

3/C or 4/C CU 600V XLPE XHHW-2 LSZH Control Cable With Green Ground

Type TC-ER Control Cable 600Volt Copper Conductors, Cross Linked Polyethylene (XLPE) Insulation XHHW-2 SOLONON® Low Smoke Zero Halogen (LSZH) Jacket with 1 Insulated Green CU Ground, Control Cable Conductor Identification Method 1 Table 2



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 7 strands class B compressed tinned copper per ASTM B33 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) XHHW-2, 30 Mils thick for all cable sizes
3. **Grounding Conductor:** Class B compressed stranded copper with green insulation
4. **Filler:** Polypropylene filler on cables with 5 or less conductors
5. **Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
6. **Overall Jacket:** SOLONON® Low Smoke Zero Halogen (LSZH) 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.

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 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
- NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems



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Table 1 – Physical and Electrical Data

Cond. Size	Cond. Number	Diameter Over Cond.	Insul. Thickness	Ground	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	DC Resistance	AC Resistance @ 90°C	Min Bending Radius	Allowable Ampacity At 60°C *	Allowable Ampacity 75°C *	Allowable Ampacity 90°C *
AWG	No.	inch	mil	No. x AWG	mil	inch	lb /1000ft	lb /1000ft	Ω /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
16 AWG														
16	3	0.056	30	1 x 16	45	0.371	32	81	4.180	5.226	1.5	10	10	10
16	4	0.056	30	1 x 16	45	0.404	40	97	4.180	5.226	1.6	10	10	10
14 AWG														
14	3	0.070	30	1 x 14	45	0.403	51	107	2.630	3.288	1.6	14	15	15
14	4	0.070	30	1 x 14	45	0.440	64	129	2.630	3.288	1.8	14	15	15
12 AWG														
12	3	0.087	30	1 x 12	45	0.445	81	146	1.660	2.075	1.8	16	20	20
12	4	0.087	30	1 x 12	45	0.487	102	177	1.660	2.075	1.9	16	20	20
10 AWG														
10	3	0.111	30	1 x 10	45	0.502	130	206	1.040	1.300	2.0	24	28	30
10	4	0.111	30	1 x 10	60	0.581	162	269	1.040	1.300	2.3	24	28	30

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 310.15 (B)(16) of the NEC, 2017 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

