

# Wire Charts

## Solid and Stranded Conductor AWG Chart

AWG Size	Total Strands/ Strand Size	Type	Construction	Nominal Diameter		Circular Area		Approximate Weight		Nom. Break Strength		Maximum DC Resistance	
				Inches	mm	Mils	mm <sup>2</sup>	Lbs/ 1000'	Kg/ Km	Lbs	Kg	Ohms/ 1,000'	Ohms/ Km
56	1	S	Solid	0.00049	0.0124	0.24	0.00012	0.00070	0.001	0.0066	0.00	46949	154039
54	1	S	Solid	0.00062	0.0157	0.38	0.00020	0.0012	0.002	0.011	0.00	28808	94520
52	1	S	Solid	0.00078	0.0198	0.61	0.00031	0.0018	0.003	0.017	0.01	18437	60493
50	1	S	Solid	0.00099	0.0251	0.98	0.00050	0.0030	0.005	0.027	0.01	11491	37703
48	1	S	Solid	0.00124	0.0315	1.54	0.00078	0.0047	0.007	0.042	0.02	7324	24029
46	1	S	Solid	0.00157	0.0399	2.46	0.0012	0.0075	0.011	0.068	0.03	4548	14924
44	1	S	Solid	0.00200	0.0508	4.00	0.0020	0.0121	0.018	0.11	0.05	2873	9426
42	1	S	Solid	0.00250	0.0635	6.25	0.0032	0.0189	0.028	0.17	0.08	1801	5908
42	7/50	C	7/50	0.00300	0.0762	6.86	0.0035	0.0216	0.032	0.19	0.09	1891	5548
40	1	S	Solid	0.00310	0.0787	9.61	0.0049	0.0291	0.043	0.26	0.12	1152	3781
40	7/48	C	7/48	0.00370	0.0940	10.80	0.0055	0.0339	0.050	0.30	0.13	1078	3536
40	10/50	B	10/50	0.00360	0.0914	9.80	0.0050	0.0306	0.046	0.27	0.12	1172	3846
39	1	S	Solid	0.00350	0.0889	12.30	0.0062	0.0371	0.055	0.34	0.15	897	2944
38	1	S	Solid	0.00400	0.102	16.00	0.0081	0.0484	0.072	0.44	0.20	682	2237
38	7/46	C	7/46	0.00470	0.119	17.30	0.0087	0.0541	0.081	0.47	0.22	669	2196
38	10/48	B	10/48	0.00450	0.114	15.40	0.0078	0.0479	0.071	0.42	0.19	747	2451
38	16/50	B	16/50	0.00460	0.117	15.70	0.0080	0.0490	0.073	0.43	0.20	733	2404
36	1	S	Solid	0.0050	0.127	25.00	0.013	0.0757	0.11	0.69	0.31	432	1417
36	7/44	C	7/44	0.0060	0.152	28.00	0.014	0.0872	0.13	0.77	0.35	423	1387
36	10/46	B	10/46	0.0057	0.145	24.60	0.012	0.0765	0.11	0.68	0.31	464	1522
36	16/48	B	16/48	0.0057	0.145	24.60	0.012	0.0767	0.11	0.68	0.31	467	1532
36	19/48	C	19/48	0.0062	0.157	29.20	0.015	0.0920	0.14	0.80	0.36	397	1303
36	25/50	B	25/50	0.0057	0.145	24.50	0.012	0.0765	0.11	0.67	0.31	469	1538
34	1	S	Solid	0.0063	0.160	39.70	0.020	0.120	0.18	1.1	0.50	270	885
34	7/42	C	7/42	0.0075	0.191	43.80	0.022	0.136	0.20	1.2	0.55	265	869
34	10/44	B	10/44	0.0073	0.185	40.00	0.020	0.123	0.18	1.1	0.50	293	961
34	16/46	B	16/46	0.0073	0.185	39.40	0.020	0.122	0.18	1.1	0.49	290	951
34	19/46	C	19/46	0.0079	0.201	46.80	0.024	0.147	0.22	1.3	0.58	247	809
34	25/48	B	25/48	0.0072	0.183	38.40	0.019	0.120	0.18	1.1	0.48	299	980
34	40/50	B	40/50	0.0072	0.183	39.20	0.020	0.122	0.18	1.1	0.49	293	961
32	1	S	Solid	0.0080	0.203	64.00	0.032	0.194	0.29	1.8	0.80	166	545
32	7/40	C	7/40	0.0093	0.236	67.30	0.034	0.210	0.31	1.9	0.84	170	556
32	10/42	B	10/42	0.0091	0.231	62.50	0.032	0.193	0.29	1.7	0.78	184	603
32	16/44	B	16/44	0.0092	0.234	64.00	0.032	0.197	0.29	1.8	0.80	183	601
32	19/44	C	19/44	0.0100	0.254	76.00	0.039	0.237	0.35	2.1	0.95	156	511
32	25/46	B	25/46	0.0091	0.231	61.60	0.031	0.190	0.29	1.7	0.77	186	609
32	64/50	B	64/50	0.0091	0.231	62.10	0.032	0.196	0.29	1.7	0.78	183	601
30	1	S	Solid	0.0100	0.254	100.00	0.051	0.303	0.45	2.8	1.25	106	347
30	7/38	C	7/38	0.0120	0.305	112.00	0.057	0.349	0.52	3.1	1.40	100	329
30	10/40	B	10/40	0.0113	0.287	96.10	0.049	0.297	0.44	2.6	1.20	118	386
30	16/42	B	16/42	0.0116	0.295	100.00	0.051	0.308	0.46	2.8	1.25	115	377
30	19/42	C	19/42	0.0125	0.318	119.00	0.060	0.370	0.55	3.3	1.48	97.6	320
30	25/44	B	25/44	0.0116	0.295	100.00	0.051	0.309	0.46	2.8	1.25	117	385
30	40/46	B	40/46	0.0115	0.292	98.60	0.050	0.306	0.46	2.7	1.23	116	381
29	1	S	Solid	0.0113	0.287	128.00	0.065	0.387	0.58	3.5	1.59	82.7	271
29	51/46	B	51/46	0.0129	0.328	126.00	0.064	0.390	0.58	3.5	1.57	91.0	299

B – Bunch stranded wire. Wires are twisted without a geometric relationship to each other.  
 C – Concentric stranded wire. Each layer of the stranding has all strands in the same direction and position.

RB – Rope construction with Bunch stranded groups. Similar to concentric for the groups of strands.  
 RC – Rope construction with Concentric stranded groups. Similar to concentric stranding for both the final stranding and each group.

S – Solid wires.

The maximum resistance values are for the wire as a single conductor. Additional allowances have to be made when the wires are cabled into a multiconductor cable.