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 1, CT Rated, Sunlight Resistant, Oil Resistant, For Direct Burial, VW-1 Rated, 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. **Overall Jacket:** Thermoplastic Chlorinated Polyethylene (CPE-TP)

APPLICATIONS AND FEATURES:

Southwire's 600/100 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. Sunlight Resistant. Oil 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 1 Table 1
- 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	
14 AWG																
TBA	14	2	7	0.071	30	45	0.358	39	75	2.631	3.265	0.058	1.4	20	25	BK
599457	14	3	7	0.071	30	45	0.388	38	86	2.631	3.265	0.058	1.6	20	25	BK
599458	14	4	7	0.071	30	45	0.423	50	108	2.631	3.265	0.058	1.7	16	20	BK
599459	14	5	7	0.071	30	45	0.461	63	130	2.631	3.265	0.058	1.8	16	20	BK
595479	14	7	7	0.071	30	45	0.502	88	171	2.631	3.265	0.058	2	14	18	BK
599460	14	9	7	0.071	30	60	0.616	113	233	2.631	3.265	0.058	2.5	14	18	BK
599461	14	12	7	0.071	30	60	0.692	150	299	2.631	3.265	0.058	2.8	10	12	BK
TBA	14	15	7	0.071	30	60	0.743	209	362	2.631	3.265	0.058	3	10	12	BK
595475	14	19	7	0.071	30	80	0.804	238	434	2.631	3.265	0.058	3.2	10	12	BK
TBA	14	25	7	0.071	30	80	0.952	341	598	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
TBA	14	37	7	0.071	30	80	1.083	498	839	2.631	3.265	0.058	5.4	8	10	BK
12 AWG																
595635	12	2	7	0.089	30	45	0.466	41	85	1.662	2.063	0.054	1.9	25	30	BK
595472	12	3	7	0.089	30	45	0.466	61	115	1.662	2.063	0.054	1.9	25	30	BK
595636	12	4	7	0.089	30	45	0.466	81	148	1.662	2.063	0.054	1.9	20	24	BK
595477	12	12	7	0.089	30	60	0.466	244	410	1.662	2.063	0.054	1.9	12	15	BK
592111	12	5	7	0.089	30	60	0.543	102	197	1.662	2.063	0.054	2.2	20	24	BK
TBA	12	7	7	0.089	30	60	0.573	161	259	1.662	2.063	0.054	2.3	18	21	BK
596919	12	9	7	0.089	30	60	0.589	183	330	1.662	2.063	0.054	2.4	18	21	BK
TBA	12	15	7	0.089	30	80	0.868	323	529	1.662	2.063	0.054	3.5	12	15	BK
TBA	12	19	7	0.089	30	80	0.911	403	640	1.662	2.063	0.054	3.6	12	15	BK
TBA	12	25	7	0.089	30	80	1.06	525	821	1.662	2.063	0.054	5.3	11	14	BK
TBA	12	30	7	0.089	30	80	1.121	626	963	1.662	2.063	0.054	5.6	11	14	BK
TBA	12	37	7	0.089	30	80	1.209	767	1161	1.662	2.063	0.054	6	10	12	BK
10 AWG																
595632	10	2	7	0.113	30	45	0.466	65	117	1.04	1.291	0.05	1.9	35	40	BK
645726	10	12	7	0.113	30	80	0.466	388	617	1.04	1.291	0.05	1.9	18	20	BK
595556	10	3	7	0.113	30	45	0.478	97	162	1.04	1.291	0.05	1.9	35	40	BK
595633	10	4	7	0.113	30	60	0.556	129	221	1.04	1.291	0.05	2.2	28	32	BK
TBA	10	5	7	0.113	30	60	0.593	193	287	1.04	1.291	0.05	2.4	28	32	BK
TBA	10	7	7	0.113	30	60	0.645	258	373	1.04	1.291	0.05	2.6	24	28	BK
TBA	10	9	7	0.113	30	60	0.751	322	463	1.04	1.291	0.05	3	24	28	BK
TBA	10	15	7	0.113	30	80	0.981	516	757	1.04	1.291	0.05	3.9	18	20	BK
TBA	10	19	7	0.113	30	80	1.031	646	924	1.04	1.291	0.05	5.2	18	20	BK
TBA	10	25	7	0.113	30	80	1.204	840	1189	1.04	1.291	0.05	6	16	18	BK
TBA	10	30	7	0.113	30	80	1.275	1001	1398	1.04	1.291	0.05	6.4	16	18	BK
TBA	10	37	7	0.113	30	80	1.377	1227	1691	1.04	1.291	0.05	6.9	14	16	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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