CU 600V Power Drop Cable

600V Flexible CU THHN Power Cable TC-ER

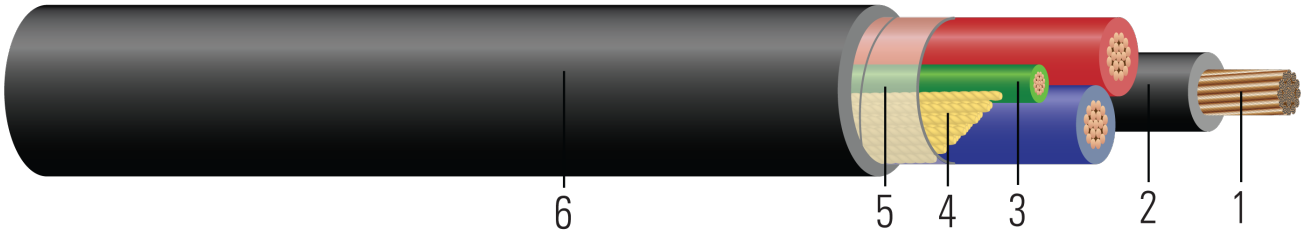

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Flexible stranded bare copper per ASTM B3, B172 and B174
2. **Insulation:** Polyvinyl Chloride (PVC) with nylon layer
   Color Code: 2/C Black, Red, with Green Ground. 3/C Black, Red, Blue with Green Ground
3. **Grounding Conductor:** Flexible stranded bare copper per ASTM B3, B172 and B174
4. **Filler:** Polypropylene fillers as necessary for a round assembly
5. **Binder:** Mylar tape
6. **Overall Jacket:** Black Polyvinyl Chloride (PVC) Jacket.

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Power Drop Cables conform to NFPA 79 and are suited for use in wet and dry areas, conduits, ducts, troughs, trays (TC-ER per NEC 336.10), direct burial 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, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, Division 2 hazardous locations per NEC Article 501 and 502. Southwire's 600 Volt Power Drop Cable is ideal for use in power feed drop applications.

SPECIFICATIONS:

- ASTM B3 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
- UL 509 Bus Drop Cable
- UL 758 Standard for Appliance Wiring Material Style 20886
- UL 1063 Machine Tool Wiring (MTW)
- UL 1277 TC-ER
- UL 2277 Type WTTC
- CSA C22.2 No. 75 Thermoplastic Insulated Wires and Cables
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- **CE/RoHS-2 – The CE Marking has been applied solely to express the conformance to the material restrictions identified in the RoHS-2 (2011/65/EU) Directive**

SAMPLE PRINT LEGEND:

SOUTHWIRE
(UL) E75755 XXX AWG (XX.XXmm2) 3/C TYPE TC-ER THHN OR THWN-2 CDRS GW 1 X AWG X 600V 90C WET/DRY SUN RES DIR BUR FT4 OR MTW OR WTTC 1000V OR AWM 20886 105C 1000V --- CE RoHS-2 Made in USA [YEAR] [SEQ FT MARKS]

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	Jacket Color
	AWG/ Kcmil		No. of Strands	inch	mil	No. x AWG	mil	inch	lb/1000ft	lb/1000ft	
648947◊	6	3	273	0.190	35	1 x 8	60	0.755	297	461	Black
648942◊	4	3	413	0.235	35	1 x 8	80	0.957	447	700	Black
647275◊	2/0	3	1330	0.420	60	1 x 2	80	1.451	1326	1981	Black
647280◊	373.7	3	931	0.710	70	1 x 2	110	2.055	3539	4478	Black

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	Cond. Number	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/ Kcmil		inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
648947◊	6	3	3.0	629	0.411	0.495	0.051	65	75
648942◊	4	3	3.8	1001	0.258	0.310	0.048	85	95
647275◊	2/0	3	7.3	3194	0.081	0.097	0.043	175	195
647280◊	373.7	3	12.3	2990	0.033	0.035	0.040	323	365

***** Ampacities based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.