



# CU 600V Shielded Substation Cable - Re3™ Rodent-Resistant Power & Control Cables

Single Conductor 600 Volt Copper Conductors, Cross Linked Polyethylene and Thermoplastic Low Smoke Zero Halogen Jacket (XLPE/LSZH). Silicone Free

Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B, compressed, stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE)
3. **Shield:** Longitudinally Corrugated 5 mil annealed Copper Tape
4. **Rip Cord:** Rip cord for ease of jacket removal
5. **Jacket:** Moisture, Sunlight Resistant, Black, Thermoplastic, Polyolefin, Low Smoke Zero Halogen (LSZH) Jacket

## APPLICATIONS AND FEATURES:

Southwire single conductor shielded control cable is used primarily in utility generating plants and substations. Can be installed indoors or outdoors. Conductor operating temperature is 90°C, 130°C for emergency overload, and 250°C for short circuit conditions.

## SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy

## SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE XX AWG 1/C FR-XLPE CDR 90{D}C LSZH JACKET SUNLIGHT RESISTANT 600V {MMM/DD/YYYY}

**Table 1 – Weights and Measurements**

Cond. Size AWG/Kcmil	Strand Count No. of Strands	Diameter Over Conductor inch	Min. Avg. Insul. Thickness mil	Jacket Thickness mil	Approx. OD inch	Copper Weight lb/1000ft	Approx. Weight lb/1000ft
6	7	0.177	45	30	0.424	112	170
4	7	0.225	45	30	0.471	162	231
1/0	19	0.361	55	45	0.664	346	489
2/0	19	0.405	55	45	0.708	486	627
4/0	19	0.512	55	65	0.846	711	894
250	37	0.558	65	65	0.904	847	1058
500	37	0.789	65	65	1.122	1618	1887

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item





**Table 2 – Electrical and Engineering Data**

Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
AWG/ Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
6	5.1	209	0.411	0.495	0.051	65	75
4	5.7	333	0.258	0.310	0.048	85	95
1/0	8.0	844	0.102	0.122	0.044	150	170
2/0	8.5	1064	0.081	0.097	0.043	175	195
4/0	10.1	1692	0.051	0.062	0.041	230	260
250	10.8	2000	0.043	0.053	0.041	255	290
500	13.5	4000	0.022	0.029	0.039	380	430

\* 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.

