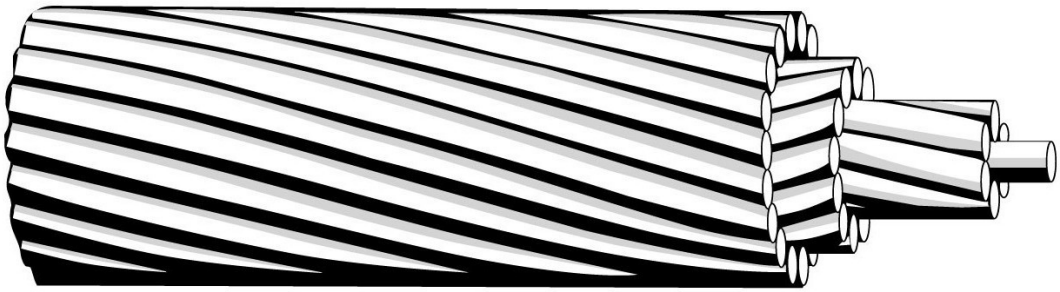
# ACAR

**Aluminum Conductor. Aluminum Alloy Reinforced. Bare.**



## APPLICATIONS

Used as bare overhead transmission cable and as primary and secondary distribution cable. A good strength-to-weight ratio makes ACAR applicable where both ampacity and strength are prime considerations in line design; for equal weight, ACAR offers higher strength and ampacity than ACSR.

## SPECIFICATIONS

Southwire's ACAR bare conductor meets or exceeds the following ASTM specifications:

- B230 Aluminum 1350-H19 Wire for Electrical Purposes.
- B398 Aluminum-Alloy 6201-T81 Wire for Electrical Purposes.
- B524 Concentric-Lay-Stranded Aluminum Conductors, Aluminum-Alloy Reinforced (ACAR, 1350/6201).

## CONSTRUCTION

Aluminum 1350-H19 wires, concentrically stranded about an aluminum-alloy 6201-T81 core. Although the alloy strands generally comprise the core of the conductor, in some constructions they are distributed in layers throughout the aluminum 1350-H19 strands.

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# ACAR

| Size (kcmil) | Strand-ing (EC/6201) | Diameter (ins.) | | | Weight Per 1000 ft. (lbs.) | Rated Strength (lbs.) | Resistance OHMS/1000 ft. | | Allowable Ampacity+ (Amps) |
|---|---|---|---|---|---|---|---|---|---|
| | | Individual Wires | | Comp. Cable | | | DC @ 20°C | AC @ 75°C | |
| | | 6201 | 1350 | | | | | | |
| 355.0 | 12/7 | 0.1367 | 0.1367 | 0.683 | 332.1 | 8500 | .0514 | .0624 | 519 |
| 465.9 | 12/7 | 0.1566 | 0.1566 | 0.783 | 435.8 | 11000 | .0392 | .0477 | 616 |
| 503.6 | 12/7 | 0.1628 | 0.1628 | 0.814 | 471.1 | 11900 | .0362 | .0441 | 646 |
| 653.1 | 12/7 | 0.1854 | 0.1854 | 0.927 | 611.0 | 15400 | .0279 | .0342 | 760 |
| 739.8 | 30/7 | 0.1414 | 0.1414 | 0.990 | 692.7 | 15300 | .0240 | .0296 | 831 |
| 739.8 | 18/19 | 0.1414 | 0.1414 | 0.990 | 691.6 | 18800 | .0252 | .0308 | 814 |
| 853.7 | 30/7 | 0.1519 | 0.1519 | 1.063 | 799.3 | 17500 | .0208 | .0257 | 907 |
| 853.7 | 18/19 | 0.1519 | 0.1519 | 1.063 | 798.0 | 21500 | .0218 | .0268 | 890 |
| 927.2 | 30/7 | 0.1583 | 0.1583 | 1.108 | 868.2 | 19000 | .0192 | .0238 | 955 |
| 927.2 | 18/19 | 0.1583 | 0.1583 | 1.108 | 866.7 | 23400 | .0201 | .0247 | 936 |
| 1024.5 | 30/7 | 0.1664 | 0.1664 | 1.165 | 959.3 | 20900 | .0173 | .0216 | 1015 |
| 1024.5 | 18/19 | 0.1664 | 0.1664 | 1.165 | 957.7 | 25800 | .0182 | .0225 | 995 |
| 1081.0 | 30/7 | 0.1709 | 0.1709 | 1.196 | 1012.1 | 22100 | .0164 | .0205 | 1048 |
| 1081.0 | 18/19 | 0.1709 | 0.1709 | 1.196 | 1010.5 | 27200 | .0172 | .0213 | 1028 |
| 1109.0 | 30/7 | 0.1731 | 0.1731 | 1.212 | 1038.4 | 22700 | .0160 | .0200 | 1065 |
| 1109.0 | 18/19 | 0.1731 | 0.1731 | 1.212 | 1036.6 | 27900 | .0168 | .0208 | 1044 |
| 1172.0 | 30/7 | 0.1780 | 0.1780 | 1.246 | 1097.3 | 24000 | .0152 | .0190 | 1101 |
| 1172.0 | 18/19 | 0.1780 | 0.1780 | 1.246 | 1095.5 | 29500 | .0159 | .0198 | 1080 |
| 1197.0 | 30/7 | 0.1799 | 0.1799 | 1.259 | 1120.8 | 24500 | .0148 | .0187 | 1115 |
| 1197.0 | 18/19 | 0.1799 | 0.1799 | 1.259 | 1118.9 | 30200 | .0156 | .0194 | 1094 |
| 1280.0 | 30/7 | 0.1860 | 0.1860 | 1.302 | 1198.5 | 26200 | .0139 | .0175 | 1160 |
| 1280.0 | 18/19 | 0.1860 | 0.1860 | 1.302 | 1196.5 | 32200 | .0146 | .0182 | 1139 |
| 1361.0 | 42/19 | 0.1494 | 0.1494 | 1.344 | 1273.6 | 30300 | .0133 | .0168 | 1196 |
| 1527.0 | 42/19 | 0.1582 | 0.1582 | 1.424 | 1428.8 | 33600 | .0118 | .0151 | 1314 |
| 1703.0 | 42/19 | 0.1671 | 0.1671 | 1.504 | 1593.5 | 37500 | .0106 | .0137 | 1363 |
| 1933.0 | 42/19 | 0.1780 | 0.1780 | 1.602 | 1808.8 | 42500 | .00936 | .0123 | 1465 |
| 2267.0 | 42/19 | 0.1928 | 0.1928 | 1.735 | 2142.0 | 49900 | .00806 | .0108 | 1594 |
| 2493.0 | 72/19 | 0.1655 | 0.1655 | 1.821 | 2356.9 | 50400 | .00722 | .0099 | 1687 |
| 2493.0 | 54/37 | 0.1655 | 0.1655 | 1.821 | 2354.5 | 57600 | .00743 | .0101 | 1670 |

+Ampacity based on 75°C conductor temperature, 25°C ambient temperature,with 2 ft./sec. wind in the sun.

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