CU 600/1000V XLPE Insulation PVC Jacket XHHW-2. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

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, CT Rated, Sunlight Resistant, For Direct Burial, VW-1 Rated, Silicone Free



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 7-strand class B compressed bare copper per ASTM B3 and B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2 VW-1 Rated
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:** Polyvinyl Chloride (PVC)

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 - 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 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 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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SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® {UL} XX AWG (X.XX{MM2}) CU X/C TYPE TC-ER XHHW-2 CDRS 90°C JACKET SUNLIGHT RESISTANT DIRECT BURIAL FT4/IEEE1202 600V or 1000V {NOM}-ANCE XHHW-2 CT SR 600V 90°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 @ 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																
952459◊	14	2	7	0.071	30	45	0.364	26	68	2.631	3.265	0.058	1.5	20	25	BK
952465◊	14	3	7	0.071	30	45	0.386	38	93	2.631	3.265	0.058	1.5	20	25	BK
952473◊	14	4	7	0.071	30	45	0.42	51	113	2.631	3.265	0.058	1.7	16	20	BK
952481◊	14	5	7	0.071	30	45	0.458	64	133	2.631	3.265	0.058	1.8	16	20	BK
952440◊	14	7	7	0.071	30	45	0.495	90	173	2.631	3.265	0.058	2	14	18	BK
952499	14	6	7	0.071	30	45	0.499	77	156	2.631	3.265	0.058	2	16	20	BK
952507	14	8	7	0.071	30	60	0.573	102	213	2.631	3.265	0.058	2.3	14	18	BK
952572◊	14	9	7	0.071	30	60	0.613	115	237	2.631	3.265	0.058	2.5	14	18	BK
952598◊	14	12	7	0.071	30	60	0.688	153	303	2.631	3.265	0.058	2.8	10	12	BK
952606◊	14	15	7	0.071	30	60	0.762	191	368	2.631	3.265	0.058	3	10	12	BK
952614◊	14	19	7	0.071	30	60	0.801	243	451	2.631	3.265	0.058	3.2	10	12	BK
952622	14	20	7	0.071	30	60	0.877	255	502	2.631	3.265	0.058	3.5	10	12	BK
952630◊	14	25	7	0.071	30	80	0.978	319	618	2.631	3.265	0.058	3.9	9	11	BK
952648	14	30	7	0.071	30	80	1.033	386	726	2.631	3.265	0.058	5.2	9	11	BK
952655◊	14	37	7	0.071	30	80	1.113	475	862	2.631	3.265	0.058	5.6	8	10	BK
12 AWG																
953042◊	12	2	7	0.089	30	45	0.4	41	91	1.662	2.063	0.054	1.6	25	30	BK
953059◊	12	3	7	0.089	30	45	0.42	61	121	1.662	2.063	0.054	1.7	25	30	BK
953067◊	12	4	7	0.089	30	45	0.463	81	156	1.662	2.063	0.054	1.9	20	24	BK
953075◊	12	5	7	0.089	30	45	0.503	102	179	1.662	2.063	0.054	2	20	24	BK
953091◊	12	7	7	0.089	30	60	0.579	143	255	1.662	2.063	0.054	2.3	18	21	BK
953109	12	8	7	0.089	30	60	0.607	162	280	1.662	2.063	0.054	2.4	18	21	BK
953117◊	12	9	7	0.089	30	60	0.678	182	324	1.662	2.063	0.054	2.7	18	21	BK
953125	12	10	7	0.089	30	60	0.738	203	358	1.662	2.063	0.054	3	12	15	BK
953133◊	12	12	7	0.089	30	60	0.762	243	416	1.662	2.063	0.054	3	12	15	BK
953141	12	15	7	0.089	30	80	0.881	304	537	1.662	2.063	0.054	3.5	12	15	BK
953158◊	12	19	7	0.089	30	80	0.933	386	664	1.662	2.063	0.054	3.7	12	15	BK
953174◊	12	25	7	0.089	30	80	1.075	511	843	1.662	2.063	0.054	5.4	11	14	BK
953190	12	37	7	0.089	30	85	1.209	754	1176	1.662	2.063	0.054	6	10	12	BK
10 AWG																
952861◊	10	2	7	0.113	30	45	0.448	65	122	1.04	1.291	0.05	1.8	35	40	BK
952879◊	10	3	7	0.113	30	45	0.472	97	166	1.04	1.291	0.05	1.9	35	40	BK
952895◊	10	4	7	0.113	30	60	0.547	129	230	1.04	1.291	0.05	2.2	28	32	BK
952887◊	10	5	7	0.113	30	60	0.604	162	273	1.04	1.291	0.05	2.4	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
952911◊	10	7	7	0.113	30	60	0.657	227	362	1.04	1.291	0.05	2.6	24	28	BK
952929	10	8	7	0.113	30	60	0.712	258	408	1.04	1.291	0.05	2.8	24	28	BK
952937◊	10	9	7	0.113	30	60	0.765	290	456	1.04	1.291	0.05	3.1	24	28	BK
952952◊	10	12	7	0.113	30	80	0.904	387	626	1.04	1.291	0.05	3.6	18	20	BK

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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	
952960	10	15	7	0.113	30	80	1.002	483	763	1.04	1.291	0.05	5	18	20	BK
952978	10	19	7	0.113	30	80	1.045	613	931	1.04	1.291	0.05	5.2	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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