

## 4/C CU 600V PVC THHN PVC Jacket Power Cable With Ground. Silicone Free

Type TC-ER Power Cable 600Volt Four Conductor Copper, Polyvinyl Chloride (PVC) with nylon layer insulation THHN Polyvinyl Chloride (PVC) Jacket with 1 Bare CU Ground



Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Insulation:** Polyvinyl Chloride (PVC) with nylon layer Type THHN/THWN
- Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (cable size 8 & 6 has insulated green ground)
- Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
- Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
- Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

### APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 75°C in wet locations and 90°C in dry locations, 105°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10. Silicone Free

### SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 83 Thermoplastic Insulated Wires and Cables
- UL 1277 Electrical Power and Control Tray Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 Control Cable Conductor Identification Method 3 (1-BLACK, 2-RED, 3-BLUE)
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy

### SAMPLE PRINT LEGEND:

SOUTHWIRE{R} MASTER-DESIGN {UL} 1 AWG (XX.X{mm<sup>2</sup>}) CU 4 CDRS TYPE TC-ER THHN OR THWN CDRS GW 1 X X AWG 90{D}C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600 VOLTS {NOM}-ANCE {YYYY}



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**Table 1 – Weights and Measurements**

Stock Number	Cond. Size	Diameter Over Conductor	Insul. Thickness	Diameter Over Insulation	Ground	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil	inch	mil	inch	No. x AWG	mil	inch	lb/1000ft	lb/1000ft
557694◇	8	0.139	35	0.199	1 x 10	60	0.695	238	378
664736◇‡	8	0.139	35	0.199	1 x 10	60	0.709	238	415
553438◇	6	0.174	35	0.234	1 x 8	60	0.710	379	541
601989◇	4	0.221	46	0.301	1 x 8	80	0.914	572	824
601997◇	2	0.277	46	0.357	1 x 6	80	1.052	910	1219
602003	1	0.321	57	0.421	1 x 6	80	1.210	1126	1515
554568◇	1/0	0.360	57	0.460	1 x 6	80	1.304	1398	1831
556720◇	2/0	0.404	57	0.504	1 x 6	80	1.410	1742	2225
602029◇	3/0	0.454	57	0.554	1 x 4	80	1.531	2223	2766
444745◇	4/0	0.510	57	0.610	1 x 4	80	1.666	2770	3382
580495	250	0.558	68	0.678	1 x 2	110	1.895	3249	4173
602045◇	250	0.558	68	0.678	1 x 4	110	1.895	3249	4077
602060◇	350	0.661	68	0.781	1 x 3	110	2.144	4531	5515
563180	350	0.661	68	0.781	1 x 3/0	110	2.258	4889	5884
552513◇	500	0.789	68	0.909	1 x 2	110	2.453	6445	7628
593375	500	0.789	68	0.909	1 x 250	110	2.485	7017	8336
604819	600	0.866	79	1.024	1 x 2	110	2.692	7693	9078
TBA	600	0.866	79	1.024	1 x 4/0	140	2.860	8154	9539
604827	750	0.968	79	1.108	1 x 1	140	2.998	9618	11342

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item

† Ampacities are based on Table 310.15 (B)(16) of the NEC, 2017 Edition - Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and adjusted to 80% per Table 310.15(B)(3)(a) for More Than Three Current-Carrying Conductors.

‡ Insulated green ground



**Table 2 – Electrical and Engineering Data**

Stock Number	Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 60° C†	Allowable Ampacity At 75° C†	Allowable Ampacity At 90° C†
	AWG/Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
557694◇	8	2.8	528	0.652	0.815	0.033	32	40	44
664736◇†	8	2.8	528	0.652	0.815	0.033	32	40	44
553438◇	6	2.8	840	0.411	0.514	0.032	44	52	60
601989◇	4	3.7	1336	0.258	0.323	0.032	56	68	76
601997◇	2	5.3	2124	0.162	0.203	0.031	76	92	104
602003	1	6.1	2678	0.129	0.161	0.031	88	104	116
554568◇	1/0	6.5	3379	0.102	0.128	0.031	100	120	136
556720◇	2/0	7.1	4259	0.081	0.101	0.030	116	140	156
602029◇	3/0	7.7	5370	0.064	0.080	0.029	132	160	180
444745◇	4/0	8.3	6771	0.051	0.064	0.029	156	184	208
580495	250	9.5	8000	0.043	0.054	0.029	172	204	232
602045◇	250	9.5	8000	0.043	0.054	0.029	172	204	232
602060◇	350	12.9	11200	0.031	0.039	0.029	208	248	280
563180	350	13.6	11200	0.031	0.039	0.029	208	248	280
552513◇	500	14.7	16000	0.022	0.027	0.028	256	304	344
593375	500	14.9	16000	0.022	0.027	0.028	256	304	344
604819	600	16.2	19200	0.018	0.023	0.028	280	336	380
TBA	600	17.16	19200	0.018	0.023	0.028	280	336	380
604827	750	18.0	24000	0.014	0.019	0.028	320	380	428

† Ampacities are based on Table 310.15 (B)(16) of the NEC, 2017 Edition - Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and adjusted to 80% per Table 310.15(B)(3)(a) for More Than Three Current-Carrying Conductors.

