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TECHNICAL DATA

National Electrical Code

Ampacities of Insulated Conductors Rated 0 - 2000 Volts

(As Excerpted from the National Electrical Code)

Ampacities of Not More Than Three Conductors In Raceway Or Cable
Or Earth (Directly Buried) Based On Ambient Temperature of 30°C (86°F)

Size AWG or kcmil	Copper Conductors					
	Temperature Rating of Conductor					
	60°C		75°C		90°C	
	Types	Types	Types	Types	Types	Types
	TW	RHW TWWH	RHW TWWH	RHW TWWH	RHW TWWH	RHW TWWH
	UF	THW XHHW	RHW-2 THWN-2	RHW-2 THWN-2	RHW-2 THWN-2	RHW-2 THWN-2
		THWN USE	XHHW THW-2	XHHW THW-2	XHHW-2 THHN	XHHW-2 THHN
			USE-2	USE-2	USE-2	USE-2
14	20 t		20 t		25 t	
12	25 t		25 t		30 t	
10	30		35 t		40 t	
8	40		50		55	
6	55		65		75	
4	70		85*		95*	
3	85		100*		110*	
2	95		115*		130*	
1	110		130*		150*	
1/0	125		150*		170*	
2/0	145		175*		195*	
3/0	165		200*		225*	
4/0	195		230*		260*	
250	215		255*		290*	
300	240		285		320	
350	260		310*		350*	
400	280		335*		380*	
500	320		380		430	
600	355		420		475	
700	385		460		520	
750	400		475		535	
800	410		490		555	
900	435		520		585	
1000	455		545		615	
1250	495		590		665	
1500	520		625		705	
1750	545		650		735	
2000	560		665		750	

Size AWG or kcmil	Aluminum Conductors					
	Temperature Rating of Conductor					
	60°C		75°C		90°C	
	Types	Types	Types	Types	Types	Types
	TW	RHW TWWH	RHW TWWH	RHW TWWH	RHW TWWH	RHW TWWH
	UF	THW XHHW	RHW-2 THWN-2	RHW-2 THWN-2	RHW-2 THWN-2	RHW-2 THWN-2
		THWN USE	XHHW THW-2	XHHW THW-2	XHHW-2 THHN	XHHW-2 THHN
			USE-2	USE-2	USE-2	USE-2
14	-		-		-	
12	20 t		20 t		25 t	
10	25 t		30 t		35 t	
8	30		40		45	
6	40		50		60	
4	55		65		75	
3	65		75		85	
2	75		90*		100*	
1	85		100*		115*	
1/0	100		120*		135*	
2/0	115		135*		150*	
3/0	130		155*		175*	
4/0	150		180*		205*	
250	170		205*		230*	
300	190		230*		255*	
350	210		250*		280*	
400	225		270		305	
500	260		310*		350*	
600	285		340*		385*	
700	310		375		420	
750	320		385		435	
800	330		395		450	
900	355		425		480	
1000	375		445		500	
1250	405		485		545	
1500	435		520		585	
1750	455		545		615	
2000	470		560		630	

Notes on next page are part of this table and may modify the ampacities above.



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NATIONAL ELECTRICAL CODE
AMPACITIES OF INSULATED CONDUCTORS RATED 0 - 2000 VOLTS
(As Excerpted from the National Electrical Code)

Notes to Accompany Table:

Note 1:

Temperature	Type	Location
60°C	TW	wet or dry
	UF	wet or dry or corrosive
75°C	RHW, THW, THWN, USE, THHW, XHHW	wet or dry
90°C	RHH, THHN, XHHW, THHW	dry only
	THWN-2, XHHW-2, THW-2, RHW-2, USE-2	wet or dry

Note 2:

- Maximum size of Type UF is 4/0 AWG
- Maximum size of Types THWN and THHN is 1000kcmil
- Maximum size of Type THHW is 1000 kcmil
- Minimum size of Single Conductor Type USE is 12 AWG Copper, 10 AWG Aluminum

Note 3:

- The allowable values in the Ampacity Table are based on temperature alone and do not take voltage drop into consideration.

The overcurrent protection shall not exceed 15 amperes for 14 AWG, 20 amperes for 12 AWG, and 30 amperes for 10 AWG copper; or 15 amperes for 12 AWG and 25 amperes for 10 AWG aluminum after any correction factors for ambient temperature and number of conductors have been applied.

Note 4:

- Where the number of current-carrying conductors in a raceway or cable exceeds three, or where single conductors or multiconductor cables are stacked or bundled longer than 24 inches without maintaining spacing and are not installed in raceways, the allowable ampacity of each conductor shall be reduced as shown in the following table:

No. of Current Carrying Conductors	% of Values in Tables are Adjusted for Ambient Temperature if Necessary
4 thru 6	80
7 thru 9	70
10 thru 20	50
21 thru 30	45
31 thru 40	40
41 and above	30

The above derating factors do not apply to conductors in nipples having a length not exceeding 24 inches.

Note 5:

For ambient temperatures other than 30°C, multiply the ampacities by the appropriate factors shown below:

Ambient Temperature °C	Conductor Temperature			Ambient Temperature °F
	60°C	75°C	90°C	
21-25	1.08	1.05	1.04	70-77
26-30	1.00	1.00	1.00	78-86
31-35	.91	.94	.96	87-95
36-40	.82	.88	.91	96-104
41-45	.71	.82	.87	105-113
46-50	.58	.75	.82	114-122
51-55	.41	.67	.76	123-131
56-60	—	.58	.71	132-140
61-70	—	.33	.58	141-158
71-80	—	—	.41	159-176

* In dwelling units, conductors, as listed below, shall be permitted to be utilized as 120/240 volt, 3 wire, single phase service-entrance conductors, service lateral conductors and feeder conductors that supply the total load to a dwelling unit and installed in raceway or cable with or without an equipment grounding conductor. The grounded conductor shall be permitted to be not more than two AWG sizes smaller than the undergrounded conductors provided the requirements of Sections 215-2, 220-22 and 230-42 are met.

RHH - RHW - THHW - THW - THWN - THHN - XHHW - USE		
Copper AWG	Aluminum AWG	Service Rating in Amps
4	2	100
3	1	110
2	1/0	125
1	2/0	150
1/0	3/0	175
2/0	4/0	200
3/0	250 kcmil	225
4/0	300 kcmil	250
250 kcmil	350 kcmil	300
350 kcmil	500 kcmil	350
400 kcmil	600 kcmil	400