

CU 600V XLPE Insulation PVC Jacket. XHHW-2

Type TC-ER Control Cable 600 or 1000 Volt Copper Conductors, Cross Linked Polyethylene (XLPE) Insulation XHHW-2 Polyvinyl Chloride (PVC) Jacket, Control Cable Conductor Identification Method 1 Table 2. Silicone free. VW-1 Rated



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** 7 strands class B compressed bare copper per ASTM B3 and ASTM B8
- Insulation:** Cross Linked Polyethylene (XLPE) XHHW-2, 30 Mils thick for all cable sizes. VW-1 Rated
- Filler:** Polypropylene filler on cables with 5 or less conductors
- Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
- Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 or 1000 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. The jacket acts as gas/vapor-tight polymeric sheath that is extruded over the core per Sections 501.15(D) and 501.15(E) of the NEC, however when these cables are used in a hazardous location, they may need to be sealed further as described in more detail in the NEC. 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. VW-1 Rated.

SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- 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 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

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE{R} (UL) XX AWG (X.XXmm²) CU 3/C TYPE TC-ER XHHW-2 CDRS 90(D)C JACKET SUNLIGHT RESISTANT DIRECT BURIAL FT4/IEEE1202 600V or 1000V NOM-ANCE XHHW-2 CT SR 600V 90(D)C



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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 @ 90°C	Min Bending Radius	Allowable Ampacity At 60°C *	Allowable Ampacity 75°C *	Allowable Ampacity 90°C *
	AWG	No.	strands	inch	mil	mil	inch	lb /1000ft	lb /1000ft	Ω /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
14 AWG															
952459	14	2	7	0.070	30	45	0.355	25	66	2.631	3.170	1.4	15	20	25
952465	14	3	7	0.070	30	45	0.376	38	90	2.631	3.170	1.5	15	20	25
952473	14	4	7	0.070	30	45	0.409	51	109	2.631	3.170	1.6	12	16	20
952481	14	5	7	0.070	30	45	0.447	64	129	2.631	3.170	1.7	12	16	20
952440	14	7	7	0.070	30	45	0.482	89	168	2.631	3.170	1.9	10	14	17
952499	14	6	7	0.070	30	45	0.486	76	151	2.631	3.170	1.9	12	16	20
952507	14	8	7	0.070	30	60	0.559	102	208	2.631	3.170	2.2	10	14	17
952572	14	9	7	0.070	30	60	0.598	114	231	2.631	3.170	2.3	10	14	17
952598	14	12	7	0.070	30	60	0.670	153	295	2.631	3.170	2.6	7	10	12
952606	14	15	7	0.070	30	60	0.742	191	358	2.631	3.170	2.9	7	10	12
952614	14	19	7	0.070	30	60	0.780	242	439	2.631	3.170	3.1	7	10	12
952622	14	20	7	0.070	30	60	0.820	255	462	2.631	3.170	3.2	7	10	12
952630	14	25	7	0.070	30	80	0.952	319	602	2.631	3.170	3.8	6	9	11
952648	14	30	7	0.070	30	80	1.006	386	707	2.631	3.170	5.0	6	9	11
952655	14	37	7	0.070	30	80	1.083	474	849	2.631	3.170	5.4	6	8	10
12 AWG															
953042	12	2	7	0.088	30	45	0.388	40	88	1.662	2.002	1.5	20	25	30
953059	12	3	7	0.088	30	45	0.408	61	117	1.662	2.002	1.6	20	25	30
953067	12	4	7	0.088	30	45	0.449	81	152	1.662	2.002	1.7	16	20	24
953075	12	5	7	0.088	30	45	0.487	101	174	1.662	2.002	1.9	16	20	24
953091	12	7	7	0.088	30	60	0.561	142	248	1.662	2.002	2.2	14	17	21
953109	12	8	7	0.088	30	60	0.607	162	279	1.662	2.002	2.4	14	17	21
953117	12	9	7	0.088	30	60	0.657	182	315	1.662	2.002	2.6	14	17	21
953125	12	10	7	0.088	30	60	0.714	202	349	1.662	2.002	2.8	10	12	15
953133	12	12	7	0.088	30	60	0.738	243	404	1.662	2.002	2.9	10	12	15
953141	12	15	7	0.088	30	60	0.819	303	496	1.662	2.002	3.2	10	12	15
953158	12	19	7	0.088	30	80	0.904	385	647	1.662	2.002	3.6	10	12	15
953174	12	25	7	0.088	30	80	1.051	511	835	1.662	2.002	5.2	9	11	13
TBA	12	37	7	0.088	30	80	1.198	753	1181	1.662	2.002	5.9	8	10	12
10 AWG															
952861	10	2	7	0.113	30	45	0.436	64	119	1.040	1.253	1.7	30	35	40
952879	10	3	7	0.113	30	45	0.459	97	163	1.040	1.253	1.8	30	35	40
952895	10	4	7	0.113	30	45	0.502	129	210	1.040	1.253	2.0	24	28	32
952887	10	5	7	0.113	30	60	0.587	161	267	1.040	1.253	2.3	24	28	32
952911	10	7	7	0.113	30	60	0.639	226	354	1.040	1.253	2.5	21	24	28
TBA	10	7	7	0.113	30	60	0.651	258	377	1.040	1.253	2.6	21	24	28
952929	10	8	7	0.113	30	60	0.692	257	399	1.040	1.253	2.7	21	24	28
952937	10	9	7	0.113	30	60	0.743	289	446	1.040	1.253	2.9	21	24	28
952952	10	12	7	0.113	30	80	0.879	386	613	1.040	1.253	3.5	15	17	20



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	AWG	No.	strands	inch	mil	mil	inch	lb /1000ft	lb /1000ft	Ω /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
952960	10	15	7	0.113	30	80	0.973	483	748	1.040	1.253	3.8	15	17	20
952978	10	19	7	0.113	30	80	1.015	612	909	1.040	1.253	5.0	15	17	20

All dimensions are nominal and subject to normal manufacturing tolerances

∅ Cable marked with this symbol is a standard stock item

† Ampacities are based on Table 310.16 of the NEC, 2020 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F). Ampacities have been adjusted to article 240.4 (D) and Table 310.15 (B)(3) for more than 3 current carrying conductors

