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 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:

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

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	Jacket Color
	AWG	No.	strands	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	
16 AWG															
TBA!	16	7	7	25	45	0.416	56	112	4.181	5.282	0.036	1.6	-	12	Black
14 AWG															
561312	14	2	7	30	45	0.349	25	67	2.631	3.170	0.058	1.4	20	25	Black
890159	14	3	7	30	45	0.373	38	93	2.631	3.170	0.058	1.5	20	25	Black
561313	14	4	7	30	45	0.402	51	111	2.631	3.170	0.058	1.6	16	20	Black
563383	14	5	7	30	45	0.443	64	135	2.631	3.170	0.058	1.8	16	20	Black
TBA	14	7	7	30	45	0.478	89	171	2.631	3.170	0.058	1.9	14	17	Black
TBA	14	6	7	30	45	0.482	89	157	2.631	3.170	0.058	1.9	16	20	Black
TBA	14	8	7	30	60	0.552	115	212	2.631	3.170	0.058	2.2	14	17	Black
561315	14	9	7	30	60	0.587	115	233	2.631	3.170	0.058	2.3	14	17	Black
597524	14	10	7	30	60	0.649	127	262	2.631	3.170	0.058	2.6	10	12	Black
563194	14	19	7	30	60	0.774	242	440	2.631	3.170	0.058	3.1	10	12	Black
TBA	14	20	7	30	60	0.812	268	455	2.631	3.170	0.058	3.2	10	12	Black
TBA	14	25	7	30	80	0.942	332	591	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															
574615	12	2	7	30	45	0.384	40	89	1.662	2.002	0.054	1.5	25	30	Black
890122	12	3	7	30	45	0.412	61	121	1.662	2.002	0.054	1.6	25	30	Black
561319	12	4	7	30	45	0.445	81	152	1.662	2.002	0.054	1.8	20	24	Black
574612	12	5	7	30	45	0.487	101	180	1.662	2.002	0.054	1.9	20	24	Black
TBA	12	6	7	30	60	0.566	142	237	1.662	2.002	0.054	2.3	20	24	Black
574613	12	7	7	30	60	0.567	142	257	1.662	2.002	0.054	2.3	17	21	Black
TBA	12	8	7	30	60	0.612	182	294	1.662	2.002	0.054	2.4	17	21	Black
TBA	12	9	7	30	60	0.656	203	326	1.662	2.002	0.054	2.6	17	21	Black
TBA	12	10	7	30	60	0.714	223	359	1.662	2.002	0.054	2.9	12	15	Black
574614	12	12	7	30	60	0.732	244	411	1.662	2.002	0.054	2.9	12	15	Black
TBA	12	15	7	30	60	0.819	325	502	1.662	2.002	0.054	3.3	12	15	Black
TBA	12	20	7	30	80	0.948	426	679	1.662	2.002	0.054	3.8	12	15	Black
TBA	12	25	7	30	80	1.050	528	826	1.662	2.002	0.054	5.3	11	13	Black
TBA	12	30	7	30	80	1.111	630	967	1.662	2.002	0.054	5.6	11	13	Black
TBA	12	37	7	30	80	1.198	772	1163	1.662	2.002	0.054	6.0	10	12	Black
10 AWG															
566719	10	2	7	30	45	0.444	65	123	1.040	1.253	0.050	1.9	35	40	Black
577144	10	3	7	30	45	0.472	97	169	1.040	1.253	0.050	1.9	35	40	Black
566720	10	4	7	30	45	0.547	129	235	1.040	1.253	0.050	2.2	28	32	Black
TBA	10	5	7	30	60	0.589	193	291	1.040	1.253	0.050	2.4	28	32	Black
TBA	10	6	7	30	60	0.641	226	337	1.040	1.253	0.050	2.6	28	32	Black
TBA	10	7	7	30	60	0.641	258	376	1.040	1.253	0.050	2.6	24	28	Black
TBA	10	8	7	30	60	0.695	290	421	1.040	1.253	0.050	2.8	24	28	Black

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	Jacket Color
	AWG	No.	strands	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	
TBA	10	10	7	30	60	0.814	355	514	1.040	1.253	0.050	3.3	17	20	Black
574619	10	12	7	30	80	0.904	388	640	1.040	1.253	0.050	3.6	17	20	Black
TBA	10	15	7	30	80	0.977	517	764	1.040	1.253	0.050	3.9	17	20	Black
TBA	10	19	7	30	80	1.027	646	929	1.040	1.253	0.050	5.1	17	20	Black
TBA	10	20	7	30	80	1.081	678	976	1.040	1.253	0.050	5.4	17	20	Black
TBA	10	25	7	30	80	1.200	840	1193	1.040	1.253	0.050	6.0	15	18	Black
TBA	10	30	7	30	80	1.271	1002	1401	1.040	1.253	0.050	6.4	15	18	Black
TBA	10	37	7	30	80	1.373	1228	1693	1.040	1.253	0.050	6.9	14	16	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.

! not UL listed

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.