



Cellular Power Cable

600 Volt Tray Cable (TC-ER) Rated for Exposed Run. Flexible Tinned Copper Conductors. THHN, THWN Conductors rated 75°C Wet and 90°C Dry. Uninsulated, Flexible Tinned Copper Ground Wire and Drain Wire. Overall Aluminum Foil Shield and Tinned Copper Braid Shield. Overall TPE or PVC Jacket. Rated FT4 Flame Resistant, Sunlight Resistant and -40°C.



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Class K Stranded Tinned Copper per ASTM B33, B172 & B174. #8 and #6 AWG 19 Strand per ASTM B787
- Insulation:** Polyvinyl Chloride (PVC) Insulated Conductors with Nylon Sheath.
Color: 2 Conductor Construction - BLK, RED
Color: 6 Conductor Construction - BLK-BLU/RED-BLU/BLK-ORG/RED-ORG/BLK-GRN/RED-GRN
- Ground:** Tinned Copper
- Drain Wire:** Tinned Copper
Phase Size: 12awg. Drain Size/Strands: 16awg/7
Phase Size: 10awg. Drain Size/Strands: 14awg/7
Phase Size: 8 and 6 awg. Drain Size/Strands: 12awg/7
- Filler:** Polypropylene as needed to make round
- Tape Shield:** Aluminum/Poly/Aluminum (3-Layer) applied Helically over cabled assembly
- Braid Shield:** 34 AWG Tinned Copper with 85% coverage applied over Tape Shield
- Overall Jacket:** Black sunlight resistant
2 Conductor: Thermoplastic Elastomer (TPE) Jacket
6 Conductor: Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire Tray Cable is suitable for use in industrial power or control circuits. Primary installations include cable trays, raceways and outdoor locations where supported by a messenger. These constructions are listed for exposed runs (TC-ER) per NEC 336.10. Type TC in sizes 8 AWG and larger is listed for direct burial and for use in Class 1, Division 2 hazardous locations and Class 1 Control circuits. This cable may be used at temperatures not to exceed 75°C in wet locations and 90°C in dry locations.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ASTM B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors
- ASTM B174 Standard Specification for Bunch-Stranded Copper
- ASTM B787 19 Wire Combination Unilay-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
- UL 2882 Outline of Investigation for Radio Head Cable
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® E75755 {UL} X/C X AWG (XX.X{mm2}) XXX STRAND CLASS K + 1/C X AWG (X.XX{mm2}) GDING
COND THHN/THWN 90°C DRY OR 75°C WET TYPE TC-ER 600V FT4 SUN RES





Table 1 – Weights and Measurements

Stock Number	Cond. Size	Cond. Number	Cond. Strands	Diameter Over Conductor	Insul. Thickness	Ground	Approx. OD	Approx. Weight
	AWG/Kcmil	No.	No.	inch	mil	No. x AWG	inch	lb/1000ft
TBA	12	3	65	0.094	20	1 x 12	0.304	78

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

Note:

1. Only 2/C cables are rated for direct burial.

Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance	Max Pull Tension	Min Bending Radius	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
AWG/Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	lb	inch	Amp	Amp
12	1.774	2.137	0.054	156	1.2	25	30

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.

