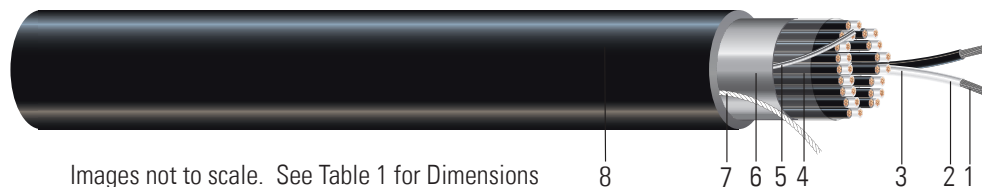


600V INSTRUMENTATION EPR/CPE PAIRS, POS, TYPE TC-ER

Type TC-ER Instrumentation Cable 600 Volt Tinned Copper Conductors EPR Insulated Single Pairs with Overall Shield POS. CPE Jacket Heat, Moisture, Oil and Sunlight Resistant



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

- 1. Conductors:** Class B stranded tinned copper per ASTM B-3 and B-33
- 2. Insulation:** Flame-retardant Ethylene Propylene Rubber EPR 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 an individual drain wire as shown in step 6
- 7. Rip Cord:** Rip cord under jacket for ease of removal
- 8. 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 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 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 PAIRS 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 Pairs	Insulation Thickness		Jacket Thickness		Nominal OD (8)		Nominal Weight		DC Resistance		Min Bend Radius	
			(mils)	(mm)	(mils)	(mm)	inches	mm	lbs/MFT	kg/km	Ω/MFT	Ω/km	inches	mm
592128	18	1†	30	0.76	45	1.14	0.322	8.18	68	101	6.66	21.84	2.576	65.43
TBA	18	2	30	0.76	45	1.14	0.496	12.6	83	124	6.66	21.84	3.968	100.79
TBA	18	4	30	0.76	60	1.52	0.606	15.39	146	217	6.66	21.84	4.848	123.14
677058	18	5	30	0.76	60	1.52	0.714	18.13	178	265	6.66	21.84	5.71	145.03
TBA	18	8	30	0.76	60	1.52	0.765	19.43	244	363	6.66	21.84	6.12	155.45
TBA	18	12	30	0.76	80	2.03	0.941	23.9	372	554	6.66	21.84	7.528	191.21
TBA	18	24	30	0.76	80	2.03	1.274	32.36	685	1019	6.66	21.84	10.192	258.88
TBA	18	36	30	0.76	80	2.03	1.465	37.21	977	1454	6.66	21.84	11.72	297.69
592115	16	1†	30	0.76	45	1.14	0.332	8.43	58	86	4.18	13.71	2.656	67.46
TBA	16	2	30	0.76	60	1.52	0.474	12.04	119	177	4.18	13.71	3.792	96.32
TBA	16	4	30	0.76	60	1.52	0.589	14.96	182	271	4.18	13.71	4.712	119.68
TBA	16	8	30	0.76	80	2.03	0.857	21.77	347	516	4.18	13.71	6.856	174.14
TBA	16	12	30	0.76	80	2.03	1.004	25.5	479	713	4.18	13.71	8.032	204.01
TBA	16	16	30	0.76	80	2.03	1.153	29.29	636	946	4.18	13.71	9.224	234.29
TBA	16	24	30	0.76	80	2.03	1.403	35.64	944	1405	4.18	13.71	11.224	285.09
TBA	16	36	30	0.76	80	2.03	1.587	40.31	1311	1951	4.18	13.71	12.696	322.48

All dimensions are nominal and subject to normal manufacturing tolerances

†One Pair Not TC-ER Rated

Typical Electrical Specifications for Each Pair		
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.

