

NEOTECH

Copper Winding Wires - Complete Technical Table

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This table is one of the most comprehensive lists of copper winding (magnet) wire parameters available. It contains data useful for designing inductor coils and chokes, transformers, electric motors, electromagnets, and other devices using copper windings. The table includes data on winding wire diameters, cross-sections, resistance, and the tension values used during the winding process.

Standard	Conductor Diameter - Wire Size				Weight	Resistivity	Permissible Wire Tension Force according to the Aumann Table (before plastic deformation)			Wire Cross-Section (copper only - no insulation)		Current Capacity
	mm	in	AWG	SWG	[kg/km] [g/m]	[Ω/km] [mΩ/m]	N	kg	Lbs	mm²	in²	A
IEC 60317 NEMA MW 1000	0.01	0.0004			0.0008	217650	0.002	0.0002	0.0004	0.000079	0.00000012	Unmeasurable value (below 79 mA)
	0.012	0.0005			0.0011	151140	0.008	0.0008	0.0018	0.000113	0.00000018	
	0.014	0.0006			0.0015	111040	0.018	0.0018	0.0040	0.000154	0.00000024	
	0.016	0.00063			0.0019	85020	0.031	0.0032	0.0071	0.000201	0.00000031	
	0.018	0.0007			0.0024	67180	0.039	0.0040	0.0088	0.000254	0.00000039	
	0.019	0.00075			0.0027	60290	0.044	0.0045	0.0099	0.000284	0.00000044	
	0.02	0.0008			0.0029	54410	0.050	0.0051	0.0112	0.000314	0.00000049	
	0.021	0.00083			0.0033	49350	0.054	0.0055	0.0121	0.000346	0.00000054	
	0.022	0.0009			0.0036	44970	0.057	0.0059	0.0129	0.000380	0.00000059	
	0.023	0.00091			0.0039	41140	0.061	0.0063	0.0138	0.000415	0.00000064	
	0.024	0.00094			0.0042	37790	0.066	0.0067	0.0148	0.000452	0.00000070	
	0.025	0.001	50	50	0.0046	34820	0.070	0.0071	0.0157	0.000491	0.00000076	
	0.027	0.00106			0.0054	29860	0.081	0.0083	0.0183	0.000573	0.00000089	
	0.028	0.0011	49		0.01	27760	0.087	0.0089	0.0196	0.000616	0.00000095	
	0.03	0.0012		49	0.0066 – 0.0070	24180	0.100	0.0102	0.0225	0.000707	0.00000110	
	0.032	0.0013	48		0.0071 – 0.0075	21250 – 27250	0.120	0.0122	0.0270	0.000804	0.00000125	
	0.034	0.00134			0.0085	18830	0.130	0.0132	0.0291	0.000908	0.00000141	
NEMA MW 1000	0.035	0.0014	47		0.0090	17810	0.135	0.0137	0.0303	0.000962	0.00000149	
IEC 60317	0.036	0.00142			0.0088 – 0.0096	16790	0.140	0.0143	0.0315	0.001018	0.00000158	
	0.038	0.0015			0.0106	15070	0.155	0.0158	0.0347	0.001134	0.00000176	
	0.04	0.0016	46		0.0111 – 0.0120	13600 – 14920	0.170	0.0173	0.0382	0.001257	0.00000195	
NEMA MW 1000	0.041	0.00161		48	0.0117	13015	0.178	0.0181	0.0399	0.001320	0.00000205	
IEC 60317	0.043	0.0017			0.0136	11770	0.193	0.0197	0.0435	0.001452	0.00000225	
	0.045	0.0018	45		0.01395 – 0.01496	10750 – 10984	0.210	0.0214	0.0472	0.001590	0.00000247	
	0.048	0.0019			0.0170	9447	0.228	0.0232	0.0512	0.001810	0.00000280	
	0.05	0.002			0.0175 – 0.0190	8706 – 9489	0.240	0.0245	0.0539	0.001963	0.00000304	
NEMA MW 1000	0.051	0.00201	44	47	0.0180	8507	0.250	0.0254	0.0561	0.002043	0.00000317	
IEC 60317	0.053	0.0021			0.0207	7748	0.269	0.0274	0.0605	0.002206	0.00000342	
NEMA MW 1000	0.056	0.0022	43		0.02180 – 0.02306	6940 – 7031	0.300	0.0306	0.0674	0.002463	0.00000382	

Standard	Conductor Diameter - Wire Size				Weight	Resistivity	Permissible Wire Tension Force according to the Aumann Table (before plastic deformation)			Wire Cross-Section (copper only - no insulation)		Current Capacity
	mm	in	AWG	SWG	[kg/km] [g/m]	[Ω/km] [mΩ/m]	N	kg	Lbs	mm²	in²	A
	0.06	0.00236			0.0265	6046	0.330	0.0336	0.0742	0.002827	0.00000438	Unmeasurable value (below 79 mA)
	0.061	0.0024		46	0.0260	5765	0.340	0.0346	0.0764	0.002922	0.00000453	
IEC 60317	0.063	0.00248			0.0277 – 0.02918	5484	0.360	0.0367	0.0809	0.003117	0.00000483	
NEMA MW 1000	0.064	0.0025	42		0.0282	5442	0.368	0.0375	0.0828	0.003217	0.00000499	
IEC 60317	0.067	0.0026			0.0330	4848	0.394	0.0402	0.0885	0.003526	0.00000546	
	0.07	0.00276			0.0359 – 0.039	4442 – 4747	0.421	0.0429	0.0946	0.003848	0.00000597	
	0.071	0.0028	41	45	0.0352 – 0.03694	4318 – 4341	0.430	0.0438	0.0966	0.003959	0.00000614	
	0.075	0.003			0.0412	3869	0.469	0.0478	0.1053	0.004418	0.00000685	
NEMA MW 1000	0.079	0.0031	40		0.0433	3540	0.509	0.0519	0.1145	0.004902	0.00000760	
IEC 60317	0.08	0.00315			0.0447 – 0.0490	3401 – 3703	0.520	0.0530	0.1169	0.005027	0.00000779	
	0.081	0.0032		44	0.0458	3338	0.531	0.0542	0.1194	0.005153	0.00000799	
NEMA MW 1000	0.084	0.0033	39.5		0.0490	3124	0.566	0.0577	0.1273	0.005542	0.00000859	
IEC 60317	0.085	0.00335			0.0529	3012	0.578	0.0589	0.1299	0.005675	0.00000880	
NEMA MW 1000	0.089	0.0035	39		0.0552	2777	0.627	0.0640	0.1410	0.006221	0.00000964	
IEC 60317	0.09	0.00354			0.0566 – 0.0591	2687	0.640	0.0652	0.1438	0.006362	0.00000986	
	0.091	0.0036		43	0.0578	2586	0.652	0.0665	0.1466	0.006504	0.00001008	
NEMA MW 1000	0.094	0.0037	38.5		0.0617	2485	0.690	0.0704	0.1551	0.006940	0.00001076	
IEC 60317	0.095	0.00374			0.0658	2412	0.703	0.0717	0.1581	0.007088	0.00001099	
	0.1	0.0039		42	0.0698 – 0.0760	2176 – 2333	0.770	0.0785	0.1730	0.007854	0.00001217	0.079
NEMA MW 1000	0.102	0.004	38		0.0721	2126	0.799	0.0815	0.1797	0.008171	0.00001267	0.08
IEC 60317	0.106	0.00417			0.0818	1937	0.860	0.0877	0.1933	0.008825	0.00001368	0.09
NEMA MW 1000	0.107	0.0042	37.5		0.0795	1928	0.875	0.0892	0.1966	0.008992	0.00001394	0.09
IEC 60317	0.11	0.0043		41	0.0882	1799	0.919	0.0937	0.2066	0.009503	0.00001473	0.10
	0.112	0.0044			0.0876 – 0.09132	1735	0.950	0.0968	0.2135	0.009852	0.00001527	0.10
NEMA MW 1000	0.114	0.0045	37		0.0912	1680	0.976	0.0995	0.2194	0.010207	0.00001582	0.10
IEC 60317	0.118	0.0046			0.1013	1563	1.030	0.1050	0.2315	0.010936	0.00001695	0.11
NEMA MW 1000	0.119	0.0047	36.5		0.0995	1540	1.045	0.1066	0.2349	0.011122	0.00001724	0.11
IEC 60317	0.12	0.00472		40	0.1047	1511	1.061	0.1081	0.2384	0.011310	0.00001753	0.11
	0.125	0.0049			0.1136	1393	1.140	0.1162	0.2562	0.012272	0.00001902	0.12
NEMA MW 1000	0.127	0.005	36		0.1126	1360	1.174	0.1196	0.2637	0.012668	0.00001963	0.13
IEC 60317	0.13	0.0051		39	0.1230	1288	1.225	0.1249	0.2753	0.013273	0.00002057	0.13

Standard	Conductor Diameter - Wire Size				Weight	Resistivity	Permissible Wire Tension Force according to the Aumann Table (before plastic deformation)			Wire Cross-Section (copper only - no insulation)		Current Capacity
	mm	in	AWG	SWG	[kg/km] [g/m]	[Ω/km] [mΩ/m]	N	kg	Lbs	mm²	in²	A
IEC 60317	0.132	0.0052			0.12673	1249.0	1.260	0.128	0.283	0.01368	0.0000212	0.14
NEMA MW 1000	0.135	0.0053	35.5		0.12652	1211.0	1.312	0.134	0.295	0.01431	0.0000222	0.15
IEC 60317	0.14	0.0055			0.13690 – 0.14225	1110.0	1.400	0.143	0.315	0.01539	0.0000239	0.15
NEMA MW 1000	0.142	0.0056	34		0.14126	1084.0	1.437	0.146	0.323	0.01584	0.0000245	0.18
IEC 60317	0.15	0.0059	34.5	38	0.15685 – 0.16327	967.3 – 977.4	1.590	0.162	0.357	0.01767	0.0000274	0.19
	0.16	0.0063	34		0.17870 – 0.18553	850.2 – 857.3	1.780	0.181	0.400	0.02011	0.0000312	0.20
	0.17	0.0067	33.5	37	0.20224 – 0.20960	753.1 – 757.9	1.990	0.203	0.447	0.02270	0.0000352	0.23
	0.18	0.0071	33		0.22620 – 0.23458	671.8 – 674.9	2.210	0.225	0.497	0.02545	0.0000394	0.26
	0.19	0.0075		36	0.26157	602.9	2.430	0.248	0.546	0.02835	0.0000439	0.28
NEMA MW 1000	0.191	0.00752	32.5		0.25343	605.0	2.453	0.250	0.551	0.02865	0.0000444	0.30
IEC 60317	0.2	0.0079			0.27930 – 0.29600	544.10 – 565.00	2.670	0.272	0.600	0.03142	0.0000487	0.31
NEMA MW 1000	0.203	0.008	32		0.28826	531.49	2.746	0.280	0.617	0.03237	0.0000502	0.33
	0.21	0.0083		35	0.30791	507.90	2.927	0.298	0.658	0.03464	0.0000537	0.35
IEC 60317	0.212	0.00835			0.32520	484.30	2.980	0.304	0.670	0.03530	0.0000547	0.36
NEMA MW 1000	0.213	0.0084	31.5		0.31787	482.28	3.005	0.306	0.675	0.03563	0.0000552	0.37
	0.22	0.0087			0.37100	449.00	3.185	0.325	0.716	0.03801	0.0000589	0.38
IEC 60317	0.224	0.0088			0.35030 – 0.36245	433.80	3.290	0.335	0.739	0.03941	0.0000611	0.41
NEMA MW 1000	0.226	0.0089	31		0.35686	429.46	3.341	0.341	0.751	0.04011	0.0000622	0.42
	0.23	0.0091		34	0.36936	410.13	3.443	0.351	0.774	0.04155	0.0000644	0.44
IEC 60317	0.236	0.0093			0.40306	390.80	3.600	0.367	0.809	0.04374	0.0000678	0.46
NEMA MW 1000	0.241	0.0095	30.5		0.40657	376.96	3.744	0.382	0.841	0.04562	0.0000707	0.48
IEC 60317	0.25	0.0098		33	0.43640 – 0.46200	348.20 – 362.00	4.010	0.409	0.901	0.04909	0.0000761	0.49
NEMA MW 1000	0.254	0.01	30		0.45047	340.22	4.127	0.421	0.928	0.05067	0.0000785	0.53
IEC 60317	0.265	0.0104			0.50710	309.90	4.460	0.455	1.002	0.05515	0.0000855	0.60
NEMA MW 1000	0.269	0.0106	29.5	32	0.50612	302.82	4.580	0.467	1.029	0.05683	0.0000881	0.62
IEC 60317	0.28	0.0110			0.54740 – 0.57700	277.60 – 288.00	4.920	0.502	1.106	0.06158	0.0000954	0.70
NEMA MW 1000	0.287	0.0113	29		0.57518	266.47	5.136	0.524	1.154	0.06469	0.0001003	0.75
	0.29	0.0114		31	0.58720	254.14	5.230	0.533	1.175	0.06605	0.0001024	0.77
IEC 60317	0.3	0.0118			0.64851	241.80	5.550	0.566	1.247	0.07069	0.0001096	0.84
NEMA MW 1000	0.302	0.0119	28.5		0.63783	240.29	5.619	0.573	1.263	0.07163	0.0001110	0.86
	0.31	0.0122		30	0.67099	229.80	5.900	0.601	1.326	0.07548	0.0001170	0.92

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	mm	in	AWG	SWG	[kg/km] [g/m]	[Ω/km] [mΩ/m]	N	kg	Lbs	mm²	in²	A
IEC 60317	0.315	0.0124			0.69280 – 0.71429	219.30	6.080	0.620	1.366	0.0779	0.000121	0.96
NEMA MW 1000	0.32	0.0126	28		0.71506 – 0.72800	214.34 – 227.00	6.253	0.637	1.405	0.0804	0.000125	1.00
IEC 60317	0.335	0.0132			0.80775	193.90	6.790	0.692	1.526	0.0881	0.000137	1.17
NEMA MW 1000	0.34	0.0134	27.5		0.80882	189.50	6.969	0.710	1.566	0.0908	0.000141	1.23
	0.35	0.0138		29	0.85532	181.10	7.334	0.748	1.648	0.0962	0.000149	1.35
IEC 60317	0.355	0.014			0.87990 – 0.90579	172.70	7.520	0.767	1.690	0.0990	0.000153	1.41
	0.36	0.0142			0.92600	178.00	7.709	0.786	1.732	0.1018	0.000158	1.47
NEMA MW 1000	0.361	0.01421	27		0.90823	168.73	7.747	0.790	1.741	0.1024	0.000159	1.48
IEC 60317	0.375	0.0148			1.0111	154.80	8.290	0.845	1.863	0.1104	0.000171	1.66
NEMA MW 1000	0.381	0.0150	26.5	28	1.0134	151.21	8.512	0.868	1.913	0.1140	0.000177	1.74
IEC 60317	0.4	0.0157			1.1170 – 1.1720	136.00 – 140.00	9.240	0.942	2.077	0.1257	0.000195	2.00
NEMA MW 1000	0.404	0.0159	26		1.1387	134.58	9.405	0.959	2.114	0.1282	0.000199	2.05
IEC 60317	0.425	0.0167		27	1.2953	120.50	10.300	1.050	2.315	0.1419	0.000220	2.31
NEMA MW 1000	0.429	0.0169	25.5		1.2865	119.13	10.470	1.067	2.353	0.1445	0.000224	2.36
IEC 60317	0.45	0.0177			1.4140 – 1.4514	107.5 – 110.0	11.390	1.161	2.560	0.1590	0.000247	2.63
NEMA MW 1000	0.455	0.0179	25		1.4432	106.20	11.609	1.183	2.609	0.1626	0.000252	2.70
	0.46	0.0181		26	1.4774	101.33	11.831	1.206	2.659	0.1662	0.000258	2.77
IEC 60317	0.475	0.0187			1.6181	96.46	12.510	1.275	2.811	0.1772	0.000275	2.97
NEMA MW 1000	0.483	0.019	24.5		1.6261	94.26	12.875	1.312	2.893	0.1832	0.000284	3.09
IEC 60317	0.5	0.0197			1.7460 – 1.7889	87.06 – 89.00	13.670	1.393	3.072	0.1963	0.000304	3.34
NEMA MW 1000	0.511	0.0201	24	25	1.8200	84.22	14.203	1.448	3.192	0.2051	0.000318	3.50
	0.53	0.0209			1.9701	77.48	15.150	1.544	3.405	0.2206	0.000342	3.69
NEMA MW 1000	0.541	0.0213	23.5		2.0432	75.00	15.741	1.605	3.537	0.2299	0.000356	3.81
IEC 60317	0.56	0.022		24	2.1900	69.40	16.790	1.712	3.773	0.2463	0.000382	4.02
NEMA MW 1000	0.574	0.0226	23		2.3007	66.63	17.498	1.784	3.932	0.2588	0.000401	4.17
	0.6	0.0236			2.5249	60.46	18.860	1.923	4.238	0.2827	0.000438	4.47
NEMA MW 1000	0.607	0.0239	22.5	23	2.5730	59.58	19.268	1.964	4.330	0.2894	0.000449	4.56
IEC 60317	0.63	0.0248			2.7710 – 2.8780	54.84 – 56.00	20.640	2.104	4.638	0.3117	0.000483	4.84
NEMA MW 1000	0.643	0.0253	22		2.8826	53.15	21.388	2.180	4.807	0.3247	0.000503	5.00
	0.67	0.0264			3.1484	48.49	22.990	2.344	5.167	0.3526	0.000546	5.36
NEMA MW 1000	0.683	0.0269	21.5		3.2591	47.01	23.732	2.419	5.333	0.3664	0.000568	5.54

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	mm	in	AWG	SWG	[kg/km] [g/m]	[Ω/km] [mΩ/m]	N	kg	Lbs	mm²	in²	A
IEC 60317	0.71	0.028		22	3.5200 – 3.6470	43.18 – 44.00	25.32	2.58	5.69	0.396	0.000614	5.92
NEMA MW 1000	0.724	0.029	21		3.6594	41.90	26.15	2.67	5.88	0.412	0.000638	6.12
IEC 60317	0.725	0.0285			0.1091	40.00	26.21	2.67	5.89	0.413	0.000640	6.13
	0.75	0.03			4.1310	39.00	27.73	2.83	6.23	0.442	0.000685	6.51
NEMA MW 1000	0.767	0.0302	20.5		4.1088	37.30	28.84	2.94	6.48	0.462	0.000716	6.77
IEC 60317	0.8	0.031			4.4690 – 4.6210	34.01 – 35.00	31.06	3.17	6.98	0.503	0.000779	7.29
NEMA MW 1000	0.813	0.032	20	21	4.6118	33.23	31.93	3.26	7.18	0.519	0.000805	7.50
IEC 60317	0.85	0.033			5.0450 – 5.2320	30.12 – 31.00	34.50	3.52	7.75	0.567	0.000880	7.95
NEMA MW 1000	0.861	0.034	19.5		5.1758	29.61	35.27	3.59	7.93	0.582	0.000902	8.09
IEC 60317	0.9	0.035			5.6560 – 5.8370	26.87 – 27.00	38.06	3.88	8.55	0.636	0.000986	8.60
NEMA MW 1000	0.912	0.036	19	20	5.8053	26.40	38.92	3.97	8.75	0.653	0.001013	8.76
IEC 60317	0.95	0.037			6.3010 – 6.5240	24.00 – 24.12	41.71	4.25	9.37	0.709	0.001099	9.28
NEMA MW 1000	0.965	0.038	18.5		6.5048	23.56	43.07	4.39	9.68	0.731	0.001134	9.49
IEC 60317	1	0.039			6.9820 – 7.1950	21.76 – 22.00	46.34	4.72	10.41	0.785	0.001217	10.00
NEMA MW 1000	1.024	0.04	18	19	7.3158	20.951	47.92	4.89	10.77	0.824	0.001277	11.00
IEC 60317	1.06	0.042			7.845 – 8.123	19.370	50.37	5.13	11.32	0.882	0.001368	11.73
NEMA MW 1000	1.085	0.043	17.5		8.213	18.661	52.38	5.34	11.77	0.925	0.001433	12.25
IEC 60317	1.12	0.044			8.758 – 9.004	17.350	55.27	5.63	12.42	0.985	0.001527	13.00
NEMA MW 1000	1.151	0.045	17		9.243	16.581	57.99	5.91	13.03	1.040	0.001613	13.52
IEC 60317	1.18	0.046			9.722 – 10.108	15.630	60.60	6.18	13.62	1.094	0.001695	14.01
NEMA MW 1000	1.219	0.048	16.5	18	10.378	14.767	64.00	6.52	14.38	1.167	0.001809	14.70
IEC 60317	1.25	0.049			10.91 – 11.19	13.930	66.79	6.81	15.01	1.227	0.001902	15.26
NEMA MW 1000	1.29	0.051	16		11.624	13.186	70.60	7.20	15.87	1.307	0.002026	16.00
IEC 60317	1.32	0.052			12.170 – 12.602	12.490	73.54	7.50	16.53	1.368	0.002121	16.20
NEMA MW 1000	1.369	0.054	15.5		13.085	11.713	77.74	7.92	17.47	1.472	0.002282	16.54
IEC 60317	1.4	0.055			13.69 – 14.009	11.100	80.47	8.20	18.08	1.539	0.002386	16.76
NEMA MW 1000	1.42	0.056		17	14.079	10.768	82.16	8.38	18.46	1.584	0.002455	16.90
	1.45	0.057	15		14.687	10.436	84.75	8.64	19.04	1.651	0.002560	17.12
IEC 60317	1.5	0.059			15.710 - 16.137	9.670	89.17	9.09	20.04	1.767	0.002739	17.50
NEMA MW 1000	1.537	0.061	14.5		16.487	9.295	92.79	9.46	20.85	1.855	0.002876	18.24
IEC 60317	1.6	0.063			17.870 - 18.259	8.500	99.17	10.11	22.29	2.011	0.003116	19.54

Standard	Conductor Diameter - Wire Size				Weight	Resistivity	Permissible Wire Tension Force according to the Aumann Table (before plastic deformation)			Wire Cross-Section (copper only - no insulation)		Current Capacity
	mm	in	AWG	SWG	[kg/km] [g/m]	[Ω/km] [mΩ/m]	N	kg	Lbs	mm²	in²	A
NEMA MW 1000	1.628	0.064	14	16	18.513	8.2810	102.1	10.4	23.0	2.08	0.00323	20.13
IEC 60317	1.7	0.067			20.180 – 20.672	7.5310	110.0	11.2	24.7	2.27	0.00352	21.70
NEMA MW 1000	1.725	0.068	13.5		20.760	7.3786	112.7	11.5	25.3	2.34	0.00362	22.26
IEC 60317	1.8	0.071			22.620 – 23.069	6.7180	121.0	12.3	27.2	2.54	0.00394	24.00
NEMA MW 1000	1.829	0.072	13	15	23.349	6.5649	124.3	12.7	27.9	2.63	0.00407	24.47
IEC 60317	1.9	0.075			25.210 – 25.691	6.0290	132.6	13.5	29.8	2.84	0.00439	25.67
NEMA MW 1000	1.938	0.076	12.5		26.221	5.8430	138.2	14.1	31.1	2.95	0.00457	26.32
IEC 60317	2	0.079			27.93 – 28.44	5.4410	147.7	15.1	33.2	3.14	0.00487	27.42
NEMA MW 1000	2.052	0.081	12	14	29.406	5.2130	152.6	15.6	34.3	3.31	0.00513	28.37
IEC 60317	2.12	0.083			31.380 – 31.938	4.8430	159.2	16.2	35.8	3.53	0.00547	29.65
NEMA MW 1000	2.174	0.086	11.5		33.007	4.6420	166.3	16.9	37.4	3.71	0.00575	30.69
IEC 60317	2.24	0.088			35.030 – 35.624	4.3380	175.1	17.8	39.3	3.94	0.00611	32.00
NEMA MW 1000	2.304	0.091	11		37.055	4.1370	183.4	18.7	41.2	4.17	0.00646	33.04
IEC 60317	2.36	0.093		13	38.890 – 39.527	3.9080	190.9	19.5	42.9	4.37	0.00678	33.98
NEMA MW 1000	2.443	0.096	10.5		41.683	3.6780	201.7	20.6	45.3	4.69	0.00727	35.41
IEC 60317	2.5	0.098			43.640 – 44.317	3.4820	209.4	21.3	47.1	4.91	0.00761	36.43
NEMA MW 1000	2.588	0.102	10		46.773	3.2776	221.3	22.6	49.7	5.26	0.00815	38.03
	2.65	0.104		12	49.777	3.0973	229.9	23.4	51.7	5.52	0.00855	39.20
	2.743	0.108	9.5		52.532	2.9170	242.6	24.7	54.5	5.91	0.00916	41.00
IEC 60317	2.8	0.11			54.740 – 55.529	2.7760	250.6	25.5	56.3	6.16	0.00954	42.00
NEMA MW 1000	2.906	0.114	9	11	58.946	2.5997	264.5	27.0	59.4	6.63	0.01028	43.90
IEC 60317	3	0.118			62.840 - 63.715	2.4180	277.3	28.3	62.3	7.07	0.01096	45.65
NEMA MW 1000	3.081	0.121	8.5		66.283	2.3127	289.0	29.5	64.9	7.46	0.01156	47.20
IEC 60317	3.15	0.124			69.280	2.2120	295.0	30.1	66.3	7.79	0.01208	48.56
	3.264	0.129	8	10	74.378	2.0607	301.0	30.7	67.6	8.37	0.01297	50.86
IEC 60317	3.35	0.132			78.630	1.9560	311.0	31.7	69.9	8.81	0.01366	52.65
NEMA MW 1000	3.459	0.136	7.5		83.560	1.8343	319.0	32.5	71.7	9.40	0.01457	54.99
IEC 60317	3.55	0.14			87.990	1.7420	327.0	33.3	73.5	9.90	0.01534	57.00
NEMA MW 1000	3.665	0.144	7	9	93.799	1.6342	333.0	33.9	74.8	10.55	0.01635	59.06
	3.884	0.153	6.5		105.302	1.4554	340.0	34.7	76.4	11.85	0.01836	63.17
IEC 60317	4	0.157			111.700	1.3720	377.0	38.4	84.7	12.57	0.01948	65.44

Standard	Conductor Diameter - Wire Size				Weight	Resistivity	Permissible Wire Tension Force according to the Aumann Table (before plastic deformation)			Wire Cross-Section (copper only - no insulation)		Current Capacity
	mm	in	AWG	SWG	[kg/km] [g/m]	[Ω/km] [mΩ/m]	N	kg	Lbs	mm²	in²	A
	4.06	0.16		8	115.09	1.33429	400.0	40.8	89.9	12.95	0.0201	66.64
NEMA MW 1000	4.115	0.162	6		118.20	1.29659	421.0	42.9	94.6	13.30	0.0206	67.76
	4.361	0.17	5.5		132.79	1.15420	460.0	46.9	103.4	14.94	0.0232	72.94
IEC 60317	4.5	0.18		7	141.40	1.07500	495.0	50.5	111.2	15.90	0.0247	76.00
NEMA MW 1000	4.62	0.182	5		148.97	1.02822	525.0	53.5	118.0	16.76	0.0260	79.13
	4.897	0.19	4.5	6	167.42	0.91535	543.0	55.4	122.0	18.83	0.0292	82.25
NEMA MW 1000	5.189	0.2	4		187.96	0.81529	589.0	60.0	132.4	21.15	0.0328	85.38
	5.38	0.21		5	202.10	0.77067	637.0	64.9	143.2	22.73	0.0352	88.50
	5.499	0.22	3.5		211.17	0.72605	689.8	70.3	155.0	23.75	0.0368	94.75
	5.827	0.23	3		237.06	0.64665	742.5	75.7	166.9	26.67	0.0413	97.88
	5.89	0.232		4	242.23	0.61122	795.3	81.1	178.7	27.25	0.0422	101.00
	6.175	0.24	2.5		266.23	0.57579	848.0	86.4	190.6	29.95	0.0464	107.00
	6.4	0.25		3	285.99	0.54429	906.0	92.4	203.6	32.17	0.0499	113.00
	6.543	0.26	2		298.97	0.51280	995.0	101.4	223.6	33.62	0.0521	119.00
	6.934	0.27	1.5		335.73	0.45669	1090.0	111.1	245.0	37.76	0.0585	122.00
	7.01	0.28		2	343.11	0.43159	1154.0	117.6	259.3	38.59	0.0598	125.00
	7.348	0.29	1		376.95	0.40650	1248.0	127.2	280.5	42.41	0.0657	138.00
	7.62	0.3		1	405.42	0.36434	1330.0	135.6	298.9	45.60	0.0707	144.50
	8.252	0.32	1/0 (0)		475.47	0.32218	1508.0	153.7	338.9	53.48	0.0829	151.00
	9.266	0.36	2/0 (00)		599.43	0.25558	1850.0	188.6	415.8	67.43	0.1045	171.50
	10.404	0.41	3/0 (000)		771.00	0.20280	2356.0	240.2	529.5	85.01	0.1318	192.00
	11.684	0.46	4/0 (0000)		975.00	0.16080	2513.0	256.2	564.8	107.22	0.1662	232.00

Notes:

1. The data presented in the table is for informational purposes only and does not replace the wire manufacturer's technical documentation or design calculations. Before use in production, verify the parameters with the supplier's current catalog data sheet and the requirements of the specific application.
2. The wire tension values provided should be considered recommended technological values used during the winding process, not as the mechanical strength limits of the material. Exceeding the recommended values IS POSSIBLE, but may result in damage to the enamel layer, permanent deformation of the wire, reduction of the conductor diameter, or deterioration of the winding's electrical parameters.
3. The current-carrying capacity data were determined at a temperature of 30°C and are indicative. The maximum permissible current should be determined individually for a given winding, taking into account the thermal conditions, device design, and wire insulation class.