TCU 600/1000V XLPE Insulation Thermoplastic CPE-TP XHHW-2. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

Type TC-ER Power Cable 600Volt Three Conductor Copper, Ethylene Propylene Rubber (EPR) insulation XHHW-2 Thermoplastic Chlorinated Polyethylene (CPE) Jacket with 1 Tinned CU Ground. VW-1 Rated. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded tinned copper per ASTM B33 and ASTM B8
2. **Insulation:** Ethylene Propylene Rubber (EPR) Type XHHW-2. VW-1 Rated
3. **Grounding Conductor:** Class B compressed stranded tinned copper per ASTM B33 and ASTM B8
4. **Overall Jacket:** Thermoplastic Chlorinated Polyethylene (CPE-TP) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER power cables are 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 90°C for normal operation in wet and dry locations, 130°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. VW-1 Rated. Sunlight Resistant - For Direct Burial - Silicone Free

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 44 Thermoset-Insulated Wires and Cables
- UL 44 VW-1 Vertical flame test on individual conductors
- UL 1277 Electrical Power and Control Tray Cables
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 Control Cable Conductor Identification Method 4
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® XX AWG (XX.X{mm2}) 3/C EPR/CPE TYPE TC-ER XHHW-2 CDRS GW 1 X X AWG TINNED E75755 {UL} 600V 90°C DRY/90°C WET OIL RES I SUNLIGHT RESISTANT DIRECT BURIAL FT4/IEEE 1202 -- {NOM}-ANCE EPR/CPE Tipo XHHW-2 SR FT4 600V 90°C USA

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
	AWG/ Kcmil		No. of Strands	inch	mil	No. x AWG	mil	inch	lb/1000ft	lb/1000ft
591981◊	8	3	7	0.141	45	1 x 10	60	0.647	186	307
591983◊	6	3	7	0.177	45	1 x 8	60	0.724	297	441
591985◊	4	3	7	0.225	45	1 x 8	60	0.853	441	634
591987◊	2	3	7	0.282	45	1 x 6	80	0.978	702	930
591989◊	1	3	19	0.322	55	1 x 6	80	1.162	864	1198
591991◊	1/0	3	19	0.361	55	1 x 6	80	1.216	1069	1406
591993◊	2/0	3	19	0.405	55	1 x 6	80	1.329	1326	1719
591995	3/0	3	19	0.456	55	1 x 4	80	1.437	1699	2127
591996◊	4/0	3	19	0.512	55	1 x 4	80	1.558	2109	2579
591998◊	250	3	37	0.558	65	1 x 4	80	1.755	2469	3091
592000◊	350	3	37	0.661	65	1 x 3	110	1.990	3438	4167
674038	500	3	37	0.789	65	1 x 3/0	110	2.224	5201	5976
592002	500	3	37	0.789	65	1 x 2	115	2.225	4884	5681
TBA	750	3	61	0.968	80	1 x 1	110	2.658	7268	8547

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
591981◊	8	3	2.6	396	0.653	0.786	0.052	50	55
591983◊	6	3	2.9	629	0.411	0.495	0.051	65	75
591985◊	4	3	3.4	1001	0.258	0.310	0.048	85	95
591987◊	2	3	3.9	1592	0.162	0.195	0.045	115	130
591989◊	1	3	5.8	2008	0.128	0.154	0.046	130	145
591991◊	1/0	3	6.1	2534	0.102	0.122	0.044	150	170
591993◊	2/0	3	6.6	3194	0.081	0.097	0.043	175	195
591995	3/0	3	7.2	4027	0.064	0.078	0.042	200	225
591996◊	4/0	3	7.8	5078	0.051	0.062	0.041	230	260
591998◊	250	3	8.8	6000	0.043	0.053	0.041	255	290
592000◊	350	3	10.0	8400	0.031	0.039	0.040	310	350
674038	500	3	13.3	12000	0.022	0.029	0.039	380	430
592002	500	3	13.4	12000	0.022	0.029	0.039	380	430
TBA	750	3	15.9	18000	0.014	0.022	0.038	475	535

* Ampacities based upon 2023 NEC Table 310.16. See NEC sections 310.15 and 110.14(C) for additional requirements.