

4/C CU Flexible 600V THHN PVC Power Cable With Ground Flexor

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

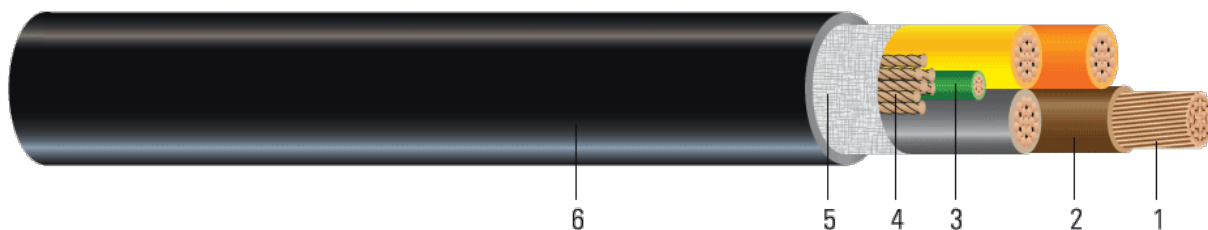


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class C compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Polyvinyl Chloride (PVC) with nylon layer Type THHN/THWN. Colors: Gray, Brown, Orange, Yellow.
3. **Grounding Conductor:** Green insulated THHN Class C compressed stranded bare copper per ASTM B3 and ASTM B8
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 flexible power cables are made with class C copper stranding for extra flexibility 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.

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 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- ICEA T-33-655/MIL-C-24643 Low Smoke Halogen Free (LSHF) Polymeric Jackets
- IEEE 1202 FT4 Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)



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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
TBA	8	0.148	35	0.218	1 x 10	60	0.66	238	384
TBA	6	0.186	35	0.256	1 x 8	60	0.755	379	556
TBA	4	0.235	46	0.327	1 x 8	80	0.971	572	839
643697	2	0.295	46	0.387	1 x 6	80	1.158	910	1246
TBA	1	0.333	57	0.447	1 x 6	80	1.269	1126	1530
TBA	1/0	0.374	57	0.488	1 x 6	80	1.37	1398	1846
TBA	2/0	0.42	57	0.534	1 x 6	80	1.484	1742	2240
TBA	3/0	0.471	57	0.585	1 x 4	80	1.611	2223	2781
TBA	4/0	0.529	57	0.643	1 x 4	80	1.754	2770	3397
TBA	250	0.576	68	0.712	1 x 4	110	1.985	3249	4092
TBA	350	0.681	68	0.817	1 x 3	110	2.246	4531	5530
TBA	500	0.815	68	0.951	1 x 2	110	2.578	6445	7643
TBA	750	0.999	79	1.157	1 x 1	140	3.149	9618	11357

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

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	Shield Short Circuit Current 6 Cycles	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	Amp
TBA	8	2.6	528	0.652	0.815	0.033	3754	32	40	44
TBA	6	3	840	0.411	0.514	0.032	5966	44	52	60
TBA	4	3.9	1336	0.258	0.323	0.032	9491	56	68	76
643697	2	5.6	2124	0.162	0.203	0.031	15089	76	92	104
TBA	1	6.3	2678	0.129	0.161	0.031	19029	88	104	116
TBA	1/0	6.9	3379	0.102	0.128	0.031	24011	100	120	136
TBA	2/0	7.4	4259	0.081	0.101	0.030	30264	116	140	156
TBA	3/0	8.1	5370	0.064	0.080	0.029	38154	132	160	180
TBA	4/0	8.7	6771	0.051	0.064	0.029	48114	156	184	208
TBA	250	9.9	8000	0.043	0.054	0.029	56845	172	204	232
TBA	350	13.4	11200	0.031	0.039	0.029	79583	208	248	280
TBA	500	15.4	16000	0.022	0.027	0.028	113690	256	304	344
TBA	750	18.8	24000	0.014	0.019	0.028	170535	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.

