



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

Type TC-ER Control Cable, 600/1000 Volt, Tinned Copper Conductors, Ethylene Propylene Rubber (EPR) Insulation XHHW-2, Thermoplastic Chlorinated Polyethylene (CPE-TP) Jacket, Control Cable Conductor Identification Method 1 Table 2, VW-1 Rated 14 - 10 AWG, CT Rated, Sunlight Resistant, For Direct Burial, Silicone Free



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 7-strand class B compressed tinned copper per ASTM B33 and B8
2. **Insulation:** Ethylene Propylene Rubber (EPR) Type XHHW-2
3. **Filler:** Polypropylene filler on cables with 5 or less conductors
4. **Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
5. **Overall Jacket:** Thermoplastic Chlorinated Polyethylene (CPE-TP)

APPLICATIONS AND FEATURES:

Southwire's 600/1000 Volt Type TC-ER control 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. Constructions with 2 conductors are rated TC. VW-1 rated for sizes 14 - 10 AWG. Sunlight Resistant. For Direct Burial. Silicone Free.

SPECIFICATIONS:

- 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 1 Table 2
- ICEA S-73-532 Standard for Control, Thermocouple Extension and Instrumentation Cables
- 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 (X.XX{MM2}) X/C EPR/CPE TYPE TC-ER XHHW-2 CDRS E75755 {UL} 600V/1000V 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/1000V 90°C USA





Table 1 – Physical and Electrical Data

Stock Number	Cond. Size	Cond. Number	Cond. Strands	Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance	Min Bending Radius	Allowable Ampacity 75°C	Allowable Ampacity 90°C	Jacket Color
	AWG	No.	strands	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	
16 AWG															
591931	16	2	7	30	45	0.332	16	52	4.181	5.037	0.033	1.3	-	18	Black
591932	16	3	7	30	45	0.351	24	66	4.181	5.037	0.033	1.4	-	18	Black
591933	16	4	7	30	45	0.382	32	82	4.181	5.037	0.033	1.5	-	14	Black
591934	16	5	7	30	45	0.415	40	100	4.181	5.037	0.033	1.7	-	14	Black
591935	16	7	7	30	45	0.451	56	128	4.181	5.037	0.033	1.8	-	12	Black
591936	16	9	7	30	45	0.555	72	178	4.181	5.037	0.033	2.2	-	12	Black
591937	16	12	7	30	60	0.618	96	225	4.181	5.037	0.033	2.5	-	9	Black
591938	16	15	7	30	60	0.684	120	273	4.181	5.037	0.033	2.7	-	9	Black
14 AWG															
591944	14	2	7	30	45	0.366	25	65	2.631	3.170	0.058	1.5	20	25	Black
591947	14	3	7	30	45	0.388	37	86	2.631	3.170	0.058	1.6	20	25	Black
591948	14	4	7	30	45	0.423	50	107	2.631	3.170	0.058	1.7	16	20	Black
591949	14	5	7	30	45	0.461	62	129	2.631	3.170	0.058	1.8	16	20	Black
591950	14	7	7	30	45	0.502	87	170	2.631	3.170	0.058	2.0	14	17	Black
591951	14	9	7	30	60	0.616	112	232	2.631	3.170	0.058	2.5	14	17	Black
591952	14	12	7	30	60	0.692	150	299	2.631	3.170	0.058	2.8	10	12	Black
591953	14	15	7	30	60	0.743	187	365	2.631	3.170	0.058	2.2	10	12	Black
591954	14	19	7	30	60	0.805	237	447	2.631	3.170	0.058	2.2	10	12	Black
591955	14	25	7	30	80	0.949	332	611	2.631	3.170	0.058	3.8	9	11	Black
TBA	14	30	7	30	80	0.995	396	688	2.631	3.170	0.058	4.0	9	11	Black
12 AWG															
591959	12	2	7	30	45	0.404	40	86	1.662	2.002	0.054	1.6	25	30	Black
591960	12	3	7	30	45	0.466	61	116	1.662	2.002	0.054	1.9	25	30	Black
591962	12	4	7	30	45	0.469	81	147	1.662	2.002	0.054	1.9	20	24	Black
591963	12	5	7	30	45	0.543	101	198	1.662	2.002	0.054	2.2	20	24	Black
591964	12	7	7	30	60	0.589	142	253	1.662	2.002	0.054	2.4	17	21	Black
591965	12	9	7	30	60	0.589	183	307	1.662	2.002	0.054	2.4	17	21	Black
591966	12	12	7	30	60	0.767	244	411	1.662	2.002	0.054	3.1	12	15	Black
591967	12	15	7	30	60	0.864	305	542	1.662	2.002	0.054	3.5	12	15	Black
591968	12	19	7	30	80	0.934	386	659	1.662	2.002	0.054	3.7	12	15	Black
10 AWG															
591973	10	2	7	30	45	0.448	64	116	1.040	1.253	0.050	1.8	35	40	Black
591974	10	3	7	30	45	0.476	97	160	1.040	1.253	0.050	1.9	35	40	Black
591976	10	4	7	30	45	0.560	129	225	1.040	1.253	0.050	2.2	28	32	Black
591977	10	5	7	30	60	0.602	161	267	1.040	1.253	0.050	2.4	28	32	Black
591978	10	7	7	30	60	0.655	226	355	1.040	1.253	0.050	2.6	24	28	Black
591979	10	9	7	30	60	0.765	291	450	1.040	1.253	0.050	3.1	24	28	Black
591980	10	12	7	30	80	0.899	388	619	1.040	1.253	0.050	3.6	17	20	Black

All dimensions are nominal and subject to normal manufacturing tolerances





◇ Cable marked with this symbol is a standard stock item

* 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.

* Ampacities have been adjusted for more than Three Current-Carrying Conductors.

TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

