



$$V_{drop} = (Current) \times (Distance(Ft)) \times (2) \times (Ohms\ per\ 1000Ft) \times (0.001)$$

AWG	Diameter		Turns of wire		Area		Copper resistance		NEC copper wire ampacity with 60/75/90 °C insulation (A)	Approximate standard metric equivalents	Fusing Current (copper)		
	(inch)	(mm)	(per in)	(per cm)	(kcmil)	(mm ²)	(Ω/km) (mΩ/m)	(Ω/kFT) (mΩ/ft)			Preece (~10s)	Onderdonk (1s)	Onderdonk (32ms)
0000 (4/0)	0.4600	11.684	2.17	0.856	212	107	0.1608	0.04901	195 / 230 / 260			31 kA	173 kA
000 (3/0)	0.4096	10.404	2.44	0.961	168	85.0	0.2028	0.06180	165 / 200 / 225			24.5 kA	137 kA
00 (2/0)	0.3648	9.266	2.74	1.08	133	67.4	0.2557	0.07793	145 / 175 / 195			19.5 kA	109 kA
0 (1/0)	0.3249	8.252	3.08	1.21	106	53.5	0.3224	0.09827	125 / 150 / 170		1.9 kA	15.5 kA	87 kA
1	0.2893	7.348	3.46	1.36	83.7	42.4	0.4066	0.1239	110 / 130 / 150		1.6 kA	12 kA	68 kA
2	0.2576	6.544	3.88	1.53	66.4	33.6	0.5127	0.1563	95 / 115 / 130		1.3 kA	9.7 kA	54 kA
3	0.2294	5.827	4.36	1.72	52.6	26.7	0.6465	0.1970	85 / 100 / 110	196/0.4	1.1 kA	7.7 kA	43 kA
4	0.2043	5.189	4.89	1.93	41.7	21.2	0.8152	0.2485	70 / 85 / 95		946 A	6.1 kA	34 kA
5	0.1819	4.621	5.50	2.16	33.1	16.8	1.028	0.3133		126/0.4	795 A	4.8 kA	27 kA
6	0.1620	4.115	6.17	2.43	26.3	13.3	1.296	0.3951	55 / 65 / 75		668 A	3.8 kA	21 kA
7	0.1443	3.665	6.93	2.73	20.8	10.5	1.634	0.4982		80/0.4	561 A	3 kA	17 kA
8	0.1285	3.264	7.78	3.06	16.5	8.37	2.061	0.6282	40 / 50 / 55		472 A	2.4 kA	13.5 kA
9	0.1144	2.906	8.74	3.44	13.1	6.63	2.599	0.7921		84/0.3	396 A	1.9 kA	10.7 kA
10	0.1019	2.588	9.81	3.86	10.4	5.26	3.277	0.9989	30 / 35 / 40		333 A	1.5 kA	8.5 kA
11	0.0907	2.305	11.0	4.34	8.23	4.17	4.132	1.260		56/0.3	280 A	1.2 kA	6.7 kA
12	0.0808	2.053	12.4	4.87	6.53	3.31	5.211	1.588	25 / 25 / 30		235A	955 A	5.3 kA
13	0.0720	1.828	13.9	5.47	5.18	2.62	6.571	2.003		50/0.25	198 A	758 A	4.2 kA
14	0.0641	1.628	15.6	6.14	4.11	2.08	8.286	2.525	20 / 20 / 25		166 A	601 A	3.3 kA
15	0.0571	1.450	17.5	6.90	3.26	1.65	10.45	3.184		30/0.25	140 A	477 A	2.7 kA
16	0.0508	1.291	19.7	7.75	2.58	1.31	13.17	4.016	— / — / 18		117 A	377 A	2.1 kA
17	0.0453	1.150	22.1	8.70	2.05	1.04	16.61	5.064		32/0.2	99 A	300 A	1.7 kA
18	0.0403	1.024	24.8	9.77	1.62	0.823	20.95	6.385	— / — / 14		83 A	237A	1.3 kA
19	0.0359	0.912	27.9	11.0	1.29	0.653	26.42	8.051		24/0.2	70 A	189 A	1 kA
20	0.0320	0.812	31.3	12.3	1.02	0.518	33.31	10.15		16/0.2	58.5 A	149 A	834 A
21	0.0285	0.723	35.1	13.8	0.810	0.410	42.00	12.80		13/0.2	49 A	119 A	662 A
22	0.0253	0.644	39.5	15.5	0.642	0.326	52.96	16.14		7/0.25	41 A	94 A	525 A
23	0.0226	0.573	44.3	17.4	0.509	0.258	66.79	20.36			35 A	74 A	416 A
24	0.0201	0.511	49.7	19.6	0.404	0.205	84.22	25.67		1/0.5, 7/0.2, 30/0.1	29 A	59 A	330 A
25	0.0179	0.455	55.9	22.0	0.320	0.162	106.2	32.37			24 A	47 A	262 A
26	0.0159	0.405	62.7	24.7	0.254	0.129	133.9	40.81		1/0.4, 7/0.15	20 A	37 A	208 A
27	0.0142	0.361	70.4	27.7	0.202	0.102	168.9	51.47					
28	0.0126	0.321	79.1	31.1	0.160	0.0810	212.9	64.90		7/0.12			
29	0.0113	0.286	88.8	35.0	0.127	0.0642	268.5	81.84					
30	0.0100	0.255	99.7	39.3	0.101	0.0509	338.6	103.2		1/0.25, 7/0.1			
31	0.00893	0.227	112	44.1	0.0797	0.0404	426.9	130.1					
32	0.00795	0.202	126	49.5	0.0632	0.0320	538.3	164.1		1/0.2, 7/0.08			
33	0.00708	0.180	141	55.6	0.0501	0.0254	678.8	206.9					
34	0.00630	0.160	159	62.4	0.0398	0.0201	856.0	260.9					
35	0.00561	0.143	178	70.1	0.0315	0.0160	1079	329.0					
36	0.00500	0.127	200	78.7	0.0250	0.0127	1361	414.8					
37	0.00445	0.113	225	88.4	0.0198	0.0100	1716	523.1					
38	0.00397	0.101	252	99.3	0.0157	0.00797	2164	659.6					
39	0.00353	0.0897	283	111	0.0125	0.00632	2729	831.8					
40	0.00314	0.0799	318	125	0.00989	0.00501	3441	1049					