

Wire Gauge Chart (AWG) — diameters and cross-sections

Nominal bare-conductor diameters per ASTM B258; AWG is geometric, $d = 0.005 \times 92^{((36-n)/39)}$ in. Areas derived from the diameter. Ampacity and resistance are excluded - they depend on insulation, bundling, and code, not on the gauge.

AWG	INCHES	mm	CMIL	mm ²
4/0	0.4600	11.684	211,600	107.22
3/0	0.4096	10.404	167,772	85.01
2/0	0.3648	9.266	133,079	67.43
1/0	0.3249	8.252	105,560	53.49
1	0.2893	7.348	83,694	42.41
2	0.2576	6.543	66,358	33.62
3	0.2294	5.827	52,624	26.67
4	0.2043	5.189	41,738	21.15
5	0.1819	4.620	33,088	16.77
6	0.1620	4.115	26,244	13.30
7	0.1443	3.665	20,822	10.55
8	0.1285	3.264	16,512	8.37
9	0.1144	2.906	13,087	6.63
10	0.1019	2.588	10,384	5.26
11	0.0907	2.304	8,226	4.17
12	0.0808	2.052	6,529	3.31
13	0.0720	1.829	5,184	2.63
14	0.0641	1.628	4,109	2.08
15	0.0571	1.450	3,260	1.65
16	0.0508	1.290	2,581	1.31
17	0.0453	1.151	2,052	1.04
18	0.0403	1.024	1,624	0.8229

AWG	INCHES	mm	CMIL	mm ²
19	0.0359	0.912	1,289	0.6530
20	0.0320	0.813	1,024	0.5189
21	0.0285	0.724	812	0.4116
22	0.0253	0.643	640	0.3243
23	0.0226	0.574	511	0.2588
24	0.0201	0.511	404	0.2047
25	0.0179	0.455	320	0.1624
26	0.0159	0.404	253	0.1281
27	0.0142	0.361	202	0.1022
28	0.0126	0.320	159	0.0804
29	0.0113	0.287	128	0.0647
30	0.0100	0.254	100	0.0507
31	0.0089	0.226	79	0.0401
32	0.0080	0.203	64	0.0324
33	0.0071	0.180	50	0.0255
34	0.0063	0.160	40	0.0201
35	0.0056	0.142	31	0.0159
36	0.0050	0.127	25	0.0127
37	0.0045	0.114	20	0.0103
38	0.0040	0.102	16	0.0081
39	0.0035	0.089	12	0.0062
40	0.0031	0.079	10	0.0049