

AWG Wire Gauge Chart

American Wire Gauge 4/0 to 40: diameter, area and copper resistance per 1000 ft.

AWG	Diameter (in)	Diameter (mm)	Area (mm²)	Area (kcmil)	Copper Ω/1000 ft	Copper Ω/km
4/0	0.4600	11.684	107.219	211.60	0.04901	0.1608
3/0	0.4096	10.405	85.029	167.81	0.06180	0.2028
2/0	0.3648	9.266	67.431	133.08	0.07793	0.2557
1/0	0.3249	8.251	53.475	105.53	0.09827	0.3224
1	0.2893	7.348	42.408	83.69	0.1239	0.4066
2	0.2576	6.544	33.631	66.37	0.1563	0.5127
3	0.2294	5.827	26.670	52.63	0.1970	0.6464
4	0.2043	5.189	21.151	41.74	0.2485	0.8152
5	0.1819	4.621	16.773	33.10	0.3133	1.028
6	0.1620	4.115	13.302	26.25	0.3951	1.296
7	0.1443	3.665	10.549	20.82	0.4982	1.634
8	0.1285	3.264	8.366	16.51	0.6282	2.061
9	0.1144	2.906	6.634	13.09	0.7921	2.599
10	0.1019	2.588	5.261	10.38	0.9988	3.277
11	0.0907	2.305	4.172	8.23	1.260	4.132
12	0.0808	2.053	3.309	6.53	1.588	5.211
13	0.0720	1.828	2.624	5.18	2.003	6.571
14	0.0641	1.628	2.081	4.11	2.525	8.285
15	0.0571	1.450	1.650	3.26	3.184	10.45
16	0.0508	1.291	1.309	2.58	4.015	13.17
17	0.0453	1.150	1.038	2.05	5.063	16.61
18	0.0403	1.024	0.823	1.62	6.385	20.95
19	0.0359	0.912	0.653	1.29	8.051	26.41
20	0.0320	0.812	0.518	1.02	10.15	33.31
21	0.0285	0.723	0.410	0.81	12.80	42.00
22	0.0253	0.644	0.326	0.64	16.14	52.96
23	0.0226	0.573	0.258	0.51	20.36	66.78
24	0.0201	0.511	0.205	0.40	25.67	84.21
25	0.0179	0.455	0.162	0.32	32.37	106.2
26	0.0159	0.405	0.129	0.25	40.81	133.9
27	0.0142	0.361	0.102	0.20	51.47	168.9
28	0.0126	0.321	0.081	0.16	64.90	212.9
29	0.0113	0.286	0.064	0.13	81.83	268.5
30	0.0100	0.255	0.051	0.10	103.2	338.6
31	0.0089	0.227	0.040	0.08	130.1	426.9
32	0.0080	0.202	0.032	0.06	164.1	538.3
33	0.0071	0.180	0.025	0.05	206.9	678.8
34	0.0063	0.160	0.020	0.04	260.9	856.0
35	0.0056	0.143	0.016	0.03	329.0	1079.
36	0.0050	0.127	0.013	0.03	414.8	1361.

Diameters from the AWG definition: $d = 0.005 \text{ in} \times 92^{((36 - n)/39)}$ (ASTM B258). Resistance: solid annealed copper at 20 C (68 F), 10.371 ohm-circular-mil per foot. Stranded wire is slightly larger in diameter. Ampacity depends on insulation, temperature and installation: use the NEC / local electrical code tables, not this chart, to size conductors.

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37	0.0045	0.113	0.010	0.02	523.1	1716.
38	0.0040	0.101	0.008	0.02	659.6	2164.
39	0.0035	0.090	0.006	0.01	831.8	2729.
40	0.0031	0.080	0.005	0.01	1049.	3441.

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