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

Type TC-ER Control Cable 600Volt Copper Conductors, Cross Linked Polyethylene (XLPE) Insulation XHHW-2 Thermoplastic SOLONON® Low Smoke Zero Halogen (LSZH-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 bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2 for cables 14 AWG or larger, 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 SOLONON® Low Smoke Zero Halogen (LSZH-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. 16 AWG wire is made in accordance with UL 66 Fixture Wire. 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 66 Fixture Wire
- 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

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SAMPLE PRINT LEGEND:

For 16 AWG:
SOUTHWIRE {UL} AWG XX 7 CDRS TYPE TC-ER XLPE CDRS SOLONON 90C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600 VOLTS YEAR {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

For 14 AWG and larger:
SOUTHWIRE {UL} AWG XX 7 CDRS TYPE TC-ER XHHW-2 CDRS SOLONON 90C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600 VOLTS YEAR {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

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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 Rectance	Min Bending Radius	Allowable Ampacity 75°C	Allowable Ampacity 90°C
	AWG	No.	strands	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp
14 AWG														
561312	14	2	7	30	45	0.349	25	67	2.631	3.170	0.058	1.4	20	25
890159	14	3	7	30	45	0.373	38	93	2.631	3.170	0.058	1.5	20	25
561313	14	4	7	30	45	0.402	51	111	2.631	3.170	0.058	1.6	16	20
563383	14	5	7	30	45	0.443	64	135	2.631	3.170	0.058	1.8	16	20
561314	14	7	7	30	45	0.478	89	171	2.631	3.170	0.058	1.9	14	17
TBA	14	6	7	30	45	0.482	89	157	2.631	3.170	0.058	1.9	16	20
TBA	14	8	7	30	60	0.552	115	212	2.631	3.170	0.058	2.2	14	17
561315	14	9	7	30	60	0.587	115	233	2.631	3.170	0.058	2.3	14	17
597524	14	10	7	30	60	0.649	127	262	2.631	3.170	0.058	2.6	10	12
563194	14	19	7	30	60	0.774	242	440	2.631	3.170	0.058	3.1	10	12
TBA	14	20	7	30	60	0.812	268	455	2.631	3.170	0.058	3.2	10	12
TBA	14	25	7	30	80	0.942	332	591	2.631	3.170	0.058	3.8	9	11
TBA	14	30	7	30	80	0.995	396	688	2.631	3.170	0.058	4.0	9	11
574617	14	19	7	30	60	1.075	719	1209	2.631	3.170	0.058	5.4	10	12
12 AWG														
574615	12	2	7	30	45	0.384	40	89	1.662	2.002	0.054	1.5	25	30
890122	12	3	7	30	45	0.412	61	121	1.662	2.002	0.054	1.6	25	30
561319	12	4	7	30	45	0.445	81	152	1.662	2.002	0.054	1.8	20	24
574612	12	5	7	30	45	0.487	101	180	1.662	2.002	0.054	1.9	20	24
TBA	12	6	7	30	60	0.566	142	237	1.662	2.002	0.054	2.3	20	24
574613	12	7	7	30	60	0.567	142	257	1.662	2.002	0.054	2.3	17	21
TBA	12	8	7	30	60	0.612	182	294	1.662	2.002	0.054	2.4	17	21
TBA	12	9	7	30	60	0.656	203	326	1.662	2.002	0.054	2.6	17	21
TBA	12	10	7	30	60	0.714	223	359	1.662	2.002	0.054	2.9	12	15
574614	12	12	7	30	60	0.732	244	411	1.662	2.002	0.054	2.9	12	15
TBA	12	15	7	30	60	0.819	325	502	1.662	2.002	0.054	3.3	12	15
TBA	12	20	7	30	80	0.948	426	679	1.662	2.002	0.054	3.8	12	15
TBA	12	25	7	30	80	1.050	528	826	1.662	2.002	0.054	5.3	11	13
TBA	12	30	7	30	80	1.111	630	967	1.662	2.002	0.054	5.6	11	13
TBA	12	37	7	30	80	1.198	772	1163	1.662	2.002	0.054	6.0	10	12
10 AWG														
577144	10	3	7	30	45	0.472	97	169	1.040	1.253	0.050	1.9	35	40
566720	10	4	7	30	45	0.547	129	235	1.040	1.253	0.050	2.2	28	32
TBA	10	5	7	30	60	0.589	193	291	1.040	1.253	0.050	2.4	28	32
TBA	10	6	7	30	60	0.641	226	337	1.040	1.253	0.050	2.6	28	32
TBA	10	7	7	30	60	0.641	258	376	1.040	1.253	0.050	2.6	24	28
TBA	10	8	7	30	60	0.695	290	421	1.040	1.253	0.050	2.8	24	28
TBA	10	10	7	30	60	0.814	355	514	1.040	1.253	0.050	3.3	17	20
574619	10	12	7	30	80	0.904	388	640	1.040	1.253	0.050	3.6	17	20

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	AWG	No.	strands	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp
TBA	10	15	7	30	80	0.977	517	764	1.040	1.253	0.050	3.9	17	20
TBA	10	19	7	30	80	1.027	646	929	1.040	1.253	0.050	5.1	17	20
TBA	10	20	7	30	80	1.081	678	976	1.040	1.253	0.050	5.4	17	20
TBA	10	25	7	30	80	1.200	840	1193	1.040	1.253	0.050	6.0	15	18
TBA	10	30	7	30	80	1.271	1002	1401	1.040	1.253	0.050	6.4	15	18
TBA	10	37	7	30	80	1.373	1228	1693	1.040	1.253	0.050	6.9	14	16

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.