CU 600V PVC-Nylon Insulation PVC Jacket THHN/THWN-2. CT Rated - Sunlight Resistant - For Direct Burial - 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. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Polyvinyl Chloride (PVC) with nylon layer Type THHN/THWN
3. **Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (cable size 8 & 6 has insulated green ground)
4. **Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
5. **Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
6. **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. Sunlight Resistant - For Direct Burial - Silicone Free

SPECIFICATIONS:

- ASTM B3 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® {UL} 1 AWG (XX.X{mm2}) CU 4 CDRS TYPE TC-ER THHN OR THWN CDRS GW 1 X X AWG 90°C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600 VOLTS {NOM}-ANCE {YYYY}

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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Cond. Number	Strand Count	Diameter Over Conductor	Insul. Thickness	Ground	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil		No. of Strands	inch	mil	No. x AWG	mil	inch	lb/1000ft	lb/1000ft
557694◊	8	4	7	0.141	30	1 x 10 GG	60	0.701	238	383
664736◊	8	4	7	0.141	30	1 x 10 GG	60	0.709	238	387
553438◊	6	4	7	0.177	30	1 x 8 GG	60	0.789	378	559
601989◊	4	4	7	0.225	40	1 x 8	80	0.933	572	876
601997◊	2	4	7	0.282	40	1 x 6	80	1.082	909	1230
602003	1	4	19	0.322	50	1 x 6	80	1.218	1125	1545
554568◊	1/0	4	19	0.361	50	1 x 6	80	1.304	1399	1851
556720◊	2/0	4	19	0.405	50	1 x 6	80	1.410	1742	2252
602029◊	3/0	4	19	0.456	50	1 x 4	80	1.531	2223	2801
444745◊	4/0	4	19	0.512	50	1 x 4	80	1.637	2769	3286
580495	250	4	37	0.558	60	1 x 2	110	1.895	3325	4181
602045◊	250	4	37	0.558	60	1 x 4	110	1.895	3248	4113
602060◊	350	4	37	0.661	60	1 x 3	110	2.144	4530	5482
563180	350	4	37	0.661	60	1 x 3/0	110	2.257	4889	5892
552513◊	500	4	37	0.789	60	1 x 2	110	2.397	6443	7485
593375	500	4	37	0.789	60	1 x 250	110	2.485	7016	8077
604819	600	4	61	0.865	70	1 x 2	110	2.643	7691	8924
TBA	600	4	61	0.865	80	1 x 2	110	2.703	7683	8742
604827	750	4	61	0.968	70	1 x 1	140	2.998	9616	11402

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

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Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Cond. Number	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°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	4	2.8	422	0.653	0.786	0.052	32	40	44
664736◊	8	4	2.8	422	0.653	0.786	0.052	32	40	44
553438◊	6	4	3.2	671	0.411	0.495	0.051	44	52	60
601989◊	4	4	3.7	1068	0.258	0.310	0.048	56	68	76
601997◊	2	4	5.4	1698	0.162	0.195	0.045	76	92	104
602003	1	4	6.1	2142	0.128	0.154	0.046	88	104	116
554568◊	1/0	4	6.5	2703	0.102	0.122	0.044	100	120	136
556720◊	2/0	4	7.1	3407	0.081	0.097	0.043	116	140	156
602029◊	3/0	4	7.7	4295	0.064	0.078	0.042	132	160	180
444745◊	4/0	4	8.2	5416	0.051	0.062	0.041	156	184	208
580495	250	4	9.5	6400	0.043	0.053	0.041	172	204	232
602045◊	250	4	9.5	6400	0.043	0.053	0.041	172	204	232
602060◊	350	4	12.9	8960	0.031	0.039	0.040	208	248	280
563180	350	4	13.5	8960	0.031	0.039	0.040	208	248	280
552513◊	500	4	14.4	12800	0.022	0.029	0.039	256	304	344
593375	500	4	14.9	12800	0.022	0.029	0.039	256	304	344
604819	600	4	15.9	15360	0.018	0.025	0.039	280	336	380
TBA	600	4	16.2	15360	0.018	0.025	0.039	280	336	380
604827	750	4	18.0	19200	0.014	0.022	0.038	320	380	428

* Ampacities based upon 2023 NEC Table 310.16. See NEC sections 310.15 and 110.14(C) for additional requirements.
* Ampacities have been adjusted for more than Three Current-Carrying Conductors.