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

Type TC-ER Control Cable 600Volt Copper Cross Linked Polyethylene (XLPE) Insulation XHHW-2 Thermoplastic Chlorinated Polyethylene (CPE-TP) Jacket, Control Cable Conductor Identification Method 1 Table 2. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 7 strands class B compressed copper per ASTM B3 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) XHHW-2, 30 Mils thick for all cable sizes
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) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 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. Sunlight Resistant - For Direct Burial - Silicone Free

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- 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

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® {UL} XX AWG XX/C TYPE TC-ER XHHW-2 CDRS 90°C CPE JACKET SUN RES OIL RES II FT4/ IEEE1202 600 VOLTS

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UPDATED: Dec. 31, 2024, 11:07 p.m.UTC REVISION: 1.000.006

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																
890674	14	2	7	0.071	30	45	0.356	26	67	2.631	3.265	0.058	1.4	20	25	BK
890675	14	3	7	0.071	30	45	0.376	38	92	2.631	3.265	0.058	1.5	20	25	BK
890676	14	4	7	0.071	30	45	0.41	51	111	2.631	3.265	0.058	1.6	16	20	BK
890677	14	5	7	0.071	30	45	0.458	64	133	2.631	3.265	0.058	1.8	16	20	BK
890678	14	7	7	0.071	30	60	0.486	90	172	2.631	3.265	0.058	1.9	14	18	BK
890679	14	9	7	0.071	30	60	0.592	115	232	2.631	3.265	0.058	2.4	14	18	BK
550407	14	12	7	0.071	30	60	0.67	154	299	2.631	3.265	0.058	2.7	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
TBA	14	19	7	0.071	30	60	0.781	262	440	2.631	3.265	0.058	3.1	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																
550411	12	2	7	0.089	30	45	0.388	41	90	1.662	2.063	0.054	1.6	25	30	BK
890681	12	3	7	0.089	30	45	0.412	61	121	1.662	2.063	0.054	1.6	25	30	BK
890682	12	4	7	0.089	30	60	0.449	81	154	1.662	2.063	0.054	1.8	20	24	BK
890683	12	5	7	0.089	30	60	0.491	102	179	1.662	2.063	0.054	2	20	24	BK
890684	12	12	7	0.089	30	80	0.738	244	408	1.662	2.063	0.054	3	12	15	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																
550419	10	2	7	0.113	30	60	0.432	65	120	1.04	1.291	0.05	1.7	35	40	BK
890685	10	3	7	0.113	30	45	0.476	97	170	1.04	1.291	0.05	1.9	35	40	BK
890686	10	4	7	0.113	30	60	0.547	129	229	1.04	1.291	0.05	2.2	28	32	BK
550420	10	5	7	0.113	30	60	0.604	162	276	1.04	1.291	0.05	2.4	28	32	BK
550421	10	7	7	0.113	30	60	0.657	227	365	1.04	1.291	0.05	2.6	24	28	BK
890688	10	12	7	0.113	30	80	0.871	387	614	1.04	1.291	0.05	3.5	18	20	BK

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.

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