

## Conductor reference

Conductor diameter (in.)	ACSR or all aluminum	Rated breaking strength	Aluminum alloy (5005-6201)	Rated breaking strength	Compacted ACSR or all aluminum	Rated breaking strength	AWAC	Rated breaking strength	Copper or copperweld copper composite	Rated breaking strength
<b>Bare conductor information AWG or kmcil</b>										
0.162	#6, Solid	474.0	-	-	-	-	-	-	#6, Solid	1,280
0.169	-	-	-	-	#6, 7W	528	-	-	-	-
0.174	-	-	-	-	-	-	-	-	91 <sup>1</sup> / <sub>4</sub> 2D	1,743
0.179	-	-	-	-	-	-	-	-	8C	1,362
0.182	#5, Solid	597.7	-	-	#6, 6/1	1,170	-	-	#5, Solid	1,591
0.184	#6, 7W	560	-	-	-	-	-	-	#6, 7W	1,229
0.198	#6, 6/1	1,170	#6, 7W	555	-	-	-	-	-	-
0.199	-	-	-	-	-	-	-	-	8A	2,233
0.201	-	-	#6, 3W	915	-	-	-	-	-	-
0.202	-	-	-	-	-	-	-	-	#6, 3W	1,204
0.204	#4, Solid	-	-	-	-	-	-	-	#4, Solid	1,970
0.206	-	753.9	-	-	-	-	-	-	#5, 7W	1,542
0.213	-	-	-	-	#4, 7W	826	-	-	-	-
0.219	-	-	-	-	-	-	-	-	8D	3,256
0.223	#5, 6/1	1,460	-	-	-	-	-	-	7A	2,754
0.225	-	-	-	-	-	-	-	-	6C	2,143
0.226	-	-	-	-	-	-	-	-	#5, 3W	1,516
0.229	#3, Solid	929.9	-	-	#4, 6/1	1,830	-	-	#3, Solid	2,439
0.230	-	-	-	-	-	-	-	-	6A	2,585
0.232	#4, 7W	915	-	-	-	-	-	-	#4, 7W	1,938
0.236	-	-	-	-	#4, 7/1	2,288	-	-	-	-
0.245	-	-	-	-	-	-	#4, 6/1	1,783	-	-
0.246	-	-	-	-	-	-	-	-	7D	4,022
0.250	#4, 6/1	1,830	#4, 7W	875	-	-	-	-	-	-
0.257	#4, 7/1	2,290	-	-	-	-	-	-	-	-
0.258	#2, Solid	1,172.6	-	-	#3, 6/1	2,250	-	-	#2, Solid; 5A	3,003; 3,193
0.260	#3, 7W	1,100	-	-	-	-	-	-	#3, 7W	2,433
0.261	-	-	-	-	-	-	#4, 5/2	2,830	-	-
0.268	-	-	-	-	#2, 7W	1,266	-	-	-	-
0.276	-	-	-	-	-	-	-	-	6D	4,942
0.281	#3, 6/1	2,250	-	-	-	-	#4, 4/3	4,305	-	-
0.286	-	-	-	-	-	-	-	-	#3, 3W	2,359
0.289	-	-	-	-	-	-	-	-	#1, Solid	3,688
0.290	-	-	-	-	#2, 6/1	2,790	-	-	4A	3,938
0.292	#2, 7W	1,340	-	-	-	-	-	-	#2, 7W	3,045
0.298	-	-	-	-	#2, 7/1	3,525	-	-	-	-
0.301	-	-	-	-	#1, 7W	1,537	-	-	-	-
0.307	-	-	-	-	-	-	#4, 3/4	6,325	-	-
0.308	-	-	-	-	-	-	-	-	2F	4,233
0.309	-	-	-	-	-	-	#2, 6/1	2,760	-	-
0.310	-	-	-	-	-	-	-	-	5D	6,035
0.316	#2, 6/1	2,790	32,7W	2,195	-	-	-	-	-	-
0.320	-	-	-	-	-	-	-	-	#2, 3W	2,913
0.325	#2, 7/1	3,525	-	-	-	-	-	-	1/0, Solid	4,517
0.326	-	-	-	-	#1, 6/1	3,480	-	-	5P	9,311
0.327	-	-	-	-	-	-	-	-	2G	5,626
0.328	#1, 7W	1,620	-	-	-	-	-	-	#1, 7W; 4N	3,804; 8,460

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<b>Bare conductor information AWG or kmcil (cont'd)</b>										
0.330	-	-	-	-	-	-	#2, 5/2	4,436	-	-
0.332	#1, 19W	1,685	-	-	-	-	-	-	#1, 19W	3,899
0.338	-	-	-	-	1/0, 7W	1,865	-	-	-	-
0.340	-	-	-	-	1/0, 19W	2,090	#4, 2/5	9,314	-	-
0.346	-	-	-	-	-	-	-	-	1F	5,266
0.348	-	-	-	-	-	-	-	-	4D	7,340
0.349	-	-	-	-	-	-	-	-	2J	7,322
0.355	#1, 6/1	3,480	-	-	-	-	#2, 4/3	6,785	-	-
0.360	-	-	-	-	-	-	-	-	#1, 3W	3,620
0.365	-	-	-	-	1/0, 6/1	4,280	-	-	2/0, Solid	5,519
0.366	-	-	-	-	-	-	-	-	2A; 4P	5,876; 11,420
0.367	80, 8/1	5,200	-	-	-	-	-	-	1G	6,956
0.368	1/0, 7W	1,970	-	-	-	-	-	-	1/0, 7W; 3N	4,750; 10,390
0.372	-	-	-	-	-	-	-	-	1/0, 19W	4,901
0.373	1/0, 19W	2,090	-	-	-	-	-	-	-	9,730
0.377	-	-	-	-	-	-	-	-	2K	-
0.381	-	-	-	-	2/0, 7W	2,350	-	-	-	-
0.382	-	-	-	-	2/0, 19W	2,586	-	-	-	-
0.386	-	-	-	-	-	-	#2, 3/4	9,793	-	-
0.388	-	-	-	-	-	-	-	-	1/0F	6,536
0.390	-	-	-	-	-	-	1/0, 6/1	4,246	1/0, 12W	4,841
0.392	-	-	-	-	-	-	-	-	1J	9,000
0.398	1/0, 6/1	4,280	1/0, 7W	3,405	-	-	-	-	-	-
0.410	-	-	-	-	2/0, 6/1	5,345	-	-	-	-
0.411	-	-	-	-	-	-	-	-	3P	13,910
0.412	-	-	-	-	-	-	-	-	1/0G	8,563
0.413	-	-	-	-	-	-	-	-	2N	12,680
0.414	2/0, 7W	2,485	-	-	-	-	-	-	2/0, 7W	5,927
0.416	-	-	-	-	-	-	1/0, 5/2	6,712	-	-
0.419	2/0, 19W	2,586	-	-	-	-	-	-	2/0, 19W	6,152
0.423	-	-	-	-	-	-	-	-	1K	11,900
0.426	-	-	-	-	3/0, 7W	2,845	-	-	-	-
0.428	-	-	-	-	3/0, 19W	3,200	-	-	-	-
0.429	-	-	-	-	-	-	-	-	-	-
0.436	-	-	-	-	-	-	-	-	2/0F	8,094
0.438	-	-	-	-	-	-	#2, 2/5	14,060	2/0, 12W	6,048
0.440	-	-	-	-	-	-	-	-	1/0J	10,970
0.447	2/0, 6/1	5,345	2/0, 7W	4,230	-	-	1/0, 4/3	10,020	-	-
0.461	101.8, 12/7	9,860	-	-	3/0, 6/1	6,675	-	-	-	-
0.462	-	-	-	-	-	-	-	-	2P	16,870
0.463	-	-	-	-	-	-	-	-	2/0G	10,510
0.464	3/0, 7W	3,005	-	-	-	-	-	-	3/0, 7W; IN	7,366; 15,410
0.467	-	-	-	-	-	-	2/0, 5/2	8,040	-	-
0.470	3/0, 19W	3,200	-	-	-	-	-	-	3/0, 19W	7,698
0.475	-	-	-	-	-	-	-	-	1/0K	14,490
0.480	-	-	-	-	4/0, 7W	3,590	-	-	-	-
0.481	110.8, 12/7	10,730	-	-	4/0, 19W	3,890	-	-	-	-
0.487	-	-	-	-	-	-	1/0, 3/4	14,006	-	-









## Conductor reference

Circular mils Typical	AWG size	Metric wire size mm <sup>2</sup>	Equivalent circular mils	Stranding/wire diameter per standard		Approximate overall diameter	
				in.	mm	in.	mm
<b>AWG/kcmil vs. metric wire sizes — option 1</b>							
—	—	0.50	987	1/0.032	1/0.813	0.032	0.81
1,020	20	—	—	7/0.0121	7/0.307	0.036	0.91
—	—	0.75	1,480	1/0.039	1/0.991	0.039	0.99
1,620	18	—	—	1/0.0403	1/1.02	0.040	1.02
1,620	18	—	—	7/0.0152	7/0.386	0.046	1.16
—	—	1.0	1,974	1/0.045	1/1.14	0.045	1.14
—	—	1.0	1,974	7/0.017	7/0.432	0.051	1.30
2,580	16	—	—	1/0.0508	1/1.29	0.051	1.29
2,580	16	—	—	7/0.0192	7/0.488	0.058	.46
—	—	1.5	2,960	1/0.055	1/1.40	0.055	1.40
—	—	1.5	2,960	7/0.021	7/5.33	0.063	1.60
4,110	14	—	—	1/0.0641	1/1.63	0.064	1.63
4,110	14	—	—	7/0.0242	7/0.615	0.073	1.84
—	—	2.5	4,934	1/0.071	1/1.80	0.071	1.80
—	—	2.5	4,934	7/0.027	7/0.686	0.081	2.03
6,530	12	—	—	1/0.0808	1/2.05	0.081	2.05
6,530	12	—	—	7/0.0305	7/0.775	0.092	2.32
—	—	4	7,894	1/0.089	1/2.26	0.089	2.26
—	—	4	7,894	7/0.34	7/0.864	0.102	2.59
10,380	10	—	—	1/0.1019	1/2.59	0.102	2.59
10,380	10	—	—	7/0.0385	7/0.978	0.116	2.93
—	—	6	11,840	1/0.109	1/2.77	0.109	2.77
—	—	6	11,840	7/0.042	7/0.107	0.126	3.21
13,090	9	—	—	1/0.1144	1/2.91	0.1144	2.91
13,090	9	—	—	7/0.0432	7/1.10	0.130	3.30
16,510	8	—	—	1/0.1285	1/3.26	0.128	3.26
16,510	8	—	—	7/0.0486	7/1.23	0.149	3.0
—	—	10	19,740	1/0.141	1/3.58	0.141	3.58
—	—	10	19,740	7/0.54	7/1.37	0.162	4.12
20,820	7	—	—	1/0.1443	1/3.67	0.144	3.67
20,820	7	—	—	7/0.545	7/1.38	0.164	4.15
26,240	6	—	—	1/0.162	1/4.11	0.162	4.11
26,240	6	—	—	7/0.0612	7/1.55	0.184	4.66
—	—	16	31,580	7/0.068	7/1.73	0.204	5.18
33,090	5	—	—	7/0.0688	7/1.75	0.206	5.24
41,740	4	—	—	7/0.0772	7/1.96	0.232	5.88
—	—	25	49,340	7/0.085	7/2.16	0.255	6.48
—	—	25	49,340	19/0.052	19/1.32	0.260	6.60
52,620	3	—	—	7/0.0867	7/2.20	0.260	6.61
66,360	2	—	—	7/0.0974	7/2.47	0.292	7.42
—	—	35	69,070	7/0.100	7/2.54	0.300	7.62
—	—	35	69,070	19/0.061	19/1.55	0.305	7.75

## Conductor reference

Circular mils Typical	AWG size	Metric wire size mm <sup>2</sup>	Equivalent circular mils	Stranding/wire diameter per standard		Approximate overall diameter	
				in.	mm	in.	mm
<b>AWG/kcmil vs. metric wire sizes – option 1 (cont'd)</b>							
83,690	1	–	–	19/0.0664	19/1.69	0.332	8.43
–	–	50	98,680	19/0.073	19/1.85	0.365	9.27
105,600	1/0	–	–	19/0.0745	19/1.89	0.373	9.46
133,100	2/0	–	–	19/0.0837	19/2.13	0.419	10.6
–	–	70	138,100	19/0.086	19/2.18	0.430	10.9
167,800	3/0	–	–	19/0.094	19/2.39	0.470	11.9
167,800	3/0	–	–	37/0.0673	37/1.71	0.471	12.0
–	–	95	187,500	19/0.101	19/2.57	0.505	12.8
–	–	95	187,500	37/0.072	37/1.83	0.504	12.8
211,600	4/0	–	–	19/0.1055	19/2.68	0.528	13.4
–	–	120	237.8 kcmil	37/0.081	37/2.06	0.567	14.4
250 kcmil	–	–	–	37/0.0822	37/2.09	0.575	14.6
300 kcmil	–	150	–	37/0.090	37/2.29	0.630	16.0
350 kcmil	–	–	–	37/0.0973	37/2.47	0.681	17.3
–	–	185	365.1 kcmil	37/0.100	37/2.54	0.700	17.8
400 kcmil	–	–	–	37/0.104	37/2.64	0.728	28.5
–	–	240	473.6 kcmil	37/0.114	37/2.90	0.798	20.3
–	–	240	473.6 kcmil	61/0.089	61/2.26	0.801	20.3
500 kcmil	–	–	–	37/0.1162	37/2.95	0.813	20.7
500 kcmil	–	–	–	61/0.0905	61/2.30	0.814	20.7
–	–	300	592.1 kcmil	61/0.99	61/2.51	0.891	22.6
600 kcmil	–	–	–	61/0.0992	61/2.52	0.893	22.7
700 kcmil	–	–	–	61/0.1071	61/2.72	0.964	24.5
750 kcmil	–	–	–	61/0.1109	61/2.82	0.998	25.4
750 kcmil	–	–	–	91/0.0908	91/2.31	0.999	25.4
–	–	400	789.4 kcmil	61/0.114	61/2.90	1.026	26.1
800 kcmil	–	–	–	61/0.1145	61/2.91	1.031	26.2
800 kcmil	–	–	–	91/0.0938	91/2.38	1.032	26.2
1,000 kcmil	–	500	986.8 kcmil	61/0.1280	61/3.25	1.152	29.3
1,000 kcmil	–	–	–	91/0.1048	91/2.66	1.153	29.3
–	–	625	1,233.7 kcmil	91/0.117	91/2.97	1.287	32.7
1,250 kcmil	–	–	–	91/0.1172	91/2.98	1.289	32.7
1,250 kcmil	–	–	–	127/0.0992	127/2.52	1.290	32.8
1,500 kcmil	–	–	–	91/0.1284	91/3.26	1.412	35.9
1,500 kcmil	–	–	–	127/0.1087	127/2.76	1.413	35.9
–	–	800	1,578.8 kcmil	91/0.132	91/3.35	1.452	36.9
–	–	1,000	1,973.5 kcmil	91/0.147	91/3.73	1.617	41.1
2,000 kcmil	–	–	–	127/0.1255	127/3.19	1.632	41.5
2,000 kcmil	–	–	–	169/0.1088	169/2.76	1.632	41.5



## Conductor reference

Approximate overall diameter		Circular mils	AWG size	Metric wire size mm <sup>2</sup>	Equivalent circular mils	Stranding/wire diameter per strand	
in.	mm					in.	mm
<b>AWG/kcmil vs. metric wire sizes – option 2</b>							
0.032	0.81	–	–	0.50	987	1/0.032	1/0.813
0.036	0.91	1,020	20	–	–	7/0.0121	7/0.307
0.039	0.999	1,020	–	0.75	1,480	1/0.039	1/0.991
0.040	1.02	1,620	18	–	–	1/0.0403	1/1.02
0.046	1.16	1,620	18	–	–	7/0.0152	7/0.386
0.045	1.14	–	–	1.0	1,974	1/0.045	1/1.14
0.051	1.30	–	–	1.0	1,974	7/0.017	7/0.432
0.051	1.29	2,580	16	–	–	1/0.0508	1/1.29
0.058	1.46	2,580	16	–	–	7/0.0192	7/0.488
0.055	0.40	–	–	1.5	2,960	1/0.055	1/1.40
0.063	1.60	–	–	1.5	2,960	7/0.021	7/5.33
0.064	1.63	4,110	14	–	–	1/0.0641	1/1.63
0.073	1.84	4,110	14	–	–	7/0.0242	7/0.615
0.071	1.80	–	–	2.5	4,934	1/0.071	1/1.80
0.081	2.06	–	–	2.5	4,934	7/0.027	7/0.686
0.081	2.05	6,530	12	–	–	1/0.0808	1/2.05
0.092	2.32	6,530	12	–	–	7/0.0305	7/0.775
0.089	2.26	–	–	4	7,894	1/0.089	1/2.26
0.102	2.59	–	–	4	7,894	7/0.034	7/0.864
0.102	2.59	10,380	10	–	–	1/0.1019	1/2.59
0.116	2.93	10,380	10	–	–	7/0.0385	7/0.978
0.109	2.77	–	–	6	11,840	1/0.109	1/2.77
0.126	3.21	–	–	6	11,840	7/0.042	7/0.107
0.1144	2.91	13,090	9	–	–	1/0.1144	1/2.91
0.130	3.30	13,090	9	–	–	7/0.0432	7/1.10
0.128	3.26	16,510	8	–	–	1/0.1285	1/3.26
0.146	3.70	16,510	8	–	–	7/0.0486	7/1.23
0.141	3.58	–	–	10	19,740	1/0.141	1/3.58
0.162	4.12	–	–	10	19,740	7/0.054	7/1.37
0.144	3.67	20,820	7	–	–	1/0.1443	1/3.67
0.164	4.15	20,820	7	–	–	7/0.0545	7/1.38
0.162	4.11	26,240	6	–	–	1/0.162	1/4.11
0.184	4.66	26,240	6	–	–	7/0.0612	7/1.55
0.204	5.18	–	–	16	31,580	7/0.068	7/1.73
0.206	5.24	33,090	5	–	–	7/0.0688	7/1.75
0.232	5.88	41,740	4	–	–	7/0.0772	7/1.96
0.255	6.48	–	–	25	49,340	7/0.085	7/2.16
0.260	6.60	–	–	25	49,340	19/0.052	19/1.32
0.260	6.61	52,620	3	–	–	7/0.0867	7/2.20
0.292	7.42	66,360	2	–	–	7/0.0974	7/2.47
0.300	7.62	–	–	35	69,070	7/0.100	7/2.54
0.305	7.75	–	–	35	69,070	19/0.061	19/1.55

## Conductor reference

Approximate overall diameter		Circular mils	AWG size	Metric wire size mm <sup>2</sup>	Equivalent circular mils	Stranding/wire diameter per strand	
in.	mm					in.	mm
<b>AWG/kcmil vs. metric wire sizes – option 2 (cont'd)</b>							
0.332	8.43	83,690	1	–	–	19/0.0664	19/1.69
0.365	9.27	–	–	50	98,680	19/0.073	19/1.85
0.373	9.46	105,600	1/0	–	–	19/0.0745	19/1.89
0.419	10.6	133,100	2/0	–	–	19/0.0837	19/2.13
0.430	10.9	–	–	70	138,100	19/0.086	19/2.18
0.470	11.9	167,800	3/0	–	–	19/0.094	19/2.39
0.471	12.0	167,800	3/0	–	–	37/0.0673	37/1.71
0.505	12.8	–	–	95	187,500	19/0.101	19/2.57
0.504	12.8	–	–	95	187,500	37/0.072	37/1.83
0.528	13.4	211,600	4/0	–	–	19/0.1055	19/2.68
0.567	14.4	–	–	120	237.8 kcmil	37/0.081	37/2.06
0.575	14.6	250 kcmil	–	–	–	37/0.0822	37/2.09
0.630	16.0	300 kcmil	–	150	–	37/0.090	37/2.29
0.681	17.3	350 kcmil	–	–	–	37/0.0973	37/2.47
0.700	17.8	–	–	185	365.1 kcmil	37/0.100	37/2.54
0.728	18.5	400 kcmil	–	–	–	37/0.104	37/2.64
0.798	20.3	–	–	240	473.6 kcmil	37/0.114	37/2.90
0.801	20.3	–	–	240	473.6 kcmil	61/0.089	61/2.26
0.813	20.7	500 kcmil	–	–	–	37/0.1162	37/2.95
0.814	20.7	500 kcmil	–	–	–	61/0.0905	61/2.30
0.891	22.6	–	–	300	592.1 kcmil	61/0.099	61/2.51
0.893	22.7	600 kcmil	–	–	–	61/0.0992	61/2.52
0.964	24.5	700 kcmil	–	–	–	61/0.1071	61/2.72
0.998	25.4	750 kcmil	–	–	–	61/0.1109	61/2.82
0.999	25.4	750 kcmil	–	–	–	91/0.0908	91/2.31
1.026	26.1	–	–	400	789.4 kcmil	61/0.114	61/2.90
0.031	26.2	800 kcmil	–	–	–	61/0.1145	61/2.91
0.032	26.2	800 kcmil	–	–	–	91/0.0938	91/2.38
1.152	29.3	1,000 kcmil	–	500	986.8 kcmil	61/0.1280	61/3.25
0.153	29.3	1,000 kcmil	–	–	–	91/0.1048	91/2.66
1.287	32.7	–	–	625	1,233.7 kcmil	91/0.117	91/2.97
1.289	32.7	1,250 kcmil	–	–	–	91/0.1172	91/2.98
1.290	32.8	1,250 kcmil	–	–	–	127/0.0992	127/2.52
1.412	35.9	1,500 kcmil	–	–	–	91/0.1284	91/3.26
1.413	35.9	1,500 kcmil	–	–	–	127/0.1087	127/2.76
1.452	36.9	–	–	800	1,578.8 kcmil	91/0.132	91/3.35
1.617	41.1	–	–	1,000	1,973.5 kcmil	91/0.147	91/3.73
1.632	41.5	2,000 kcmil	–	–	–	127/0.1255	127/3.19
1.632	41.5	2,000 kcmil	–	–	–	169/0.1088	169/2.76