

# HM Wire International, Inc.

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## AWG 24 – 58 Resistance Data ohms/1000ft.

AWG	Bare Copper					
	Diameter (inches)			Resistance (ohms/1000ft.)		
	Min.	Nom.	Max.	Min.	Nom.	Max.*
24.0	0.0199	0.0201	0.00202	24.91	25.55	26.19
24.5	0.0188	0.0190	0.00191	27.86	28.60	29.34
25.0	0.0177	0.0179	0.00180	31.37	32.24	33.10
25.5	0.0167	0.0169	0.00170	35.17	36.18	37.19
26.0	0.0157	0.0159	0.00160	39.17	40.89	42.07
26.5	0.0149	0.0150	0.00151	44.58	45.65	46.71
27.0	0.0141	0.0142	0.00143	49.71	50.94	52.17
27.5	0.0133	0.0134	0.00135	55.78	57.20	58.63
28.0	0.0125	0.0126	0.00127	63.02	64.70	66.37
28.5	0.0118	0.0119	0.0120	70.59	72.54	74.48
29.0	0.0112	0.0113	0.0114	78.22	80.45	82.68
29.5	0.0105	0.0106	0.0107	88.79	91.43	94.07
30.0	0.0099	0.0100	0.0101	99.65	102.7	105.8
30.5	0.0094	0.0095	0.0096	110.3	113.8	117.4
31.0	0.0088	0.0089	0.0090	125.5	129.7	133.9
31.5	0.0083	0.0084	0.0085	140.7	145.6	150.5
32.0	0.0079	0.0080	0.0081	154.9	160.6	166.2
32.5	0.0074	0.0075	0.0076	176.0	182.7	189.4
33.0	0.0070	0.0071	0.0072	196.1	203.9	211.7
33.5	0.0066	0.0067	0.0068	219.8	229.0	238.1
34.0	0.0062	0.0063	0.0064	248.2	259.0	269.8
34.5	0.0058	0.0059	0.0060	282.4	295.3	308.3
35.0	0.0055	0.0056	0.0057	312.9	327.9	342.8
35.5	0.0052	0.0053	0.0054	348.6	366.1	383.5
36.0	0.0049	0.0050	0.0051	390.8	411.4	431.9
36.5	0.0046	0.0047	0.0048	441.2	465.7	490.1
37.0	0.0044	0.0045	0.0046	480.4	508.0	535.7
37.5	0.0041	0.0042	0.0043	549.8	583.4	617.0
38.0	0.0039	0.0040	0.0041	604.7	643.3	681.9
38.5	0.0036	0.0037	0.0038	703.9	752.1	800.2
39.0	0.0034	0.0035	0.0036	784.3	840.7	897.1
39.5	0.0032	0.0033	0.0034	879.3	946.1	1013
40.0	0.0030	0.0031	0.0032	992.7	1073	1152
40.5	0.0029	0.0030	0.0031	1058	1145	1233
41.0	0.0027	0.0028	0.0029	1209	1316	1423
41.5	0.0025	0.0026	0.0027	1394	1527	1659
42.0	0.0024	0.0025	0.0026	1504	1652	1801

AWG	Bare Copper					
	Diameter (inches)			Resistance (ohms/1000ft.)		
	Min.	Nom.	Max.	Min.	Nom.	Max.*
42.5	0.0023	0.0024	0.0025	1626	1793	1960
43.0	0.0021	0.0022	0.0023	1922	2137	2352
43.5	0.0020	0.0021	0.0022	2100	2346	2593
44.0	0.0019	0.00200	0.0021	2305	2589	2873
44.5	0.0018	0.00190	0.0020	2541	2871	3201
45.0	0.0017	0.00176	0.00183	3.080	3.348	3.616
45.5	0.0016	0.00166	0.00173	3.472	3.757	4.099
46.0	0.0015	0.00157	0.00164	3.870	4.207	4.544
46.5	0.0014	0.00148	0.00154	4.377	4.733	5.134
47.0	0.00135	0.00140	0.00146	4.868	5.291	5.714
47.5	0.00127	0.00132	0.00137	5.525	5.962	6.453
48.0	0.0019	0.00124	0.00129	6.205	6.745	7.285
48.5	0.0013	0.00117	0.00122	7.008	7.585	8.123
49.0	0.00107	0.00111	0.00116	7.744	8.417	9.090
49.5	0.00101	0.00105	0.00109	8.720	9.386	10.371
50.0	0.00095	0.00099	0.00103	9.734	10.58	11.43
51.0	0.00085	0.00088	0.00092	12.32	13.39	14.46
52.0	0.00075	0.00078	0.00081	15.69	17.05	18.41
53.0	0.00067	0.00070	0.00073	19.48	21.17	22.86
54.0	0.00060	0.00062	0.00065	24.82	26.98	29.14
55.0	0.00053	0.00055	0.00057	31.54	34.28	37.02
56.0	0.00047	0.00049	0.00051	39.73	43.19	46.65
57.0	0.00042	0.00044	0.00046	49.74	54.06	58.39
58.0	0.000375	0.00039	0.00041	62.57	68.01	73.45

Information to be used as a guideline only.

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**All tolerances based on NEMA MW 1000**

**\*Resistance based upon copper conductivity of 100% I.A.C.S. Actual value may be up to 120% I.A.C.S.**

**45-58 AWG Theoretical bare wire diameters by resistance.**