Re3™ Rodent-Resistant Power & Control Cables- CU 600V FR-XLPE LCT Shielded LSZH Jacket for Substations

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

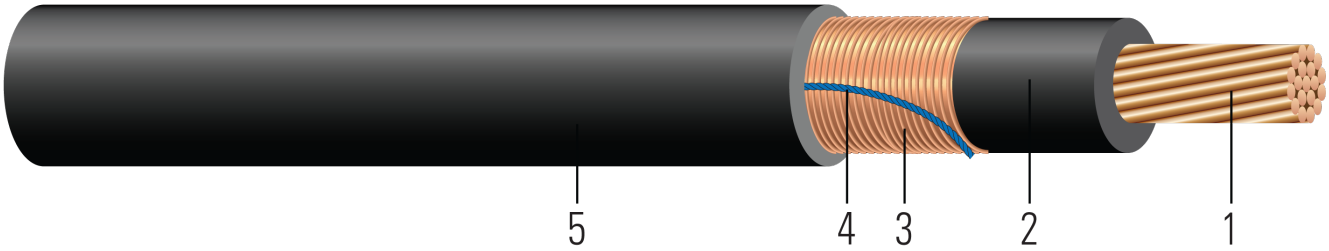


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

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

APPLICATIONS AND FEATURES:

Southwire's 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. The double-shielding design prevents wildlife attacks on cables, including but not limited to rats, moles, squirrels, gophers, and termites. Copper is a natural animal deterrent and protects the dielectric insulated phase conductors from chewing damage. The extra layers of copper material also mitigate EMI/EMF due to interferences from the high voltage or extra high voltage equipment at the transmission or distribution substations. This shielded single conductor can be deployed at any utility's critical infrastructure projects.

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°C LSZH JACKET SUNLIGHT RESISTANT 600V {MMM/DD/YYYY}

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Table 1 – Weights and Measurements

Cond. Size	Strand Count	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Jacket Color
AWG/Kcmil	No. of Strands	inch	mil	mil	inch	lb/1000ft	lb/1000ft	
6	7	0.178	45	30	0.268	81	99	BK
4	7	0.225	45	30	0.315	129	151	BK
1/0	19	0.362	55	45	0.472	326	367	BK
2/0	19	0.405	55	45	0.515	411	456	BK
4/0	19	0.512	55	45	0.622	653	708	BK
250	37	0.558	65	65	0.688	772	844	BK
500	37	0.789	65	65	0.919	1544	1642	BK

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	3.2	209	0.411	0.51	0.051	65	75
4	3.8	333	0.258	0.32	0.048	85	95
1/0	5.7	844	0.102	0.127	0.044	150	170
2/0	6.2	1064	0.082	0.102	0.043	175	195
4/0	7.5	1692	0.051	0.063	0.041	230	260
250	8.3	2000	0.043	0.053	0.041	255	290
500	11	4000	0.021	0.027	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.

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