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

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UPDATED: Dec. 31, 2024, 11:07 p.m.UTC REVISION: 1.000.008

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	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																
TBA	16	7	7	0.057	30	45	0.447	64	128	4.181	5.189	0.033	1.8	-	13	BK
14 AWG																
561312	14	2	7	0.071	30	45	0.349	26	67	2.631	3.265	0.058	1.4	20	25	BK
890159	14	3	7	0.071	30	45	0.374	38	93	2.631	3.265	0.058	1.5	20	25	BK
561313	14	4	7	0.071	30	45	0.403	51	111	2.631	3.265	0.058	1.6	16	20	BK
563383	14	5	7	0.071	30	60	0.444	64	135	2.631	3.265	0.058	1.8	16	20	BK
TBA	14	6	7	0.071	30	45	0.489	91	158	2.631	3.265	0.058	2	16	20	BK
TBA	14	7	7	0.071	30	45	0.489	104	177	2.631	3.265	0.058	2	14	18	BK
TBA	14	8	7	0.071	30	60	0.56	118	214	2.631	3.265	0.058	2.2	14	18	BK
561315	14	9	7	0.071	30	60	0.588	115	233	2.631	3.265	0.058	2.4	14	18	BK
597524	14	10	7	0.071	30	60	0.666	128	269	2.631	3.265	0.058	2.7	10	12	BK
563194	14	19	7	0.071	30	60	0.774	243	441	2.631	3.265	0.058	3.1	10	12	BK
TBA	14	20	7	0.071	30	60	0.822	275	463	2.631	3.265	0.058	3.3	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
12 AWG																
574615	12	2	7	0.089	30	45	0.396	41	92	1.662	2.063	0.054	1.6	25	30	BK
890122	12	3	7	0.089	30	45	0.412	61	122	1.662	2.063	0.054	1.6	25	30	BK
561319	12	4	7	0.089	30	60	0.445	81	153	1.662	2.063	0.054	1.8	20	24	BK
574612	12	5	7	0.089	30	60	0.487	102	180	1.662	2.063	0.054	1.9	20	24	BK
TBA	12	6	7	0.089	30	60	0.573	141	233	1.662	2.063	0.054	2.3	20	24	BK
574613	12	7	7	0.089	30	60	0.585	143	265	1.662	2.063	0.054	2.3	18	21	BK
TBA	12	8	7	0.089	30	60	0.619	181	291	1.662	2.063	0.054	2.5	18	21	BK
TBA	12	9	7	0.089	30	60	0.664	201	322	1.662	2.063	0.054	2.7	18	21	BK
TBA	12	10	7	0.089	30	60	0.722	222	355	1.662	2.063	0.054	2.9	12	15	BK
574614	12	12	7	0.089	30	60	0.756	244	422	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	20	7	0.089	30	80	0.957	424	675	1.662	2.063	0.054	3.8	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																
566719	10	2	7	0.113	30	45	0.444	65	124	1.04	1.291	0.05	1.8	35	40	BK
577144	10	3	7	0.113	30	45	0.472	97	170	1.04	1.291	0.05	1.9	35	40	BK
566720	10	4	7	0.113	30	60	0.547	129	235	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	6	7	0.113	30	60	0.645	225	333	1.04	1.291	0.05	2.6	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	8	7	0.113	30	60	0.699	290	419	1.04	1.291	0.05	2.8	24	28	BK

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	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	
TBA	10	10	7	0.113	30	60	0.818	355	511	1.04	1.291	0.05	3.3	18	20	BK
574619	10	12	7	0.113	30	80	0.904	388	641	1.04	1.291	0.05	3.6	18	20	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	20	7	0.113	30	80	1.085	678	972	1.04	1.291	0.05	5.4	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

◊ 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.

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