600V CU PVC-Nylon/PVC Pairs POS

Type TC Instrumentation Cable 600 Volt Copper Conductors PVC/Nylon Insulated Singles with Overall Shield POS. PVC Jacket Heat, Moisture, Oil and Sunlight Resistant RoHS rated for -25°C to 90°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:** Premium Grade Polyvinyl Chloride (PVC) plus nylon. Black/White alpha-numeric print alternate and inverted. 1-ONE, 2-TWO
3. **Overall Drain Wire:** Tinned Copper. Sized two AWG sizes smaller than pair size. For #18 awg pair: Drain is 20 awg. For #16 awg pair: Drain is 18 awg.
4. **Binder:** Mylar binder
5. **Overall Shielded:** 100% coverage aluminum/polyester foil shield with a drain wire.
6. **Rip Cord:** Rip cord under jacket for ease of removal
7. **Jacket:** Black sunlight, oil and moisture resistant Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's Instrumentation Cables Type TC UL 1277 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 paired conductors are colored black, white, and alpha-numeric printed. 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) and direct burial. The cable is rated for -25°C to 90°C and rated for Class I Div II hazardous locations, sun and oil resistant. The jacket is black PVC with a nylon ripcord for easy removal. 1 Pair is not TC-ER Rated.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 66 Fixture Wire Type TFN
- UL 1277 Electrical Power and Control Tray Cables
- IEEE 383 Flame Test (70,000 btu)
- 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

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SAMPLE PRINT LEGEND:

{SQFTG} XX AWG (X.XXmm2) X/PAIRS PVC/NYLON POS TYPE TC-ER E75755 (UL) 600V 90°C DRY 75°C WET DIR BUR SUN RES MADE IN USA ROHS-2

Table 1 – Weights and Measurements

Cond. Size	Number of Pairs	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	DC Resistance @ 25°C
AWG/ Kcmil	pair	inch	mil	mil	inch	lb/1000ft	inch	Ω/1000ft
18	2	0.045	20	45	0.375	60	2.2	6.669

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
† 1 Pair is not TC-ER Rated.
! Tinned copper phase conductors

Table 2 – Weights and Measurements (Metric)

Cond. Size	Number of Pairs	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	DC Resistance @ 25°C
AWG/ Kcmil	pair	inch	mm	mm	mm	lb/km	mm	Ω/km
18	2	0.045	0.51	1.14	9.52	89	55.88	21.88

Typical Electrical Specifications for Each Pair

Size	Capacitance	Inductance
18	40.66	0.0957
16	48.51	0.0895