600V CU PVC TFFN PAIRS PVC POS Instrumentation

Type TC-ER 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 -30°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
- Insulation: Premium Grade Polyvinyl Chloride (PVC) plus nylon. Black/White alpha-numeric print alternate and inverted. 1-ONE, 2-TWO
- 3. Twisted Pair: Black/White pairs
- 4. Binder: Mylar binder
- 5. Overall Drain Wire: Tinned Copper
- 6. Overall Shielded: 100% coverage aluminum/polyester foil shield with a drain wire as shown in step 5
- 7. Rip Cord: Rip cord under jacket for ease of removal
- 8. Jacket: Black sunlight, oil and moisture resistant Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's Instrumentation Cables Type TC-ER 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 -30°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 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 1277 Electrical Power and Control Tray Cables
- 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 PAIRS PVC/PVC TYPE TC-ER E75755 (UL) 90°C SUN AND OIL RES FT4/IEEE 1202 SEQUENTIAL MARKING

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Number of Pairs	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	DC Resistance @ 25° C
	AWG/ Kcmil	pair	mil	mil	inch	lb/1000ft	inch	Ω/1000ft
562954◊	16	1	15	45	0.298	50	2.384	4.18

All dimensions are nominal and subject to normal manufacturing tolerances

 \Diamond Cable marked with this symbol is a standard stock item

† 1 Pair is not TC-ER Rated.

Table 2 – Weights and Measurements (Metric)

Stock Number	Cond. Size	Number of Pairs	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	DC Resistance @ 25° C
	AWG/ Kcmil	pair	mm	mm	mm	lb/km	mm	Ω/km
562954◊	16	1	0.38	1.14	7.57	74	60.55	13.71

Typical Electrical Specifications for Each Pair

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

