

Información técnica

Resistencia eléctrica

Resistencia eléctrica de alambres de cobre

| Calibre AWG o kcmil | Resistencia c.d. a 20 °C en ohms/km | | |
|------------------------------|-------------------------------------|----------|-------|
| | Duro | Semiduro | Suave |
| | Conductividad (% IACS) | | |
| | 96.16 | 96.66 | 100 |
| 18 | 21.81 | 21.69 | 21.00 |
| 17 | 17.28 | 17.15 | 16.60 |
| 16 | 13.74 | 13.67 | 13.20 |
| 14 | 8.63 | 8.58 | 8.28 |
| 12 | 5.42 | 5.39 | 5.21 |
| 10 | 3.41 | 3.39 | 3.28 |
| 9 | 2.70 | 2.69 | 2.60 |
| 8 | 2.14 | 2.13 | 2.06 |
| 7 | 1.70 | 1.69 | 1.63 |
| 6 | 1.35 | 1.34 | 1.30 |
| 4 | 0.848 | 0.843 | 0.815 |
| 3 | 0.672 | 0.669 | 0.660 |
| 2 | 0.533 | 0.531 | 0.513 |
| 1/0 | 0.335 | 0.333 | 0.322 |

Resistencia eléctrica de cables de cobre cableado clase B

| Calibre AWG o kcmil | Resistencia c.d. a 20 °C en ohms/km | | |
|------------------------------|-------------------------------------|----------|--------|
| | Duro | Semiduro | Suave |
| | Conductividad (% IACS) | | |
| | 96.16 | 96.66 | 100 |
| 12 | 5.53 | 5.50 | 5.32 |
| 10 | 3.48 | 3.46 | 3.34 |
| 8 | 2.19 | 2.17 | 2.10 |
| 6 | 1.38 | 1.37 | 1.32 |
| 4 | 0.865 | 0.860 | 0.832 |
| 2 | 0.544 | 0.541 | 0.523 |
| 1/0 | 0.342 | 0.340 | 0.329 |
| 2/0 | 0.271 | 0.270 | 0.261 |
| 3/0 | 0.215 | 0.214 | 0.207 |
| 4/0 | 0.171 | 0.170 | 0.164 |
| 250 | 0.144 | 0.143 | 0.139 |
| 300 | 0.120 | 0.119 | 0.116 |
| 500 | 0.072 | 0.072 | 0.0694 |
| 750 | 0.048 | 0.048 | 0.0463 |
| 1000 | 0.036 | 0.036 | 0.0347 |

Nota: • Cables en configuración plana con una distancia entre centros de cables de 20 cm.

Resistencia eléctrica de conductores de cobre suave cableado clase B

| Designación del conductor | | Resistencia eléctrica en ohms/km | | | | | | | |
|------------------------------|--|----------------------------------|---------|---------|---------|----------------------------|---------|---------|---------|
| Calibre AWG o kcmil | Área de la sección transversal mm ² | Corriente directa | | | | Corriente alterna (60 Hz)* | | | |
| | | 20 °C | 60 °C | 75 °C | 90 °C | 20 °C | 60 °C | 75 °C | 90 °C |
| 20 | 0.519 | 33.88 | 38.98 | 41.21 | 43.21 | 33.88 | 38.98 | 41.21 | 43.21 |
| 18 | 0.824 | 21.35 | 24.57 | 25.98 | 27.24 | 21.35 | 24.57 | 25.98 | 27.24 |
| 16 | 1.31 | 13.46 | 15.48 | 16.37 | 17.16 | 13.46 | 15.48 | 16.37 | 17.16 |
| 14 | 2.08 | 8.447 | 9.720 | 10.27 | 10.77 | 8.447 | 9.72 | 10.27 | 10.77 |
| 12 | 3.31 | 5.318 | 6.119 | 6.469 | 6.783 | 5.318 | 6.119 | 6.469 | 6.783 |
| 10 | 5.26 | 3.343 | 3.847 | 4.067 | 4.264 | 3.343 | 3.847 | 4.067 | 4.264 |
| 8 | 8.37 | 2.102 | 2.419 | 2.557 | 2.681 | 2.102 | 2.419 | 2.557 | 2.681 |
| 6 | 13.3 | 1.322 | 1.522 | 1.609 | 1.687 | 1.322 | 1.522 | 1.609 | 1.687 |
| 4 | 21.2 | 0.8315 | 0.9568 | 1.011 | 1.060 | 0.8316 | 0.9569 | 1.011 | 1.060 |
| 2 | 33.6 | 0.5231 | 0.6019 | 0.6363 | 0.6672 | 0.5233 | 0.6021 | 0.6365 | 0.6674 |
| -- | 35.0 | 0.5025 | 0.5782 | 0.6113 | 0.6409 | 0.5027 | 0.5784 | 0.6115 | 0.6411 |
| -- | 50.0 | 0.3517 | 0.4047 | 0.4279 | 0.4486 | 0.3521 | 0.4050 | 0.4282 | 0.4489 |
| 1/0 | 53.5 | 0.3288 | 0.3784 | 0.4000 | 0.4194 | 0.3292 | 0.3787 | 0.4003 | 0.4197 |
| 2/0 | 67.4 | 0.2608 | 0.3001 | 0.3173 | 0.3327 | 0.2613 | 0.3005 | 0.3177 | 0.3330 |
| -- | 70.0 | 0.2512 | 0.2891 | 0.3056 | 0.3204 | 0.2517 | 0.2895 | 0.3060 | 0.3208 |
| 3/0 | 85.0 | 0.2069 | 0.2381 | 0.2517 | 0.2639 | 0.2074 | 0.2386 | 0.2521 | 0.2643 |
| 4/0 | 107 | 0.1640 | 0.1888 | 0.1996 | 0.2092 | 0.1648 | 0.1894 | 0.2002 | 0.2098 |
| 250 | 127 | 0.1388 | 0.1597 | 0.1689 | 0.1770 | 0.1397 | 0.1605 | 0.1696 | 0.1777 |
| -- | 150 | 0.1172 | 0.1349 | 0.1426 | 0.1495 | 0.1183 | 0.1358 | 0.1435 | 0.1503 |
| 300 | 152 | 0.1157 | 0.1331 | 0.1407 | 0.1476 | 0.1167 | 0.1340 | 0.1416 | 0.1484 |
| 350 | 177 | 0.09920 | 0.1141 | 0.1207 | 0.1265 | 0.1004 | 0.1152 | 0.1217 | 0.1275 |
| 400 | 203 | 0.08676 | 0.09984 | 0.10554 | 0.11066 | 0.08815 | 0.10105 | 0.10670 | 0.11176 |
| -- | 240 | 0.07327 | 0.08432 | 0.08914 | 0.09346 | 0.07493 | 0.08576 | 0.09051 | 0.09477 |
| 500 | 253 | 0.06940 | 0.07986 | 0.08443 | 0.08852 | 0.07114 | 0.08139 | 0.08587 | 0.08990 |
| 600 | 304 | 0.05785 | 0.06657 | 0.07037 | 0.07379 | 0.05994 | 0.06840 | 0.07211 | 0.07545 |
| 750 | 380 | 0.04628 | 0.05325 | 0.05630 | 0.05903 | 0.04887 | 0.05554 | 0.05847 | 0.06110 |
| 1000 | 507 | 0.03471 | 0.03994 | 0.04222 | 0.04427 | 0.03809 | 0.04295 | 0.04509 | 0.04702 |

Nota: • En configuración plana con una distancia entre centros de cables de 20 cm.

Resistencia eléctrica de alambres y cables de aluminio (AAC)

| Resistencia eléctrica de alambres de aluminio (AAC) | | Resistencia eléctrica de cables de aluminio (AAC) | | | | | | |
|---|--------------------------|---|-------------|-------------------------------|-------------------------------|-------|-------|--|
| Calibre | Resistencia c.d. a 20 °C | Calibre AWG o kcmil | Designación | Resistencia c.d. Ω /km | Resistencia c.a. Ω /km | | | |
| AWG | Ω /km | | | 20 °C | 25 °C | 50 °C | 75 °C | |
| 16 | 21.6 | 6 | Peachbell | 2.170 | 2.213 | 2.431 | 2.650 | |
| 14 | 13.6 | 4 | Rose | 1.364 | 1.392 | 1.529 | 1.666 | |
| 12 | 8.54 | 2 | Iris | 0.857 | 0.875 | 0.961 | 1.048 | |
| 10 | 5.37 | 1 | Pansy | 0.680 | 0.694 | 0.763 | 0.831 | |
| 8 | 3.38 | 1/0 | Poppy | 0.539 | 0.550 | 0.605 | 0.659 | |
| 6 | 2.13 | 2/0 | Aster | 0.427 | 0.428 | 0.480 | 0.523 | |
| 4 | 1.34 | 3/0 | Phlox | 0.339 | 0.347 | 0.381 | 0.415 | |
| 2 | 0.841 | 4/0 | Oxlip | 0.269 | 0.275 | 0.302 | 0.329 | |
| | | 266.8 | Daisy | 0.213 | 0.218 | 0.240 | 0.261 | |
| | | 336.4 | Tulip | 0.169 | 0.173 | 0.190 | 0.208 | |
| | | 397.5 | Canna | 0.143 | 0.147 | 0.161 | 0.176 | |
| | | 477.0 | Cosmos | 0.119 | 0.122 | 0.135 | 0.147 | |
| | | 556.5 | Dahlia | 0.102 | 0.106 | 0.116 | 0.126 | |

Resistencia eléctrica de conductores de aluminio cableado clase B

| Designación del conductor | | Resistencia eléctrica en ohms/km | | | | | | | |
|---------------------------|--|----------------------------------|-------|-------|-------|--------------------|-------|-------|-------|
| Calibre AWG o kcmil | Área de la sección transversal mm^2 | Corriente directa | | | | Corriente alterna* | | | |
| | | 20 °C | 60 °C | 75 °C | 90 °C | 20 °C | 60 °C | 75 °C | 90 °C |
| 6 | 13.3 | 2.170 | 2.520 | 2.653 | 2.782 | 2.170 | 2.520 | 2.653 | 2.782 |
| 4 | 21.2 | 1.360 | 1.580 | 1.663 | 1.744 | 1.360 | 1.580 | 1.663 | 1.744 |
| 2 | 33.6 | 0.858 | 0.997 | 1.049 | 1.100 | 0.858 | 0.997 | 1.049 | 1.100 |
| 1/0 | 53.5 | 0.539 | 0.626 | 0.659 | 0.691 | 0.539 | 0.627 | 0.659 | 0.692 |
| 2/0 | 67.4 | 0.428 | 0.497 | 0.523 | 0.549 | 0.429 | 0.498 | 0.524 | 0.550 |
| 3/0 | 85.0 | 0.339 | 0.394 | 0.414 | 0.435 | 0.340 | 0.395 | 0.416 | 0.436 |
| 4/0 | 107 | 0.269 | 0.312 | 0.329 | 0.345 | 0.270 | 0.314 | 0.330 | 0.347 |
| 250 | 127 | 0.228 | 0.265 | 0.279 | 0.292 | 0.230 | 0.267 | 0.281 | 0.295 |
| 300 | 152 | 0.190 | 0.221 | 0.232 | 0.244 | 0.191 | 0.222 | 0.234 | 0.245 |
| 350 | 177 | 0.163 | 0.189 | 0.199 | 0.209 | 0.166 | 0.193 | 0.203 | 0.213 |
| 400 | 203 | 0.142 | 0.165 | 0.174 | 0.182 | 0.146 | 0.170 | 0.179 | 0.187 |
| 500 | 253 | 0.114 | 0.132 | 0.139 | 0.146 | 0.120 | 0.139 | 0.147 | 0.154 |
| 750 | 380 | 0.0759 | 0.088 | 0.093 | 0.097 | 0.089 | 0.103 | 0.108 | 0.114 |
| 1000 | 507 | 0.0569 | 0.066 | 0.070 | 0.073 | 0.079 | 0.091 | 0.096 | 0.101 |

Nota: *Cables en configuración plana con una distancia entre centros de cables de 20 cm.

Resistencia eléctrica de conductores ACSR

| Calibre AWG o kcmil | Designación | Resistencia c.d. Ω/km | Resistencia c.a. Ω/km | | |
|------------------------------|-------------|--|--|-------|-------|
| | | 20 °C | 25 °C | 50 °C | 75 °C |
| 6 | Turkey | 2.114 | 2.150 | 2.449 | 2.685 |
| 4 | Swan | 1.328 | 1.354 | 1.565 | 1.717 |
| 3 | Swallow | 1.076 | 1.108 | 1.281 | 1.405 |
| 2 | Sparrow | 0.834 | 0.853 | 1.012 | 1.108 |
| 1 | Robin | 0.662 | 0.677 | 0.811 | 0.891 |
| 1/0 | Raven | 0.524 | 0.537 | 0.654 | 0.717 |
| 2/0 | Quail | 0.416 | 0.426 | 0.530 | 0.580 |
| 3/0 | Pigeon | 0.330 | 0.339 | 0.429 | 0.470 |
| 4/0 | Penguin | 0.262 | 0.270 | 0.354 | 0.383 |
| 266.8 | Partridge | 0.210 | 0.215 | 0.236 | 0.257 |
| 336.4 | Linnet | 0.166 | 0.170 | 0.187 | 0.204 |
| 336.4 | Oriole | 0.165 | 0.169 | 0.186 | 0.202 |
| 397.5 | Ibis | 0.141 | 0.144 | 0.159 | 0.173 |
| 397.5 | Lark | 0.140 | 0.143 | 0.157 | 0.172 |
| 477.0 | Hawk | 0.117 | 0.120 | 0.132 | 0.144 |
| 477.0 | Hen | 0.116 | 0.119 | 0.131 | 0.143 |
| 500.0 | Heron | 0.109 | 0.112 | 0.123 | 0.135 |
| 556.5 | Dove | 0.100 | 0.103 | 0.113 | 0.124 |
| 556.5 | Eagle | 0.100 | 0.103 | 0.113 | 0.123 |
| 605.0 | Duck | 0.095 | 0.097 | 0.106 | 0.116 |
| 636.0 | Grosbeak | 0.088 | 0.090 | 0.099 | 0.108 |
| 715.5 | Starling | 0.079 | 0.080 | 0.088 | 0.096 |
| 715.5 | Crow | 0.079 | 0.080 | 0.088 | 0.096 |
| 795.0 | Drake | 0.071 | 0.073 | 0.080 | 0.087 |
| 795.0 | Condor | 0.070 | 0.073 | 0.080 | 0.087 |
| 900.0 | Canary | 0.062 | 0.065 | 0.071 | 0.077 |
| 954.0 | Rail | 0.059 | 0.062 | 0.068 | 0.074 |
| 1113 | Bluejay | 0.051 | 0.054 | 0.058 | 0.064 |