly is covered with an aluminum polyester foil with 100% coverage and a tinned drain wire. The cable is suited for use in cable trays, raceways, conduit, aerial (when supported with a messenger). The cable is rated for -30°C to 105°C and rated for Class I Div II hazardous locations, and sun resistant. The jacket is black PVC with a nylon ripcord for easy removal.

## SPECIFICATIONS:

- UL 13 Power-Limited Circuit Cables
- UL 2250 Instrumentation Tray Cable
- IEEE 383 Flame Test (70,000 btu)
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- EPA 40 CFR, Part 26, Subpart C heavy metals per Table 1, TCLP method
- RoHS-2 (European Directive 2011/65/EU)
- NEC Article 336 Power and Control Tray Cable

## SAMPLE PRINT LEGEND:

SOUTHWIRE® XX AWG XX TRIADS PVC/PVC TYPE PLTC/ITC E220129 V3 & V4 (UL) 105°C SUN RES FT4/IEEE 1202 SEQUENTIAL MARKING


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## Table 1 – Weights and Measurements

| Cond. Size | Number of Triads | Diameter Over Conductor | Insul. Thickness | Jacket Thickness | Approx. OD | Approx. Weight | Min Bending Radius | DC Resistance @ 25°C |
|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | triad | inch | mil | mil | inch | lb/1000ft | inch | Ω/1000ft |
| 20 | 12 | 0.036 | 20 | 60 | 0.740 | 263 | 4.4 | 10.50 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

## Table 2 – Weights and Measurements (Metric)

| Cond. Size | Number of Triads | Diameter Over Conductor | Insul. Thickness | Jacket Thickness | Approx. OD | Approx. Weight | Min Bending Radius | DC Resistance @ 25°C |
|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | triad | inch | mm | mm | mm | lb/km | mm | Ω/km |
| 20 | 12 | 0.036 | 0.51 | 1.52 | 18.80 | 391 | 111.76 | 34.45 |

## Typical Electrical Specifications for Each Triad

| Size | Capacitance | Inductance |
|---|---|---|
| AWG | pF/ft | µH/ft |
| 18 | 40.66 | 0.0957 |
| 16 | 48.51 | 0.0895 |


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