

Wire Gauge and Current Capacity Chart

AWG 0-40 WIRE GAUGE REFERENCE

AWG	Diam(mm)	Area(mm2)	R(mOhm/m)	Ampacity(A)
0	8.252	53.49	0.322	150
2	6.544	33.62	0.513	115
4	5.189	21.15	0.815	85
6	4.115	13.30	1.30	65
8	3.264	8.37	2.06	48
10	2.588	5.26	3.28	35
12	2.053	3.31	5.21	25
14	1.628	2.08	8.28	18
16	1.291	1.31	13.2	13
18	1.024	0.823	21.0	10
20	0.812	0.518	33.3	7
22	0.644	0.326	53.0	5
24	0.511	0.205	84.2	3.5
26	0.405	0.129	134	2.2
28	0.321	0.081	213	1.4
30	0.255	0.051	339	0.9
32	0.202	0.032	538	0.5
34	0.160	0.020	856	0.3
36	0.127	0.0127	1361	0.2
38	0.101	0.0080	2164	0.12
40	0.0799	0.0050	3440	0.07

IMPORTANT NOTES

- Ampacity for chassis wiring (single conductor in free air)
- For power transmission, derate by 40-60 percent
- For bundled wires (3 or more), derate by 50-70 percent
- Temperature rating: 60 deg C (typical PVC insulation)
- For 90 deg C rated wire, multiply by approximately 1.15x
- For 105 deg C rated wire, multiply by approximately 1.25x
- Verify against local electrical code (NEC/CEC/IEC)
- Resistance values at 20 deg C ambient
- Voltage drop: $V_{drop} = I * R * Length * 2$ (round-trip)

METRIC EQUIVALENTS (IEC 60228)

mm2	AWG approx	Max Current(A)
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0.5	20	7
0.75	18	10
1.0	17	12
1.5	16	15
2.5	14	20
4.0	12	25
6.0	10	35
10.0	8	50
16.0	6	65
25.0	4	85

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