



## FREE AIR—ALLOWABLE AMPACITIES OF CONDUCTORS

Based on ambient air temperature of 30° C (or 86° F), following are the allowable ampacities of single insulated conductors (rated 0-500 volts) in free air

SIZE AWG or kcmil	60° (140° F)	75° (167° F)	90° (194° F)	60° (140° F)	75° (167° F)	90° (194° F)
	Types TW, UF	Types RHW, THHW, THW, THWN, XHHW	Types TBS, SA, SIS, THHN, THHW, THW-2, THHW-2, RHH, RHW-2, USE-2, XHH, XHHW, XHHW-2, ZW-2	Types TW, UF	Types RHW, THHW, THW, THWN, XHHW, ZW	Types TBS, SA, SIS, FEP, FEPS, MI, RHH, RHW-2, THHN, THHW, THW-2, THWN-2, USE-2, XHH, XHHW, XHHW-2, ZW-2
	<b>Copper</b>			<b>Aluminum or Copper-Clad Aluminum</b>		
18 *	—	—	18	—	—	—
16 *	—	—	24	—	—	—
14 *	25	30	35	—	—	—
12 *	30	35	40	25	30	35
10 *	40	50	55	35	40	45
8	60	70	80	45	55	60
6	80	95	105	60	75	85
4	105	125	140	80	100	115
3	120	140	165	95	115	130
2	140	170	190	110	135	150
1	165	195	220	130	155	175
1/0	195	230	260	150	180	205
2/0	225	265	300	175	210	235
3/0	260	310	350	200	240	270
4/0	300	360	405	235	280	315
250	340	405	455	265	315	355
300	375	445	500	290	350	395
350	420	505	570	330	395	445
400	455	545	615	355	425	480
500	515	620	700	405	485	545
Ambient Temp °C	Correction Factors for Temperature Multiply the allowable ampacities shown above by the appropriate factor below for ambient temperatures other than 30° C					Ambient Temp °F
10 or less	1.29	1.20	1.15	1.29	1.20	1.15
11-15	1.22	1.15	1.12	1.22	1.15	1.12
16-20	1.15	1.11	1.08	1.15	1.11	1.08
21-25	1.08	1.05	1.04	1.08	1.05	1.04
26-30	1.00	1.00	1.00	1.00	1.00	1.00
31-35	0.91	0.94	0.96	0.91	0.94	0.96
36-40	0.82	0.88	0.91	0.82	0.88	0.91
41-45	0.71	0.82	0.87	0.71	0.82	0.87
46-50	0.58	0.75	0.82	0.58	0.75	0.82
51-55	0.41	0.67	0.76	0.41	0.67	0.76
56-60	—	0.58	0.71	—	0.58	0.71
61-65	—	0.47	0.65	—	0.47	0.65
66-70	—	0.33	0.58	—	0.33	0.58
71-75	—	—	0.50	—	—	0.50
76-80	—	—	0.41	—	—	0.41
81-85	—	—	0.29	—	—	0.29

Adapted from NEC® Tables 310.15(B)(17) and 310.15(B)(2)(a).

\* Note for pages 1 and 2 above: Unless permitted in NEC 240.4(E) or 240.4(G), the overcurrent protection shall not exceed for copper:

- 15 amperes for 14 AWG
- 20 amperes for 12 AWG
- 30 amperes for 10 AWG

For aluminum and copper-clad aluminum, after any correction factors for ambient temperature and number of conductors have been applied:

- 15 amperes for 12 AWG
- 25 amperes for 10 AWG

For 18 and 16 AWG copper, see NEC 240.4(D).