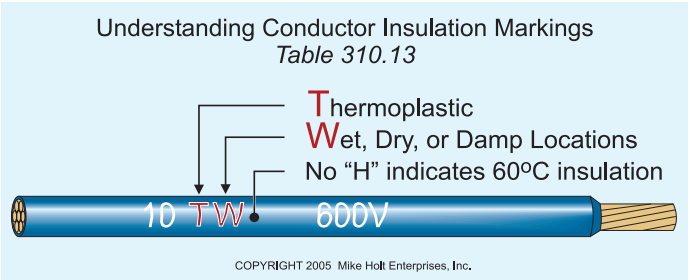

Figure 6–2

6.2 Allowable Conductor Ampacity [310.15]

The ampacity of a conductor is the current in amperes that a conductor can carry continuously without exceeding its temperature rating under specific conditions of use.

General Requirements

Tables or Engineering Supervision. There are two ways to determine conductor ampacity:

- Tables 310.16 [310.15(B)]
- Engineering formula

AUTHOR'S COMMENT: For all practical purposes, use the ampacities listed in Table 310.16.

FPN: The ampacities listed in Table 310.16 are based on temperature alone and don't take voltage drop into consideration. Voltage drop considerations are for efficiency of operation and not for safety; therefore, sizing conductors for voltage drop is not a *Code* requirement. See 210.19(A)(1) FPN No. 4 and 215.2(A)(3) FPN No. 2 for more details.

Table 310.16. Allowable Ampacities of Insulated Conductors
Based On Not More Than Three Current-Carrying Conductors and Ambient Temperature of 30°C (86°F)

Size	Temperature Rating of Conductor, See Table 310.13						Size
	60°C (140°F)	75°C (167°F)	90°C (194°F)	60°C (140°F)	75°C (167°F)	90°C (194°F)	
AWG kcmil	TW UF	THHW THW THWN XHHW Wet Location	THHW XHHW Dry Location	TW UF	THHN THW THWN XHHW Wet Location	THHN THHW XHHN Dry Location	AWG kcmil
	Copper			Aluminum/Copper-Clad Aluminum			
14*	20	20	25				12*
12*	25	25	30	20	20	25	10*
10*	30	35	40	25	30	35	8*
8	40	50	55	30	40	45	8
6	55	65	75	40	50	60	6
4	70	85	95	55	65	75	4
3	85	100	110	65	75	85	3
2	95	115	130	75	90	100	2
1	110	130	150	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	165	200	225	130	155	175	3/0
4/0	195	230	260	150	180	205	4/0
250	215	255	290	170	205	230	250
300	240	285	320	190	230	255	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

*See 240.4(D)