

600V INSTRUMENTATION EPR/CPE TRIADS, STOS, TYPE TC-ER

Type TC-ER Instrumentation Cable 600 Volt Tinned Copper Conductors EPR Insulated Singles Shielded Triads with Overall Shield STOS. CPE Jacket Heat, Moisture, Oil and Sunlight Resistant

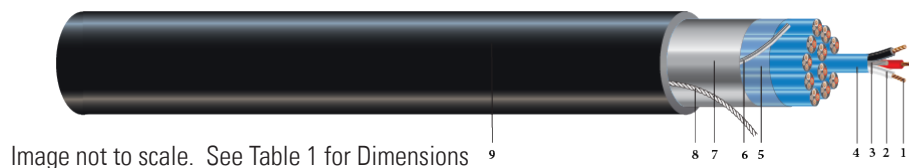


Image not to scale. See Table 1 for Dimensions

CONSTRUCTION:

- Conductors:** Class B stranded tinned copper per ASTM B-3 and B-33
- Insulation:** Flame-retardant Ethylene Propylene Rubber EPR Black/White/Red alpha-numeric print alternate and inverted. 1-ONE, 2-TWO. 22 AWG PVC (Orange) communication conductor included
- Drain Wire:** Tinned copper
- Twisted Shielded Triad:** 100% coverage aluminum/polyester foil shield with an individual drain wire shown in step 3
- Binder:** Mylar binder
- Overall Drain Wire:** Tinned Copper
- Overall Shielded:** 100% coverage aluminum/polyester foil shield with an individual drain wire as shown in step 6
- Rip Cord:** Rip cord under jacket for ease of removal
- Jacket:** Black sunlight, oil and moisture resistant thermoplastic Chlorinated Polyethylene CPE jacket

APPLICATIONS AND FEATURES:

Southwire's Instrumentation Cables Type TC-ER per 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 tinned copper conductors insulated with Ethylene Propylene Rubber EPR. The triad conductors are colored black, white, red and alpha-numeric printed. Each pair 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) and direct burial. The cable is rated for -30°C to 90°C wet or dry and rated for Class I Div II hazardous locations, sun and oil resistant. The jacket is black Chlorinated Polyethylene CPE with a rip cord for easy removal

SPECIFICATIONS:

- ASTM B8 - Concentric Lay-Standard Copper
- ASTM B33 - Tinned soft or Annealed Copper
- UL 44 - Thermoset-Insulated Wires and Cables
- UL 1277 Electrical Power and Control Cable
- UL 1581 - Standard for Electrical Wires, Cables, and Flexible Cords
- UL 1685 - Vertical-Tray Fire Propagation and Smoke-Release Test.
- IEEE 1202/FT4 - Flame Test 70,000 Btu/hr Vertical Tray
- EPA 40CFR.Part 261, Subpart C, Heavy Metals Per Table 1, TCLP Method
- ICEA S-73-532 - Standard for Control, Thermocouple Extension, and Instrumentation Cables

SAMPLE PRINT LEGEND:

SOUTHWIRE® XX AWG XX SHIELDED TRIADS EPR/CPE TYPE TC-ER E-FILE (UL) 600V 90°C WET/DRY SUN AND OIL RESI
DIRECT BURIAL-- FT4/IEEE 1202 SEQUENTIAL MARKING



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Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	No. of Triads	Insulation Thickness		Jacket Thickness		Nominal OD (9)		Nominal Weight		DC Resistance		Min Bend Radius	
			(mils)	(mm)	(mils)	(mm)	inches	mm	lbs/MFT	kg/km	Ω/MFT	Ω/km	inches	mm
592114	16	1	30	0.76	45	1.14	0.350	9.07	75	94	4.18	13.71	2.856	72.54
TBD	16	2	30	0.76	45	1.14	0.511	12.04	120	179	4.18	13.71	4.088	103.84
595481	16	4	30	0.76	60	1.52	0.749	15.98	201	299	4.18	13.71	4.936	125.37
595482	16	7	30	0.76	80	2.03	1.040	21.84	379	564	4.18	13.71	6.768	171.91
TBD	16	12	30	0.76	80	2.03	1.063	29.31	586	872	4.18	13.71	8.504	216
TBD	16	24	30	0.76	80	2.03	1.534	36.42	1184	1762	4.18	13.71	12.272	311.71

All dimensions are nominal and subject to normal manufacturing tolerances

Typical Electrical Specifications for Each Triad		
Size	Capacitance	Inductance
18 AWG	14.26 pF/ft.	0.1085 μ Henry/ft.
16 AWG	16.77 pF/ft.	0.1009 μ Henry/ft.

