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 Control, Thermocouple Extension, and Instrumentation Cables (applicable to sizes 20-9 AWG conductors)
- 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

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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

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Table 1 – Physical and Electrical Data

Stock Number	Cond. Size	Cond. Number	Cond. Strands	Diameter Over Cond.	Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Rectance	Min Bending Radius	Allowable Ampacity 75°C	Allowable Ampacity 90°C	Jacket Color
	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	
16 AWG																
591931	16	2	7	0.057	30	45	0.332	16	52	4.181	5.189	0.033	1.3	-	18	BK
591932	16	3	7	0.057	30	45	0.351	24	67	4.181	5.189	0.033	1.4	-	18	BK
591933	16	4	7	0.057	30	45	0.382	32	83	4.181	5.189	0.033	1.5	-	14	BK
591934	16	5	7	0.057	30	45	0.415	40	100	4.181	5.189	0.033	1.7	-	14	BK
591935	16	7	7	0.057	30	60	0.451	56	129	4.181	5.189	0.033	1.8	-	13	BK
591936	16	9	7	0.057	30	60	0.555	72	178	4.181	5.189	0.033	2.2	-	13	BK
591937	16	12	7	0.057	30	60	0.618	96	225	4.181	5.189	0.033	2.5	-	9	BK
591938	16	15	7	0.057	30	60	0.684	121	273	4.181	5.189	0.033	2.7	-	9	BK
14 AWG																
591944	14	2	7	0.071	30	45	0.366	25	66	2.631	3.265	0.058	1.5	20	25	BK
591947	14	3	7	0.071	30	45	0.388	38	86	2.631	3.265	0.058	1.6	20	25	BK
591948◊	14	4	7	0.071	30	45	0.423	50	108	2.631	3.265	0.058	1.7	16	20	BK
591949◊	14	5	7	0.071	30	45	0.461	63	130	2.631	3.265	0.058	1.8	16	20	BK
591950◊	14	7	7	0.071	30	45	0.502	88	173	2.631	3.265	0.058	2	14	18	BK
591951◊	14	9	7	0.071	30	60	0.616	113	233	2.631	3.265	0.058	2.5	14	18	BK
591952◊	14	12	7	0.071	30	60	0.692	150	299	2.631	3.265	0.058	2.8	10	12	BK
591953	14	15	7	0.071	30	60	0.743	188	365	2.631	3.265	0.058	3	10	12	BK
591954	14	19	7	0.071	30	60	0.805	238	447	2.631	3.265	0.058	3.2	10	12	BK
591955	14	25	7	0.071	30	80	0.949	313	611	2.631	3.265	0.058	3.8	9	11	BK
TBA	14	30	7	0.071	30	80	1.006	406	698	2.631	3.265	0.058	5	9	11	BK
12 AWG																
591959	12	2	7	0.089	30	45	0.404	41	88	1.662	2.063	0.054	1.6	25	30	BK
591960◊	12	3	7	0.089	30	45	0.466	61	117	1.662	2.063	0.054	1.9	25	30	BK
591966◊	12	12	7	0.089	30	60	0.466	244	412	1.662	2.063	0.054	1.9	12	15	BK
591962◊	12	4	7	0.089	30	45	0.469	81	147	1.662	2.063	0.054	1.9	20	24	BK
591963	12	5	7	0.089	30	60	0.543	102	197	1.662	2.063	0.054	2.2	20	24	BK
591964◊	12	7	7	0.089	30	60	0.589	143	254	1.662	2.063	0.054	2.4	18	21	BK
591965◊	12	9	7	0.089	30	60	0.589	183	312	1.662	2.063	0.054	2.4	18	21	BK
591967	12	15	7	0.089	30	80	0.864	305	543	1.662	2.063	0.054	3.5	12	15	BK
591968	12	19	7	0.089	30	80	0.934	387	660	1.662	2.063	0.054	3.7	12	15	BK
10 AWG																
591973◊	10	2	7	0.113	30	45	0.448	65	117	1.04	1.291	0.05	1.8	35	40	BK
591974◊	10	3	7	0.113	30	45	0.476	97	161	1.04	1.291	0.05	1.9	35	40	BK
591976◊	10	4	7	0.113	30	65	0.56	129	225	1.04	1.291	0.05	2.2	28	32	BK
591977◊	10	5	7	0.113	30	60	0.602	162	268	1.04	1.291	0.05	2.4	28	32	BK
591978	10	7	7	0.113	30	60	0.655	227	356	1.04	1.291	0.05	2.6	24	28	BK
591979	10	9	7	0.113	30	60	0.765	291	461	1.04	1.291	0.05	3.1	24	28	BK
591980	10	12	7	0.113	30	80	0.899	388	631	1.04	1.291	0.05	3.6	18	20	BK

All dimensions are nominal and subject to normal manufacturing tolerances

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◊ 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.

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