

Here is a table of electrical wire sizes. The original formula for wire size is $.005 * 92^{((36-S)/39)}$ This table was created using the equation, only the first 4 digits are needed $.. 3248607329817676 * . 8905257174815119^S$. "S" is the size of the wire used in the standard AWG size standard.. The weight and ohms are based on the listed values for a #10 wire. The multiple "0" size wires are negative numbers. A "00" is a "-1" and a "000" is a "-2" etc. .

| Wire Size AWG | Diameter inch | Area Square inches | Diameter mm | Area Square mm | Volume Cubic inches per 1000 ft | Weight Pounds per 1000 ft | Ohms per 1000 ft | Amps rating |
|------------------|------------------|--------------------------|----------------|----------------------|--|------------------------------------|------------------------|----------------|
| 0000 | 0.46000 | 0.16619 | 11.684 | 107.22 | 1994.3 | 640.52 | 0.04901 | |
| 000 | 0.40964 | 0.13180 | 10.405 | 85.029 | 1581.5 | 507.95 | 0.06181 | 200 |
| 00 | 0.36480 | 0.10452 | 9.2659 | 67.431 | 1254.2 | 402.82 | 0.07794 | 175 |
| 0 | 0.32486 | 0.082887 | 8.2515 | 53.475 | 994.64 | 319.45 | 0.09828 | 150 |
| 1 | 0.28930 | 0.065732 | 7.3482 | 42.408 | 788.79 | 253.34 | 0.1239 | |
| 2 | 0.25763 | 0.052128 | 6.5437 | 33.631 | 625.54 | 200.91 | 0.1563 | 95 |
| 3 | 0.22942 | 0.041339 | 5.8273 | 26.670 | 496.07 | 159.33 | 0.1970 | |
| 4 | 0.20431 | 0.032784 | 5.1894 | 21.151 | 393.40 | 126.35 | 0.2485 | 70 |
| 5 | 0.18194 | 0.025999 | 4.6213 | 16.773 | 311.98 | 100.20 | 0.3133 | |
| 6 | 0.16202 | 0.020618 | 4.1154 | 13.302 | 247.41 | 79.463 | 0.3951 | 55 |
| 7 | 0.14429 | 0.016351 | 3.6648 | 10.549 | 196.21 | 63.017 | 0.4982 | |
| 8 | 0.12849 | 0.012967 | 3.2636 | 8.3655 | 155.60 | 49.975 | 0.6282 | 40 |
| 9 | 0.11442 | 0.010283 | 2.9064 | 6.6342 | 123.40 | 39.632 | 0.7922 | |
| 10 | 0.10190 | 0.0081548 | 2.5882 | 5.2611 | 97.857 | 31.429 | 0.9989 | 30 |
| 11 | 0.090742 | 0.0064670 | 2.3048 | 4.1723 | 77.604 | 24.924 | 1.260 | |
| 12 | 0.080808 | 0.0051286 | 2.0525 | 3.3087 | 61.543 | 19.766 | 1.588 | 20 |
| 13 | 0.071961 | 0.0040671 | 1.8278 | 2.6240 | 48.806 | 15.675 | 2.003 | |
| 14 | 0.064083 | 0.0032254 | 1.6277 | 2.0809 | 38.705 | 12.431 | 2.526 | 15 |
| 15 | 0.057068 | 0.0025578 | 1.4495 | 1.6502 | 30.694 | 9.8582 | 3.185 | |
| 16 | 0.050820 | 0.0020285 | 1.2908 | 1.3087 | 24.341 | 7.8179 | 4.016 | 13 |
| 17 | 0.045257 | 0.0016086 | 1.1495 | 1.0378 | 19.304 | 6.1999 | 5.064 | |
| 18 | 0.040302 | 0.0012757 | 1.0237 | 0.82304 | 15.308 | 4.9167 | 6.385 | 10 |
| 19 | 0.035890 | 0.0010117 | 0.91161 | 0.65270 | 12.140 | 3.8991 | 8.052 | |
| 20 | 0.031961 | 0.0008023 | 0.81181 | 0.51761 | 9.6276 | 3.0921 | 10.15 | |
| 21 | 0.028462 | 0.0006363 | 0.72294 | 0.41048 | 7.6350 | 2.4522 | 12.80 | |
| 22 | 0.025346 | 0.0005046 | 0.64380 | 0.32553 | 6.0548 | 1.9447 | 16.14 | |
| 23 | 0.022572 | 0.0004001 | 0.57332 | 0.25816 | 4.8017 | 1.5422 | 20.36 | |
| 24 | 0.020101 | 0.0003173 | 0.51055 | 0.20473 | 3.8079 | 1.2230 | 25.67 | |
| 25 | 0.017900 | 0.0002517 | 0.45466 | 0.16236 | 3.0198 | 0.96989 | 32.37 | |
| 26 | 0.015940 | 0.0001996 | 0.40489 | 0.12875 | 2.3948 | 0.76915 | 40.82 | |
| 27 | 0.014195 | 0.0001583 | 0.36056 | 0.10211 | 1.8992 | 0.60997 | 51.47 | |
| 28 | 0.012641 | 0.0001255 | 0.32109 | 0.080974 | 1.5061 | 0.48373 | 64.90 | |
| 29 | 0.011257 | 0.0000995 | 0.28594 | 0.064215 | 1.1944 | 0.38361 | 81.84 | |
| 30 | 0.010025 | 0.0000789 | 0.25464 | 0.050925 | 0.94720 | 0.30422 | 103.2 | |
| 31 | 0.0089275 | 0.0000626 | 0.22676 | 0.040385 | 0.75116 | 0.24125 | 130.1 | |
| 32 | 0.0079502 | 0.0000496 | 0.20194 | 0.032027 | 0.59570 | 0.19132 | 164.1 | |
| 33 | 0.0070799 | 0.0000394 | 0.17983 | 0.025398 | 0.47241 | 0.15173 | 206.9 | |
| 34 | 0.0063048 | 0.0000312 | 0.16014 | 0.020142 | 0.37464 | 0.12032 | 260.9 | |
| 35 | 0.0056146 | 0.0000248 | 0.14261 | 0.015973 | 0.29710 | 0.095421 | 329.0 | |
| 36 | 0.0049999 | 0.0000196 | 0.12700 | 0.012667 | 0.23561 | 0.075673 | 414.9 | |
| 37 | 0.0044526 | 0.0000156 | 0.11309 | 0.010046 | 0.18685 | 0.060011 | 523.1 | |
| 38 | 0.0039651 | 0.0000123 | 0.10071 | 0.0079665 | 0.14818 | 0.047591 | 659.7 | |
| 39 | 0.0035310 | 0.0000098 | 0.089688 | 0.0063177 | 0.11751 | 0.037741 | 831.8 | |
| 40 | 0.0031445 | 0.0000078 | 0.079870 | 0.0050102 | 0.093190 | 0.029930 | 1049. | |
| 41 | 0.0028002 | 0.0000062 | 0.071126 | 0.0039733 | 0.073903 | 0.023736 | 1323. | |
| 42 | 0.0024937 | 0.0000049 | 0.063339 | 0.0031509 | 0.058607 | 0.018823 | 1668. | |
| 43 | 0.0022207 | 0.0000039 | 0.056405 | 0.0024988 | 0.046478 | 0.014927 | 2103. | |
| 44 | 0.0019776 | 0.0000031 | 0.050230 | 0.0019816 | 0.036858 | 0.011838 | 2652. | |
| 45 | 0.0017611 | 0.0000024 | 0.044731 | 0.0015715 | 0.029230 | 0.0093880 | 3344. | |
| 46 | 0.0015683 | 0.0000019 | 0.039834 | 0.0012463 | 0.023180 | 0.0074450 | 4217. | |
| 47 | 0.0013966 | 0.0000015 | 0.035474 | 0.0009883 | 0.018383 | 0.0059041 | 5317. | |
| 48 | 0.0012437 | 0.0000012 | 0.031590 | 0.0007838 | 0.014578 | 0.0046822 | 6705. | |
| 49 | 0.0011076 | 0.0000010 | 0.028132 | 0.0006216 | 0.011561 | 0.0037131 | 8455. | |
| 50 | 0.0009863 | 0.0000008 | 0.025052 | 0.0004929 | 0.0091684 | 0.0029446 | 10662. | |