

American Wire Gauge -- IEC 60228 Wire Size

AWG / kcmil	Area Circ Mils	mm ²	Amps TW/UF (60C)	Amps THHW (75C)	Amps THHN (90C)
18	1,620	1	--	--	
16	2,580	1	--	--	
14*	4,110	2	20 (15)	20 (15)	25 (20)
12*	6,530	3	25 (20)	25 (20)	30 (20)
10*	10,380	5	30	35 (30)	40 (30)
8	16,510	8	40	50	55
6	26,240	13	55	65	75
4	41,740	21	70	85	95
3	52,620	27	85	100	110
2	66,360	34	95	115	130
1	83,690	42	110	130	150
1/0	105,600	54	125	150	170
2/0	133,100	67	145	175	195
3/0	167,800	85	165	200	225
4/0	211,600	107	195	230	260
250	250,000	127	215	255	290
300	300,000	152	240	285	320
350	350,000	177	260	310	350
400	400,000	203	280	335	380
500	500,000	253	320	380	430
600	600,000	304	355	420	475
700	700,000	355	385	460	520
750	750,000	380	400	475	535
800	800,000	405	410	490	555
900	900,000	456	435	520	585
1000	1,000,000	507	455	545	615

IEC mm ²	Area Circ Mils	Amps Free Air, 70C PVC	Amps in wall, 70C PVC
0.5	987	--	--
0.75	1,481	--	--
1.5	2,961	17.5	13
2.5	4,935	24	17.5
4	7,896	32	23
6	11,844	41	29
10	19,740	57	39
16	31,584	76	52
25	49,350	96	68
35	69,090	119	83
50	98,700	144	99
70	138,180	184	125
95	187,530	223	150
120	236,880	259	172
150	296,100	299	196
185	365,190	341	223
240	473,760	403	261
300	592,200	464	298

(table A.52.4 of IEC 60364-5-52)
Fig. G20, <http://tinyurl.com/2u3pzqd>

* Maximum overcurrent protection for # 14 = 15A, # 12 = 20A, # 10 = 30A

NEC 2007, Chap 9, Table 8, via Ugly's Electrical Ref 2008, pp71, 73

Short-time Withstand Rating

Copper conductors and bolted connections withstand rating: (NEC 250-94, 250-95)

1 Ampere for 5 seconds per:

30 circular mils (bare wire)

42.25 circular mils (75°C insulated wire)

Conversions

kcmil = Square Inches x 1273

kcmil = Square Millimeters x 1.974

mm² = kcmil x 0.5067

2007 Erico Cadweld Catalog, Technical Information (page B-4)

<https://www.metatek.org/reference/awg-iec-wire>