

Aluminum Service Entrance (SE) Cable



Type SE, Style SER and SEU Service Entrance Cable. 600 Volt. Alumaflex® Brand Aluminum Alloy (AA-8176) Conductors. Individual Conductors Rated XHHW or THHN/THWN Jacket and Inner Conductors are Sunlight Resistant.



APPLICATIONS

Southwire Type SE, service entrance cable is used to convey power from the service drop to the meter base and from the meter base to the distribution panelboard; however, it may be used in all applications where Type SE cable is permitted. SE may be used in wet or dry above ground locations at temperatures not to exceed 90°C. The voltage rating is 600 volts.

STANDARDS & REFERENCES

Southwire Type SE cable complies with the following:

- ASTM- B-800 and B-801
- UL Standard 44 for XHHW-2
- UL Standard 83 for THHN/THWN-2
- Federal Specification A-A-59544
- National Electrical Code, NFPA 70, 2011 Edition
- RoHS

CONSTRUCTION

Southwire Type SE cable is constructed with Alumaflex® AA-8000 series aluminum alloy, compacted stranded conductors. The conductors are covered with a sunlight resistant Type XHHW-2 or Type THHN/THWN-2-insulation. A reinforcement tape is wrapped around the conductors for added strength and conformity. A gray sunlight-resistant polyvinyl chloride (PVC) outer jacket covers the entire assembly. Style SEU cable has two phase conductors surrounded by a concentric neutral while the SER style has two, three or four phase conductors and a bare neutral.

Southwire Style SER Cable's phase conductors are identified by a colored stripe on the insulation.

3 conductor – Black and Black with Red Stripe

4 conductor – Black, Black with White Stripe and Black with Red Stripe

5 conductor – Black, Black with White Stripe, Black with Red Stripe and Black with Blue Stripe



| Conductor Size/Const. AWG or kcmil | Stranding | | Nominal O.D. (Mils) | Allowable Ampacities | | | | Approximate Net Weight Per 1000' (Lbs) | Standard Package |
|------------------------------------------------------------------------------------------|---------------------------------|----------------------------------|---------------------------|----------------------|------|------|----------|-------------------------------------------------|---------------------|
| | Phase Conductor & Neutral | Equipment Ground Conductor | | 60°C | 75°C | 90°C | Dwelling | | |
| SER Aluminum Two-Conductor With Bare Ground (Formerly referred to as "EZ-SE") | | | | | | | | | |
| 6-6-6 | 7 | - | 650 | 40 | 50 | 60 | - | 150 | B |
| 4-4-4 | 7 | - | 745 | 55 | 65 | 75 | - | 203 | B |
| 4-4-6 | 7 | - | 745 | 55 | 65 | 75 | - | 203 | B |
| 2-2-2 | 7 | - | 864 | 75 | 90 | 100 | 100 | 290 | B |
| SER Aluminum Three Conductor With Bare Ground (Formerly referred to as "Four Conductor") | | | | | | | | | |
| 8-8-8-8 | 1 | 1 | 612 | 30 | 40 | 45 | - | 136 | B |
| 6-6-6-6 | 7 | 7 | 717 | 40 | 50 | 60 | - | 196 | B |
| 4-4-4-6 | 7 | 7 | 823 | 55 | 65 | 75 | - | 252 | B |
| 2-2-2-4 | 7 | 7 | 956 | 75 | 90 | 100 | 100 | 359 | B |
| 1-1-1-3 | 8 | 7 | 1079 | 85 | 100 | 115 | 110 | 449 | C |
| 1/0-1/0-1/0-2 | 10 | 1 | 1168 | 100 | 120 | 135 | 125 | 540 | C |
| 2/0-2/0-2/0-1 | 12 | 1 | 1264 | 115 | 135 | 150 | 150 | 652 | C |
| 3/0-3/0-3/0-1/0 | 16 | 1 | 1371 | 130 | 155 | 175 | 175 | 786 | C |
| 4/0-4/0-4/0-2/0 | 19 | 1 | 1496 | 150 | 180 | 205 | 200 | 960 | C |
| 250-250-250-3/0 | 22 | 1 | 1839 | 170 | 205 | 230 | 225 | 1458 | C |
| SER Aluminum Four Conductor With Bare Ground (Formerly referred to as "Five Conductor") | | | | | | | | | |
| 2-2-2-2-4 | 6 | 7 | 1059 | 75 | 90 | 100 | 100 | 452 | B |
| 2/0-2/0-2/0-2/0-1 | 12 | 1 | 1404 | 115 | 135 | 150 | 150 | 827 | C |
| 4/0-4/0-4/0-4/0-2/0 | 19 | 1 | 1672 | 150 | 180 | 205 | 200 | 1228 | C |
| 250-250-250-250-3/0 | 22 | 1 | 1847 | 170 | 205 | 230 | 225 | | C |

| Conductor Size/Const. AWG or kcmil | Stranding | | Nominal O.D. (Mils) | Allowable Ampacities | | | | Approximate Net Weight Per 1000' (Lbs) | Standard Package |
|----------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------|------------------------|----------------------|------|------|----------|-------------------------------------------------|---------------------|
| | Phase Conductor & Neutral | Equipment Ground Conductor | | 60°C | 75°C | 90°C | Dwelling | | |
| SEU Aluminum Two Conductor With Bare Concentric Ground (Formerly referred to as "Three Conductor") | | | | | | | | | |
| 6-6-6 | 7 | 8 | 430x687 | 40 | 50 | 60 | - | 145 | B,C,E |
| 4-4-4 | 7 | 12 | 499x800 | 55 | 65 | 75 | - | 198 | B |
| 4-4-6 | 7 | 15 | 474x775 | 55 | 65 | 75 | - | 181 | B |
| 2-2-2 | 7 | 14 | 569x925 | 75 | 90 | 100 | 100 | 283 | B,C,G |
| 2-2-4 | 7 | 18 | 554x910 | 75 | 90 | 100 | 100 | 259 | B,C,G |
| 2/0-2/0-2/0 | 18 | 18 | 736x1221 | 115 | 135 | 150 | 150 | 514 | C |
| 2/0-2/0-1 | 18 | 14 | 720x1205 | 115 | 135 | 150 | 150 | 468 | C |
| 4/0-4/0-4/0 | 18 | 18 | 878x1462 | 150 | 180 | 205 | 205 | 765 | C |
| 4/0-4/0-2/0 | 18 | 18 | 835x1419 | 150 | 180 | 205 | 205 | 691 | C |

Table values reflect XHHW-2 conductors. Allowable ampacities shown are for general use as specified by the National Electrical Code, 2011 Edition, Section 310.15.

60°C - When terminated to equipment for circuits rated 100 amperes or less or marked for 14 through 1 AWG conductors. See NEC Article 338.10 (B)(4).

75°C - When terminated to equipment for circuits rated 100 amperes or marked for conductors larger than 1 AWG conductors. May not apply, see NEC Article 338.10 (B)(4).

90°C - Wet or dry locations. For ampacity de-rating purposes.

Dwelling - For units, conductors shall be permitted at listed ampacities as 120/240-volt, 3-wire, single-phase services and feeders per NEC Article 310.15.

*For compact-stranded construction, the number of wires, as permitted by UL Standard 854 and ASTM B-801 may be reduced as follows: 19-wire constructions - 18 wires minimum.

Package
Codes:
B - 1,000'
C - 500'
E-250'
G-200'

RECOMMENDED SAMPLE SPECIFICATIONS:

SER Sample Specification: Cable shall be UL-listed Type SE, Style SER, suitable for operation at 600 volts or less as specified in the National Electrical Code. Conductors shall be AlumaFlex™ aluminum alloy, weather resistant PVC jacketed, as manufactured by Southwire Company or approved equal. SEU Sample Specification: Cable shall be UL-listed Type SE, Style SEU, suitable for operation at 600 volts or less as specified in the National Electrical Code. Conductors shall be AlumaFlex™ aluminum alloy, weather resistant PVC jacketed, as manufactured by Southwire Company or approved equal.



| Conductor | Stranding | | |
|------------------------------------------------------------------------------------------|---------------------------|----------------------------|----------------------------------------|
| Size/Const. AWG or kcmil | Phase Conductor & Neutral | Equipment Ground Conductor | Stock Numbers |
| SER Aluminum Two-Conductor With Bare Ground (Formerly referred to as "EZ-SE") | | | |
| 6-6-6 | 7 | - | Stock #: 326678 |
| 4-4-4 | 7 | - | Stock #: 326660 |
| 4-4-6 | 7 | - | Stock #: 552500 |
| 2-2-2 | 7 | - | Stock #: N/A |
| SER Aluminum Three Conductor With Bare Ground (Formerly referred to as "Four Conductor") | | | |
| 8-8-8-8 | 1 | 1 | Stock #: 130989 |
| 6-6-6-6 | 7 | 7 | Stock #: 130997 (T), 592331 (X) |
| 4-4-4-6 | 7 | 7 | Stock #: 131003 |
| 2-2-2-4 | 7 | 7 | Stock #: 131029 |
| 1-1-1-3 | 8 | 7 | Stock #: 131037 |
| 1/0-1/0-1/0-2 | 10 | 1 | Stock #: 131045 |
| 2/0-2/0-2/0-1 | 12 | 1 | Stock #: 131052 |
| 3/0-3/0-3/0-1/0 | 16 | 1 | Stock #: 131060 |
| 4/0-4/0-4/0-2/0 | 19 | 1 | Stock #: 131078 |
| 250-250-250-3/0 | 22 | 1 | Stock #: 552504 |
| SER Aluminum Four Conductor With Bare Ground (Formerly referred to as "Five Conductor") | | | |
| 2-2-2-2-4 | 6 | 7 | Stock #: 277186 |
| 2/0-2/0-2/0-2/0-1 | 12 | 1 | Stock #: 327445 |
| 4/0-4/0-4/0-4/0-2/0 | 19 | 1 | Stock #: 279968 |
| 250-250-250-250-3/0 | 22 | 1 | Stock #: 555869 |

| Conductor | Stranding | | |
|----------------------------------------------------------------------------------------------------|---------------------------|----------------------------|------------------------|
| Size/Const. AWG or kcmil | Phase Conductor & Neutral | Equipment Ground Conductor | Stock Numbers |
| SEU Aluminum Two Conductor With Bare Concentric Ground (Formerly referred to as "Three Conductor") | | | |
| 6-6-6 | 7 | 8 | Stock #: 130864 |
| 4-4-4 | 7 | 12 | Stock #: 130872 |
| 4-4-6 | 7 | 15 | Stock #: 130948 |
| 2-2-2 | 7 | 14 | Stock #: 130880 |
| 2-2-4 | 7 | 18 | Stock #: 130955 |
| 2/0-2/0-2/0 | 18 | 18 | Stock #: 130914 |
| 2/0-2/0-1 | 18 | 14 | Stock #: 130963 |
| 4/0-4/0-4/0 | 18 | 18 | Stock #: 130930 |
| 4/0-4/0-2/0 | 18 | 18 | Stock #: 130971 |



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APPLICATIONS

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- UL Standard 44 for XHHW-2
- UL Standard 83 for THHN/THWN-2
- Federal Specification A-A-59544
- National Electrical Code, NFPA 70, 2011 Edition
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CONSTRUCTION

Southwire Type SE cable is constructed with Alumaflex® AA-8000 series aluminum alloy, compacted stranded conductors. The conductors are covered with a sunlight resistant Type XHHW-2 or Type THHN/THWN-2-insulation. A reinforcement tape is wrapped around the conductors for added strength and conformity. A gray sunlight-resistant polyvinyl chloride (PVC) outer jacket covers the entire assembly. Style SEU cable has two phase conductors surrounded by a concentric neutral while the SER style has two, three or four phase conductors and a bare neutral.

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| 6-6-6 | 7 | - | 650 | 40 | 50 | 60 | - | 150 | B |
| 4-4-4 | 7 | - | 745 | 55 | 65 | 75 | - | 203 | B |
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| 2-2-2 | 7 | - | 864 | 75 | 90 | 100 | 100 | 290 | B |
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| 1-1-1-3 | 8 | 7 | 1079 | 85 | 100 | 115 | 110 | 449 | C |
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| 1/0-1/0-1/0-2 | 10 | 1 | Stock #: 131045 |
| 2/0-2/0-2/0-1 | 12 | 1 | Stock #: 131052 |
| 3/0-3/0-3/0-1/0 | 16 | 1 | Stock #: 131060 |
| 4/0-4/0-4/0-2/0 | 19 | 1 | Stock #: 131078 |
| 250-250-250-3/0 | 22 | 1 | Stock #: 552504 |
| SER Aluminum Four Conductor With Bare Ground (Formerly referred to as "Five Conductor") | | | |
| 2-2-2-2-4 | 6 | 7 | Stock #: 277186 |
| 2/0-2/0-2/0-2/0-1 | 12 | 1 | Stock #: 327445 |
| 4/0-4/0-4/0-4/0-2/0 | 19 | 1 | Stock #: 279968 |
| 250-250-250-250-3/0 | 22 | 1 | Stock #: 555869 |

| Conductor | Stranding | | |
|----------------------------------------------------------------------------------------------------|---------------------------|----------------------------|------------------------|
| Size/Const. AWG or kcmil | Phase Conductor & Neutral | Equipment Ground Conductor | Stock Numbers |
| SEU Aluminum Two Conductor With Bare Concentric Ground (Formerly referred to as "Three Conductor") | | | |
| 6-6-6 | 7 | 8 | Stock #: 130864 |
| 4-4-4 | 7 | 12 | Stock #: 130872 |
| 4-4-6 | 7 | 15 | Stock #: 130948 |
| 2-2-2 | 7 | 14 | Stock #: 130880 |
| 2-2-4 | 7 | 18 | Stock #: 130955 |
| 2/0-2/0-2/0 | 18 | 18 | Stock #: 130914 |
| 2/0-2/0-1 | 18 | 14 | Stock #: 130963 |
| 4/0-4/0-4/0 | 18 | 18 | Stock #: 130930 |
| 4/0-4/0-2/0 | 18 | 18 | Stock #: 130971 |

