

Conductor Ampacity Ratings

2022 California Electrical Code, Table 310.16

The Underwriters Laboratory (UL) Directory indicates that the termination points for electrical equipment and devices are based on the use of 60°C (140°F) ampacities for wire sizes Nos. 14 through 1 AWG and 75°C (167°F) ampacities for wire sizes Nos. 1/0 AWG and larger as specified in Table 310.16 of the 2022 California Electrical Code (attached). The directory goes on to indicate that higher temperature ampacities can be used if the system components are rated at the higher rating.

Exception: Higher temperature ampacities may be accepted by the City of Livermore Permit Center if documentation is provided showing all system components are rated for the higher temperature rating.

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A Table 310.16 Ampacities of Insulated Conductors with Not More Than Three Current-Carrying Conductors in Raceway, Cable, or Earth (Directly Buried)

	Temperature Rating of Conductor [See Table 310.4(A)]						
	60°C (140°F)	75°C (167°F)	90°C (194°F)	60°C (140°F)	75°C (167°F)	90°C (194°F)	
Size AWG or kemil	Types TW, UF	Types RHW, THHW, THW, THWN, XHHW, XHWN, USE, ZW	Types TBS, SA, SIS, FEP, FEPB, MI, PFA, RHH, RHW-2, THHN, THHW, THW-2, THWN-2, USE-2, XHH, XHHW, XHHW-2, XHWN, XHWN-2, XHHN, Z, ZW-2	Types TW, UF	Types RHW, THHW, THW, THWN, XHHW, XHWN, USE	Types TBS, SA, SIS, THHN, THHW, THW-2, THWN-2, RHH, RHW-2, USE-2, XHH, XHHW, XHHW-2, XHWN, XHWN-2, XHWN-2, XHWN	Size AW
	COPPER			ALUMINUM OR COPPER-CLAD ALUMINUM			or kemil
18*	_	_	14		_	_	_
16*	_	_	18		_	-	_
14*	15	20	25			-	-
12* 10*	20 30	25 35	30 40	15 25	20 30	25 35	12° 10°
8	40	50	55	35	40	45	100
6	55	65	75	40	50	55	6
4	70	85	95	55	65	75	4
3	85	100	115	65	75	85	3
2	95	115	130	75	90	100	2
1	110	130	145	85	100	115	1
1/0	125	150	170	100	120	135	1/0
2/0	145	175	195	115	135	150	2/0 3/0
3/0 4/0	165 195	200 230	225 260	130 150	155 180	175 205	4/0
250	215	255	290	170	205	230	250
300	240	285	320	195	230	260	300
350	260	310	350	210	250	280	350
400	280	335	380	225	270	305	400
500	320	380	430	260	310	350	500
600	350	420	475	285	340	385	600
700	385	460	520	315 320	375 385	425 435	700 750
750 800	400 410	475 490	535 555	320	395	435	800
900	435	520	585	355	425	480	900
1000	455	545	615	375	445	500	1000
1250	495	590	665	405	485	545	1250
1500	525	625	705	435	520	585	1500
1750	545	650	735	455	545	615	1750
2000	555	665	750	470	560	630	2000

Notes

Section 310.15(B) shall be referenced for ampacity correction factors where the ambient temperature is other than 30°C (86°F).

Section 310.15(C)(1) shall be referenced for more than three current-carrying conductors.

^{3.} Section 310.16 shall be referenced for conditions of use.

^{*}Section 240.4(D) shall be referenced for conductor overcurrent protection limitations, except as modified elsewhere in the Code.