

National Electrical Code

Allowable Conductor Ampacity

Table 310.15(B)(16)

Allowable Ampacities of Insulated Conductors Rated 0 - 2000 Volts, 60° to 90°C (140° to 194°F) Not More Than Three Conductors in Raceway or Cable or Earth (Directly Buried), Based on Ambient Temperature of 30°C (86°F)

Size	Temperature Rating							
	60°C (140°F)		75°C (167°F)		90°C (194°F)			
	Types		Types		Types			
	TW*	UF*	FEPW* RHW* THW* XHHW* ZW*	RH* THHW* THWN* USE*	TA SIS MI THHN* THWN-2 XHHW*	TBS FEP* RHH* THHW* USE-2 XHH XHHW-2	SA FEPB* RHW-2 THW-2 XHH ZW-2	
18 AWG	—	—	—	—	—	14		
16 AWG	—	—	—	—	—	18		
14 AWG	20*	—	20*	—	—	25*		
12 AWG	25*	—	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	—	—	110		
2 AWG	95	—	115	—	—	130		
1 AWG	110	—	130	—	—	150		
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	355	—	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	520	—	625	—	—	705		
1750 KCMIL	545	—	650	—	—	735		
2000 KCMIL	560	—	665	—	—	750		

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

Table 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 three, the allowable ampacities shall be reduced as shown:

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
more than 40	35

* Does not include ground

Example:

- Using Lapp P/N 221007 (10 AWG, 6c + ground, 90°C THHN):

40 Amps

ampacity @ 30°C

×

0.80

Table 310.15(B)(3)(a)

= 32 Amps

- Using the same P/N at 40°C:

40 Amps

ampacity @ 30°C

×

0.80

Table 310.15(B)(3)(a)

× 0.91 = 28 Amps
 Table 310.15(B)(2)(a)

Table 310.15(B)(17)

Allowable Ampacities of Single Insulated Conductors Rated 0 - 2000 Volts, In Free Air, Based on Ambient Air Temperature of 30°C (86°F)

Size	Temperature Rating							
	60°C (140°F)		75°C (167°F)		90°C (194°F)			
	Types		Types		Types			
	TW*	UF*	FEPW* RHW* THW* XHHW*	RH* THHW* THWN* ZW*	TA SIS MI THHN* THWN-2 XHHWT	TBS FEP* RHH* THHW* USE-2 XHHW-2	SA FEPB* RHW-2 THW-2 XHH 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	—	—	505		
350 KCMIL	420	—	505	—	—	570		
400 KCMIL	455	—	545	—	—	615		
500 KCMIL	515	—	620	—	—	700		
600 KCMIL	575	—	690	—	—	780		
700 KCMIL	630	—	755	—	—	855		
750 KCMIL	655	—	785	—	—	885		
800 KCMIL	680	—	815	—	—	920		
900 KCMIL	730	—	870	—	—	985		
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 below.

Ambient Temperature	60°C	75°C	90°C
30°C	1.00	1.00	1.00
40°C	0.82	0.88	0.91
50°C	0.58	0.75	0.82
60°C	—	0.58	0.71
70°C	—	0.33	0.58
80°C	—	—	—