

Wire Resistance Chart

Every AWG size in NEC Chapter 9 Table 8, both solid and stranded where the table gives both. Table 8 continues past 4/0 into 250 to 2000 kcmil; those sizes are not on this page.

AWG	STRANDS	Ω / 1000 FT	
		COPPER	ALUMINUM
0000	19	0.0608	0.100
000	19	0.0766	0.126
00	19	0.0967	0.159
0	19	0.122	0.201
1	19	0.154	0.253
2	7	0.194	0.319
3	7	0.245	0.403
4	7	0.308	0.508
6	7	0.491	0.808
8	1	0.764	1.26
8	7	0.778	1.28
10	1	1.21	2.00
10	7	1.24	2.04
12	1	1.93	3.18
12	7	1.98	3.25
14	1	3.07	5.06
14	7	3.14	5.17
16	1	4.89	8.05
16	7	4.99	8.21
18	1	7.77	12.8
18	7	7.95	13.1

AWG, Strands, Ω / 1000 ft Copper, Ω / 1000 ft Aluminum – NEC Chapter 9, Table 8
Direct current. Alternating current in a raceway runs higher, and Table 9 is the table for that. · Resistance changes with temperature. Table 8 note 2 gives the correction: $R2 = R1 \times (1 + \alpha \times (T2 - 75))$, with α of 0.00323 for copper and 0.00330 for aluminum. · Uncoated conductors. Table 8 lists coated copper separately and it reads higher. · 1 is the solid row of Table 8; 7 and 19 are Class B stranded · Uncoated copper, DC at 75 °C · Uncoated aluminum, DC at 75 °C
workshopcharts.com/wire-resistance-chart/ · last checked 2026-09-18 · manufacturer figures for a specific assembly govern