SER Copper Service Entrance

Copper Service Entrance Cable, Type SER Service Entrance Cable, 600 Volt. Individual Conductors Rated XHHW-2 or THHN/THWN. Jacket and Individual Conductors Sunlight Resistant.



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:** All phases are insulated with Cross Linked Polyethylene (XLPE) Type XHHW-2 or Polyvinyl Chloride with Nylon Sheath THHN/THWN
3. **Neutral:** Insulated bare soft annealed neutral
4. **Ground:** Bare soft annealed ground
5. **Binder:** Reinforcement binder
6. **Jacket:** Gray Polyvinyl Chloride PVC jacket. Sunlight resistant.

APPLICATIONS AND FEATURES:

Southwire Type SER, service entrance cable is primarily used to convey power from the service drop to the meter base and from the meter base to the distribution panelboard; however, the cable may be used in all applications where Type SE cable is permitted. SER may be used in wet or dry locations at temperatures not to exceed 90°C. Voltage rating is 600 volts. SE cables are not permitted underground, with or without a raceway, per NEC 338.12(A)(2).

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 83 Thermoplastic Insulated Wires and Cables
- UL 854 Service Entrance Cable
- RoHS-2 (European Directive 2011/65/EU)
- NEC National Electrical Code NFPA 70
- Federal Specification A-A-59544

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE{R} E32071 {UL} X CDR X AWG X CDR X AWG CU TYPE SE CABLE STYLE SER TYPE XHHW-2 CDRS 600 VOLTS MADE IN USA

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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Conductor Number	Diameter Over Conductor	Conductor Stranding	Insulation Thickness	Num x Neutral Size	Jacket Thickness	Approx. OD	Copper Weight	Overall Weight
	AWG/ Kcmil		inch		mils	No. x AWG	mil	inch	lbs/1000ft	lbs/1000ft
281642◊	6	3	0.178	7	45	1x6	30	0.71	327	421
263483◊	4	3	0.225	7	45	1x6	30	0.787	472	585
277574◊	3	3	0.252	7	45	1x5	30	0.855	595	719
267013◊	2	3	0.283	7	45	1x4	30	0.933	751	886
270827◊	1	3	0.322	19	55	1x3	30	1.146	947	1131
277558◊	1/0	3	0.362	19	55	1x2	30	1.241	1195	1396
270835◊	2/0	3	0.405	19	55	1x1	30	1.347	1506	1730
270843◊	3/0	3	0.456	19	55	1x1/0	30	1.462	1899	2135

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
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.

Table 2 – Electrical and Engineering Data

Cond. Size	Conductor Number	Min. Bend Radius	Max Pull Tension	DC Resistance at 25°C	AC Resistance at 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity Raceway 75°C	Allowable Ampacity Raceway 90°C
AWG/ Kcmil		Inches	Lbs	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
6	3	2.8	629	0.411	0.51	0.051	65	75
4	3	3.1	1001	0.258	0.32	0.048	85	95
3	3	3.4	1262	0.205	0.254	0.047	100	115
2	3	3.7	1592	0.162	0.201	0.045	115	130
1	3	5.7	2008	0.128	0.159	0.046	130	145
1/0	3	6.2	2534	0.102	0.127	0.044	150	170
2/0	3	6.7	3194	0.082	0.102	0.043	175	195
3/0	3	7.3	4027	0.064	0.079	0.042	200	225

***** 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.

Award Winning Patent Pending Building Wire Selector

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