



Wire Gauge Tables

Observe Proper Wire Size

The most important wiring practice is to observe proper wire size. Failure to use adequate size can result in fire. Even if fire doesn't result, wires that are too small will cause marginal performance of electrical equipment.

Amps	Distance – Feet						
	10	15	20	25	30	40	50
	Wire Gauge						
5	18	16	14	12	12	10	10
10	14	12	10	10	10	8	6
15	12	10	10	8	8	6	6
20	10	10	8	6	6	6	4
25	10	8	6	6	6	4	4
30	10	8	6	6	4	4	2
40	8	6	6	4	4	2	2
50	6	6	4	4	2	2	1
60	6	4	4	2	2	1	0
70	6	4	2	2	1	0	2/0
80	6	4	2	2	1	0	3/0
90	4	2	2	1	0	2/0	3/0
100	4	2	2	1	0	2/0	3/0
120	4	2	1	0	2/0	3/0	4/0
140	2	2	0	2/0	2/0	4/0	4/0
160	2	1	0	2/0	3/0	4/0	4/0+4
180	2	1	2/0	3/0	3/0	4/0+10	4/0+2
200	2	0	2/0	3/0	4/0	4/0+4	4/0+0

Using the Table

The table shows the wire size required for a 3% voltage drop in 12 Volt circuits. To use the table, first calculate the total length of the wire from the source to the device and back again. Next, determine the amount of current in the wire. The wire gauge is found at the intersection of Amps and Feet. In most load circuits, a 3% drop is quite acceptable. In charging circuits it often pays to have less of a drop. Always use one size bigger if practical.

AWG/MM Size Conversion				
AWG	MM	–	AWG	MM
26	.12826		11	4.156
25	.162		10	6.271
24	.205		9	6.626
23	.255		8	8.350
22	.322		7	10.544
21	.411		6	13.292
20	.516		5	16.755
19	.653		4	21.137
18	.823		3	26.653
17	1.039		2	33.606
16	1.308		1	42.384
15	1.652		0	53.454
14	2.088		00	67.399
13	2.629		000	84.004
12	3.302		0000	104.091