



Bare Copper Conductor

ASTM Standard

Size (AWG)	Weight (lbs/1000 ft)	Diameter (mils)	Circular Mil Area (mils)	Hard Drawn		Medium-Hard Drawn		Soft-Drawn (Annealed)		Allowable Ampacity+
				Rated Strength> (lbs)	DC Resistance (ohms/1000 ft) @20°C	Rated Strength (lbs)	DC Resistance (ohms/1000 ft) @20°C	Rated Strength (lbs)	DC Resistance (ohms/1000 ft) @20°C	
SOLID										
14	12.4	64.1	4110	213.5	2.626	166.6	2.613	124.2	2.525	--
13	15.7	72	5180	268.0	2.083	208.8	2.072	156.6	2.003	--
12	19.8	80.8	6530	336.9	1.652	261.2	1.643	197.5	1.588	--
11	24.9	90.7	8230	422.9	1.310	327.6	1.303	249.0	1.260	--
10	31.4	101.9	10380	529.2	1.039	410.4	1.033	314.0	.999	--
9	39.6	114.4	13090	661.2	.824	514.2	.820	380.5	.792	--
8	50	128.5	16510	826.0	.653	643.9	.650	479.8	.628	95
7	63	144.3	20820	1030.0	.518	806.6	.515	605.0	.498	105
6	79.4	162	26240	1280.0	.411	1010.0	.409	762.9	.395	125
5	100.2	181.9	33090	1591.0	.326	1265.0	.324	961.9	.313	145
4	126.3	204.3	41740	1970.0	.258	1584.0	.257	1213.0	.249	170
3	159.3	229.4	52620	2439.0	.205	1984.0	.204	1530.0	.197	195
2	200.9	257.6	66360	3003.0	.163	2450.0	.162	1929.0	.156	225
1	253.3	289.3	83690	3688.0	.129	3024.0	.128	2432.0	.124	260
+Ampacity based on 75°C conductor temperature; 25°C ambient temperature; 2 ft./sec. wind in sun.										



ASTM Standard

Size (AWG)	Stranding	Stranding Class	Weight (lbs/1000 ft)	Diameter (mils)		Hard Drawn		Medium-Hard Drawn		Soft-Drawn (Annealed)		Allowable Ampacity+
				Individual Wires	Complete Conductor	Rated Strength (lbs)	DC Resistance (ohms/1000 ft) @20°C	Rated Strength (lbs)	DC Resistance (ohms/1000 ft) @20°C	Rated Strength (lbs)	DC Resistance (ohms/1000 ft) @20°C	
STRANDED												
8	7	B	51	49	146	777	.6663	610	.6629	499	.6408	95
6	7	B	81	61	184	1228	.4191	959	.4169	794	.4030	130
4	7	A, B	128.9	77	232	1938	.2636	1505	.2622	1320	.2534	170
3	7	A, B	162.5	87	260	2433	.2090	1885	.2079	1670	.2010	200
2	7	A, B	204.9	97	292	3050	.1660	2360	.1650	2110	.1578	230
1	7	A	258.4	109	328	3801	.1316	2955	.1309	2552	.1252	265
1/0	7	A, AA	326.1	123	368	4752	.1042	3705	.1037	3221	.1002	310
2/0	7	A, AA	410.9	138	414	5926	.08267	4640	.08224	4062	.07949	355
2/0	19	B	410.9	84	418	6690	.08267	4765	.08224	4024	.07949	355
3/0	7	A, AA	518.1	155	464	7366	.06556	5812	.06522	5118	.06304	410
4/0	7	A, AA	653.3	174	522	9154	.05199	7278	.05172	6459	.04999	480
4/0	19	B	653.3	106	528	9617	.05199	7479	.05172	6453	.04999	480
250	19	A	771.9	115	574	11360	.04400	8836	.04378	7627	.04231	530
250	37	B	771.9	82	575	11600	.04400	8952	.04378	7940	.04231	530
300	19	A	926.2	126	628	13510	.03667	10530	.03648	9160	.03526	590
350	19	A	1080.6	136	679	15590	.03143	12200	.03127	10680	.03022	650
500	37	A, B	1543.8	116	814	22510	.02200	17550	.02189	15240	.02116	810
600	37	A, AA	1852.5	127	891	27020	.01834	21060	.01825	18300	.01763	910
750	61	A, B	2315.6	111	998	34090	.01467	26510	.01459	22890	.01410	1040
1000	61	A, B	3087.5	128	1152	45030	.01100	35100	.01094	30500	.01058	1240
+Ampacity based on 75°C conductor temperature; 25°C ambient temperature; 2 ft./sec. wind in sun.												



DIN 48201

nominal cross section	calculated cross section	number of wires	diameter		weight	calculated breaking load	continuous current-carrying capacity
			wire	conductor			
mm ²	mm ²		mm	mm	kg/km	kN	A
10	10.02	7	1.35	4.1	90	4.02	90
16	15.89	7	1.70	5.1	143	6.37	125
25	24.25	7	2.10	6.3	218	9.72	160
35	34.36	7	2.50	7.5	310	13.77	200
50	49.48	7	3.00	9.0	446	19.84	250
50	48.35	19	1.80	9.0	437	19.38	250
70	65.81	19	2.10	10.5	596	26.38	310
95	93.27	19	2.50	12.5	845	37.39	380
120	116.99	19	2.80	14.0	1060	48.90	440
150	147.11	37	2.25	15.8	1337	58.98	510
185	181.62	37	2.50	17.5	1649	72.81	585
240	242.54	61	2.25	20.3	2209	97.23	700
300	299.43	61	2.50	22.5	2725	120.04	800
400	400.14	61	2.89	26.0	3640	160.42	960
500	499.83	61	3.23	29.1	4545	200.38	1110

Remark: the outer layer has to be right handed (Z-rotation)

Reference values for continuous current-carrying capacity are valid up to 60 Hz at the given wind velocity of 0,6 m/s and sun impact (for Germany) for a starting ambient temperature of 35°C and a final temperature of the conductor of 70°C. For special cases (calm) the values have to be reduced by about 30%

Other designs: for example international standards or customer specifications –on request



BS 6360

No. of Core X Cross Section	No./Nominal Diameter of Strands	Conductor Nominal Diameter	Approx. Weight	Max. DC Resistance at 20°C
No./mm ²	No./mm	mm	kg/km	ohm/km
1×6mm ²	7/1.04	3.0	58	3.08
1×10mm ²	7/1.35	4.2	96	1.83
1×16mm ²	7/1.70	5.1	154	1.15
1×25mm ²	7/2.14	5.9	240	0.727
1×35mm ²	7/2.52	7.8	336	0.524
1×50mm ²	19/1.78	8.8	480	0.387
1×70mm ²	19/2.14	9.8	672	0.268
1×95mm ²	19/2.52	12.5	912	0.193
1×120mm ²	37/2.03	12.8	1152	0.153
1×150mm ²	37/2.25	14.4	1440	0.124
1×185mm ²	37/2.52	16.1	1776	0.0991
1×240mm ²	61/2.25	19.8	2304	0.0754
1×300mm ²	61/2.52	20.6	2800	0.0601
1×400mm ²	61/2.85	26.4	3750	0.047