

# National Electrical Code® Allowable Copper Conductor Ampacities

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## Table 310.15(B)(16) formerly Table 310.16

Allowable ampacities of insulated copper conductors rated up to and including 2000 Volts, 60°C through 90°C (140°F through 194°F), Not more than three current-carrying conductors in raceway, cable, or earth (directly buried), based on ambient temperature of 30°C (86°F)

Size (AWG or kcmil)	Temperature Rating of Copper Conductor					
	60°C (140°F)	75°C (167°F)		90°C (194°F)		
	Types	Types		Types		
	TW UF	RHW THHW THW THWN	XHHW USE ZW	FEP FEPB MI RHH RHW-2 SA	SIS TBS THHN THHW THW-2 THWN-2	USE-2 XHH XHHW XHHW-2 ZW-2
18 AWG	—	—	—	—	14	—
16 AWG	—	—	—	—	18	—
14 AWG*	15	20	—	—	25	—
12 AWG*	20	25	—	—	30	—
10 AWG*	30	35	—	—	40	—
8 AWG	40	50	—	—	55	—
6 AWG	55	65	—	—	75	—
4 AWG	70	85	—	—	95	—
3 AWG	85	100	—	—	115	—
2 AWG	95	115	—	—	130	—
1 AWG	110	130	—	—	145	—
1/0 AWG	125	150	—	—	170	—
2/0 AWG	145	175	—	—	195	—
3/0 AWG	165	200	—	—	225	—
4/0 AWG	195	230	—	—	260	—
250 KCMIL	215	255	—	—	290	—
300 KCMIL	240	285	—	—	320	—
350 KCMIL	260	310	—	—	350	—
400 KCMIL	280	335	—	—	380	—
500 KCMIL	320	380	—	—	430	—
600 KCMIL	350	420	—	—	475	—
700 KCMIL	385	460	—	—	520	—
750 KCMIL	400	475	—	—	535	—
800 KCMIL	410	490	—	—	555	—
900 KCMIL	435	520	—	—	585	—
1000 KCMIL	455	545	—	—	615	—
1250 KCMIL	495	590	—	—	665	—
1500 KCMIL	525	625	—	—	705	—
1750 KCMIL	545	650	—	—	735	—
2000 KCMIL	555	665	—	—	750	—

\* Unless otherwise specifically permitted elsewhere in the NEC NFPA70 Code, the overcurrent protection for conductor types marked with an asterisk shall not exceed 15A for No. 14 copper, 20A for No. 12 copper, and 30A for No. 10 copper, after any correction factors for ambient temperature and number of conductors have been applied.

## 310.15(B)(3)(a)

Adjustment factors for more than three current-carrying conductors in a raceway or cable. Where the number of current-carrying conductors in a raceway or cable exceeds 3, the allowable ampacities shall be reduced per table below:

Number of current-carrying conductors*	Percent of values in tables as adjusted for ambient temperature (if necessary)
4 - 6	80
7 - 9	70
10 - 20	50
21 - 30	45
31 - 40	40
41 and more	35

\* Does NOT include ground

## Table 310.15(B)(17) formerly Table 310.17

Allowable ampacities of single insulated copper conductors rated up to and including 2000 Volts in free air, based on ambient temperature of 30°C (86°F)

Size (AWG or kcmil)	Temperature Rating of Copper Conductor					
	60°C (140°F)	75°C (167°F)		90°C (194°F)		
	Types	Types		Types		
	TW UF	RHW THHW THW THWN	XHHW ZW	FEP FEPB MI RHH RHW-2 SA	SIS TBS THHN THHW THW-2 THWN-2	USE-2 XHH XHHW XHHW-2 ZW-2
18 AWG	—	—	—	—	18	—
16 AWG	—	—	—	—	24	—
14 AWG*	25	30	—	—	35	—
12 AWG*	30	35	—	—	40	—
10 AWG*	40	50	—	—	55	—
8 AWG	60	70	—	—	80	—
6 AWG	80	95	—	—	105	—
4 AWG	105	125	—	—	140	—
3 AWG	120	145	—	—	165	—
2 AWG	140	170	—	—	190	—
1 AWG	165	195	—	—	220	—
1/0 AWG	195	230	—	—	260	—
2/0 AWG	225	265	—	—	300	—
3/0 AWG	260	310	—	—	350	—
4/0 AWG	300	360	—	—	405	—
250 KCMIL	340	405	—	—	455	—
300 KCMIL	375	445	—	—	500	—
350 KCMIL	420	505	—	—	570	—
400 KCMIL	455	545	—	—	615	—
500 KCMIL	515	620	—	—	700	—
600 KCMIL	575	690	—	—	780	—
700 KCMIL	630	755	—	—	850	—
750 KCMIL	655	785	—	—	885	—
800 KCMIL	680	815	—	—	920	—
900 KCMIL	730	870	—	—	980	—
1000 KCMIL	780	935	—	—	1055	—
1250 KCMIL	890	1065	—	—	1200	—
1500 KCMIL	980	1175	—	—	1325	—
1750 KCMIL	1070	1280	—	—	1445	—
2000 KCMIL	1155	1385	—	—	1560	—

## Table 310.15(B)(2)(a)

### Temperature Correction Factors

For ambient temperatures other than 30°C (86°F), multiply the allowable ampacities shown above by the appropriate factor shown per table below:

Ambient temperature		60°C (140°F)	75°C (167°F)	90°C (194°F)
50°F or less	10°C or less	1.29	1.20	1.15
51-59°F	11 to 15°C	1.22	1.15	1.12
60-68°F	16 to 20°C	1.15	1.11	1.08
69-77°F	21 to 25°C	1.08	1.05	1.04
78-86°F	26 to 30°C	1.00	1.00	1.00
87-95°F	31 to 35°C	0.91	0.94	0.96
96-104°F	36 to 40°C	0.82	0.88	0.91
105-113°F	41 to 45°C	0.71	0.82	0.87
114-122°F	46-50°C	0.58	0.75	0.82
123-131°F	51-55°C	0.41	0.67	0.76
132-140°F	56-60°C	-	0.58	0.71
141-149°F	61-65°C	-	0.47	0.65
150-158°F	66-70°C	-	0.33	0.58
159-167°F	71-75°C	-	-	0.50
168-176°F	76-80°C	-	-	0.41
177-185°F	81-85°C	-	-	0.29