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:

1. **Conductor:** Class K Stranded Tinned Copper per ASTM B33, B172 & B174. #8 and #6 AWG 19 Strand per ASTM B787
2. **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
3. **Ground:** Tinned Copper
4. **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
5. **Filler:** Polypropylene as needed to make round
6. **Tape Shield:** Aluminum/Poly/Aluminum (3-Layer) applied Helically over cabled assembly
7. **Braid Shield:** 34 AWG Tinned Copper with 85% coverage applied over Tape Shield
8. **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	Diameter Over Insulation	Jacket Thickness	Approx. OD	Approx. Weight
	AWG/ Kcmil	No.	No.	inch	mil	inch	mil	inch	lb/1000ft
TBA	14	3	41	0.078	20	0.118	45	0.378	88
TBA	12	2	65	0.101	20	0.141	45	0.406	126
TBA	12	3	65	0.101	20	0.141	45	0.428	175
CTD-0210T-1A-01	10	2	104	0.126	25	0.176	45	0.48	186
CTD-0608T-1A-01	8	6	19	0.143	35	0.203	60	0.787	570
CTD-0208T-1A-01	8	2	168	0.155	35	0.215	60	0.600	284
CTD-0606T-1A-01	6	6	19	0.179	35	0.239	80	0.935	840
CTD-0206T-1A-01	6	2	266	0.186	35	0.250	60	0.683	395
CTD-0604T-1A-01	4	6	19	0.227	49	0.328	80	1.176	1238

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	Max Pull Tension	Min Bending Radius	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	lb	inch	Amp	Amp
14	2.81	2.93		4.5	20	25
12	1.66	2.075		5.1	20	20
12	1.77	1.85		5.2	25	30
10	1.04	1.300		6	30	30
8	0.658	0.822		9	40	44
8	0.715	0.879		7.2	50	55
6	0.411	0.514		11	52	60
6	0.450	0.540		8.2	65	75
4	0.283	0.368		14.1	68	76

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