

FLEXTOR™ CU 600V PVC-Nylon Insulation PVC Jacket. THHN/THWN-2

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

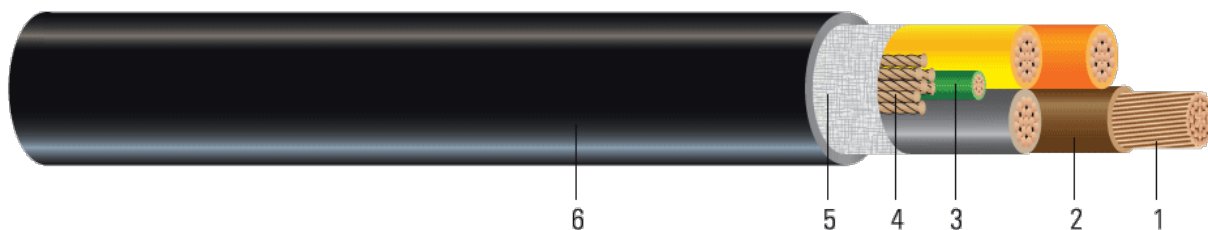


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Class C compressed stranded bare copper per ASTM B3 and ASTM B8
- Insulation:** Polyvinyl Chloride (PVC) with nylon layer Type THHN/THWN. Colors: Gray, Brown, Orange, Yellow.
- Grounding Conductor:** Green insulated THHN Class C compressed stranded bare copper per ASTM B3 and ASTM B8
- 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 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	Ground	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/Kcmil	inch	mil	No. x AWG	mil	inch	lb/1000ft	lb/1000ft
TBA	8	0.143	35	1 x 10	60	0.647	237	346
TBA	6	0.179	35	1 x 8	60	0.734	378	506
TBA	4	0.226	50	1 x 8	80	0.960	571	800
643697	2	0.286	40	1 x 6	80	1.158	909	1243
TBA	1	0.333	60	1 x 6	80	1.268	1123	1464
TBA	1/0	0.373	60	1 x 6	80	1.365	1395	1768
TBA	2/0	0.420	60	1 x 6	80	1.478	1739	2148
TBA	3/0	0.471	60	1 x 4	80	1.602	2221	2669
TBA	4/0	0.529	60	1 x 4	110	1.802	2765	3364
TBA	250	0.575	70	1 x 4	110	1.962	3245	3942
TBA	350	0.681	70	1 x 3	110	2.218	4526	5328
TBA	500	0.814	70	1 x 2	110	2.540	6437	7370
TBA	750	0.998	80	1 x 1	140	3.094	9607	10988

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.

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
TBA	8	2.5	528	0.653	0.786	0.052	32	40	44
TBA	6	2.9	839	0.411	0.495	0.051	44	52	60
TBA	4	3.8	1335	0.258	0.310	0.048	56	68	76
643697	2	5.7	2123	0.162	0.195	0.045	76	92	104
TBA	1	6.3	2678	0.128	0.154	0.046	88	104	116
TBA	1/0	6.8	3379	0.102	0.122	0.044	100	120	136
TBA	2/0	7.3	4259	0.081	0.097	0.043	116	140	156
TBA	3/0	8.0	5369	0.064	0.078	0.042	132	160	180
TBA	4/0	9.0	6771	0.051	0.062	0.041	156	184	208
TBA	250	9.8	8000	0.043	0.053	0.041	172	204	232
TBA	350	13.3	11200	0.031	0.039	0.040	208	248	280
TBA	500	15.2	16000	0.022	0.029	0.039	256	304	344
TBA	750	18.5	24000	0.014	0.022	0.038	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.

