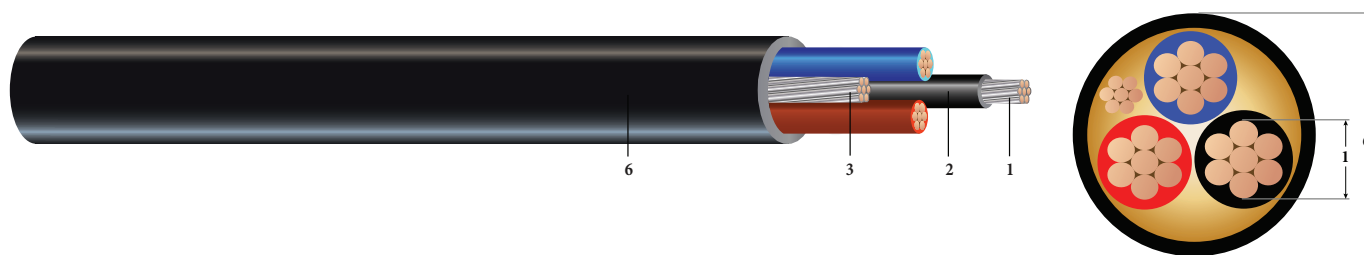


## CU 600V EPR XHHW-2 CPE Control Cable Type TC-ER

Type TC-ER Control Cable 600Volt Copper Conductors, Ethylene Propylene Rubber (EPR) Insulation XHHW-2 Chlorinated Polyethylene (CPE) Jacket with 1 Tinned CU Ground, Control Cable Conductor Identification Method 1 Table 2



Images not to scale. See Table for Dimensions

### CONSTRUCTION:

1. **Conductor:** 7 strands class B compressed tinned copper per ASTM B33 and ASTM B8
2. **Insulation:** Ethylene Propylene Rubber (EPR) XHHW-2, 30 Mils thick for all cable sizes
3. **Grounding Conductor:** Class B compressed stranded tinned copper per ASTM B33 and ASTM B8
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:** Chlorinated Polyethylene (CPE) 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 B33 - Tinned Soft or annealed copper
- ASTM B8 - Concentric-lay-standard copper
- UL 44 - Thermoset Insulated wires and cables
- UL 1277 - Electrical Power and Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr)
- ICEA S-73-532 - Standard for Control, Thermocouple Extension and Instrumentation Cables
- ICEA S-58-679 - Control Cable Conductor Identification Method 1 Table 2
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

### SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU XHHW-2 EPR/CPE 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NEC) [SEQUENTIAL FEET MARKS]



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## Measurements and Electrical Data

### #16 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
TBA	3	0.056	1 x 16	45	0.341	32	76	1.4	4.180	5.226	10/10/10
TBA	4	0.056	1 x 16	45	0.371	40	92	1.5	4.180	5.226	10/10/10

## Measurements and Electrical Data

### #14 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
591946	3	0.070	1 x 14	45	0.370	51	101	1.5	2.630	3.288	15/15/15
TBA	4	0.070	1 x 14	45	0.403	64	122	1.6	2.630	3.288	14/15/15

All dimensions are nominal and subject to normal manufacturing tolerance.

\* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and assuming ground is not carrying current.



## Measurements and Electrical Data

### #12 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
591961 <sup>◇</sup>	3	0.087	1 x 12	45	0.408	81	139	1.6	1.660	2.075	20/20/20
TBA	4	0.087	1 x 12	45	0.445	102	169	1.8	1.660	2.075	16/20/20

## Measurements and Electrical Data

### #10 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
591975 <sup>◇</sup>	3	0.111	1 x 10	45	0.459	130	198	1.8	1.040	1.300	30/30/30
TBA	4	0.111	1 x 10	45	0.502	162	243	2.0	1.040	1.300	24/28/30

All dimensions are nominal and subject to normal manufacturing tolerance.

\* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and assuming ground is not carrying current.

◇ Standard stock item

