

**AWG WIRE TABLE (All data is computed from the formulas at the bottom)**

AWG Code	Bare wire nominal		Area-cm	Length Feet/Lb	77 Deg-F / 25 Deg-C				149 Deg-F / 65 Deg-C			
	Dia-Inch	Dia-mm			Ft/Ohm	Ohm/kFt	M/Ohm	Ohm/kM	Ft/Ohm	Ohm/kFt	M/Ohm	Ohm/kM
4/0	0.460000	11.684	211600	1.557	20061	0.0498	6114.45	0.1635	17398	0.0575	5303.0	0.1886
3/0	0.409642	10.405	167806	1.963	15909	0.0629	4848.98	0.2062	13797	0.0725	4205.5	0.2378
2/0	0.364797	9.266	133077	2.476	12616	0.0793	3845.41	0.2600	10942	0.0914	3335.1	0.2998
1/0	0.324861	8.251	105535	3.122	10005	0.0999	3049.55	0.3279	8677.3	0.1152	2644.8	0.3781
1	0.289297	7.348	83693	3.937	7934.4	0.1260	2418.40	0.4135	6881.4	0.1453	2097.5	0.4768
2	0.257626	6.544	66371	4.964	6292.3	0.1589	1917.88	0.5214	5457.2	0.1832	1663.4	0.6012
3	0.229423	5.827	52635	6.260	4990.0	0.2004	1520.95	0.6575	4327.8	0.2311	1319.1	0.7581
4	0.204307	5.189	41741	7.893	3957.2	0.2527	1206.17	0.8291	3432.1	0.2914	1046.1	0.9559
5	0.181941	4.621	33102	9.954	3138.2	0.3187	956.535	1.0454	2721.8	0.3674	829.59	1.2054
6	0.162023	4.115	26251	12.55	2488.7	0.4018	758.567	1.3183	2158.5	0.4633	657.90	1.5200
7	0.144285	3.665	20818	15.83	1973.7	0.5067	601.571	1.6623	1711.7	0.5842	521.74	1.9167
8	0.128490	3.264	16510	19.96	1565.2	0.6389	477.067	2.0961	1357.5	0.7367	413.76	2.4169
9	0.114424	2.906	13093	25.17	1241.2	0.8056	378.331	2.6432	1076.5	0.9289	328.12	3.0476
10	0.101897	2.588	10383	31.73	984.35	1.0159	300.031	3.3330	853.72	1.1713	260.21	3.8430
11	0.090742	2.305	8234.1	40.01	780.63	1.2810	237.935	4.2028	677.03	1.4770	206.36	4.8459
12	0.080808	2.053	6529.9	50.46	619.07	1.6153	188.691	5.2997	536.91	1.8625	163.65	6.1106
13	0.071962	1.828	5178.5	63.63	490.94	2.0369	149.639	6.6828	425.79	2.3486	129.78	7.7053
14	0.064084	1.628	4106.7	80.23	389.33	2.5685	118.669	8.4268	337.67	2.9615	102.92	9.7162
15	0.057068	1.450	3256.8	101.2	308.76	3.2388	94.1088	10.626	267.78	3.7344	81.620	12.252
16	0.050821	1.291	2582.7	127.6	244.85	4.0841	74.6316	13.399	212.36	4.7090	64.727	15.449
17	0.045257	1.150	2048.2	160.9	194.18	5.1499	59.1856	16.896	168.41	5.9379	51.331	19.481
18	0.040303	1.024	1624.3	202.8	153.99	6.4939	46.9363	21.305	133.55	7.4876	40.707	24.566
19	0.035891	0.912	1288.1	255.8	122.12	8.1887	37.2222	26.866	105.91	9.4417	32.282	30.977
20	0.031961	0.812	1021.5	322.5	96.846	10.326	29.5185	33.877	83.993	11.906	25.601	39.061
21	0.028462	0.723	810.11	406.7	76.802	13.020	23.4093	42.718	66.610	15.013	20.303	49.255
22	0.025347	0.644	642.45	512.9	60.907	16.419	18.5644	53.867	52.824	18.931	16.101	62.109
23	0.022572	0.573	509.49	646.7	48.301	20.703	14.7222	67.925	41.891	23.871	12.768	78.318
24	0.020101	0.511	404.04	815.5	38.305	26.106	11.6753	85.651	33.221	30.101	10.126	98.757
25	0.017900	0.455	320.42	1028	30.377	32.920	9.25890	108.00	26.346	37.957	8.0302	124.53
26	0.015941	0.405	254.10	1297	24.090	41.511	7.34264	136.19	20.893	47.863	6.3682	157.03
27	0.014196	0.361	201.51	1635	19.104	52.344	5.82298	171.73	16.569	60.354	5.0502	198.01
28	0.012641	0.321	159.81	2062	15.150	66.005	4.61783	216.55	13.140	76.105	4.0050	249.69
29	0.011258	0.286	126.73	2600	12.015	83.231	3.66211	273.07	10.420	95.966	3.1761	314.85
30	0.010025	0.255	100.50	3278	9.5282	104.95	2.90418	344.33	8.2637	121.01	2.5188	397.02
31	0.008928	0.227	79.703	4134	7.5562	132.34	2.30312	434.19	6.5534	152.59	1.9975	500.63
32	0.007950	0.202	63.207	5213	5.9923	166.88	1.82646	547.51	5.1971	192.42	1.5841	631.29
33	0.007080	0.180	50.126	6573	4.7521	210.43	1.44845	690.39	4.1215	242.63	1.2562	796.04
34	0.006305	0.160	39.752	8289	3.7686	265.35	1.14867	870.57	3.2685	305.95	0.9962	1003.8
35	0.005615	0.143	31.524	10452	2.9886	334.60	0.91094	1097.8	2.5920	385.80	0.7900	1265.7
36	0.005000	0.127	25.000	13179	2.3701	421.92	0.72241	1384.3	2.0556	486.48	0.6265	1596.1
37	0.004453	0.113	19.826	16619	1.8796	532.04	0.57289	1745.5	1.6301	613.45	0.4969	2012.6
38	0.003965	0.101	15.723	20956	1.4906	670.88	0.45433	2201.1	1.2928	773.54	0.3940	2537.9
39	0.003531	0.090	12.469	26425	1.1821	845.97	0.36030	2775.5	1.0252	975.42	0.3125	3200.2
40	0.003145	0.080	9.8881	33321	0.9374	1066.7	0.28573	3499.8	0.8130	1230.0	0.2478	4035.4
41	0.002800	0.071	7.8416	42018	0.7434	1345.1	0.22659	4413.2	0.6448	1551.0	0.1965	5088.5
42	0.002494	0.063	6.2187	52983	0.5896	1696.2	0.17970	5564.9	0.5113	1955.7	0.1558	6416.5
43	0.002221	0.056	4.9316	66811	0.4675	2138.9	0.14251	7017.3	0.4055	2466.1	0.1236	8091.0
44	0.001978	0.050	3.9110	84247	0.3708	2697.1	0.11301	8848.6	0.3216	3109.7	0.0980	10203
45	0.001761	0.045	3.1015	106233	0.2940	3400.9	0.08962	11158	0.2550	3921.3	0.0777	12865
46	0.001568	0.040	2.4596	133957	0.2332	4288.5	0.07107	14070	0.2022	4944.7	0.0616	16223
47	0.001397	0.035	1.9506	168917	0.1849	5407.7	0.05636	17742	0.1604	6235.1	0.0489	20457
48	0.001244	0.032	1.5469	213000	0.1466	6819.0	0.04470	22372	0.1272	7862.4	0.0388	25795
49	0.001108	0.028	1.2267	268588	0.1163	8598.5	0.03545	28210	0.1009	9914.3	0.0307	32527
50	0.000986	0.025	0.9728	338684	0.0922	10843	0.02811	35573	0.0800	12502	0.0244	41016
51	0.000878	0.022	0.7715	427072	0.0731	13672	0.02229	44856	0.0634	15764	0.0193	51720
52	0.000782	0.020	0.6118	538528	0.0580	17240	0.01768	56563	0.0503	19878	0.0153	65218
53	0.000697	0.018	0.4852	679072	0.0460	21740	0.01402	71324	0.0399	25066	0.0122	82238
54	0.000620	0.016	0.3848	856293	0.0365	27413	0.01112	89938	0.0316	31608	0.0096	103701
55	0.000552	0.014	0.3051	1079766	0.0289	34567	0.00882	113410	0.0251	39857	0.0076	130764
56	0.000492	0.012	0.2420	1361560	0.0229	43589	0.00699	143008	0.0199	50259	0.0061	164890
57	0.000438	0.011	0.1919	1716895	0.0182	54964	0.00555	180330	0.0158	63375	0.0048	207923
58	0.000390	0.010	0.1522	2164965	0.0144	69309	0.00440	227391	0.0125	79914	0.0038	262186
59	0.000347	0.009	0.1207	2729970	0.0114	87397	0.00349	286735	0.0099	100770	0.0030	330610
60	0.000309	0.008	0.0957	3442429	0.0091	110205	0.00277	361566	0.0079	127069	0.0024	416892

**Diameter**  $d_n = 0.005 \text{ inch} \times 92^{\frac{36-n}{39}} = 0.127 \text{ mm} \times 92^{\frac{36-n}{39}}$  Diameter of stock wire is typically +/-2% max tolerance

**Area-cm**  $A_n = (5 \times 92^{\frac{36-n}{39}})^2$

**Resistance**  $R = \rho \frac{\ell}{A}$   $\rho$  is 1.72e-8 at 20C with a tempco of +0.0039/K; 1.75354e-8 at 25C and 2.02186e-8 at 65C.  
Length is in meters and Area is in Sq-Meters

Copper length in Feet/Lb is based on 0.3220279 Lbs/Cu-in at 20C