Ampacity per NFPA 79 (2018 Edition)

12.5.1 The ampacities of conductors shall not exceed the corresponding temperature values given in Table 12.5.1 before any correction factors for ambient temperature or adjustment factors for the number of current-carrying conductors have been applied.

Table 12.5.1: Conductor Ampacity Based on Copper Conductors with 60°C (140°F), 75°C (167°F), and 90°C (194°F) Insulation in an Ambient Temperature of 30°C (86°F)

Conductor Size	Ampacity		
(AWG)	60 °C (140 °F)	75 °C (167 °F)	90 °C (194 °F)
30	–	0.5	0.5
28	–	0.8	0.8
26	–	1	1
24	2	2	2
22	3	3	3
20	5	5	5
18	7	7	14
16	10	10	18
14	20	20	25
12	25	25	30
10	30	35	40
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

Notes: (1) Wire types listed in section 12.3.1 of *NFPA 79* shall be permitted to be used at the ampacities listed in this table.
(2) The sources for the ampacities in this table are Table 310.15(B)(16) of *NFPA 70*.

Correction Factors

Table 12.5.5(a) Ambient Temperature Correction Factors

For ambient temperatures other than 30 °C (86 °F), multiply the allowable ampacity by the appropriate factor shown below.

Ambient Temperature	Correction Factor	Correction Factor	Correction Factor
(°C)	60 °C	75 °C	90 °C
21-25	1.08	1.05	1.04
26-30	1.00	1.00	1
31-35	0.91	0.94	0.96
36-40	0.82	0.88	0.91
41-45	0.71	0.82	0.87
46-50	0.58	0.75	0.82
51-55	0.41	0.67	0.76
56-60	–	0.58	0.71
61-70	–	0.33	0.58
71-80	–	–	0.41

Table 12.5.5(b) Adjustment Factors for More Than Three Current-Carrying Conductors in a Raceway or Cable

Number of Current-Carrying Conductors	Percent of Values in Table 12.5.5(a) as Adjusted for Ambient Temperature if Necessary
4-6	80
7-9	70
10-20	50
21-30	45
31-40	40
41 and above	35

Example: Application with a LUTZE DRIVEFLEX® XLPE (C) 1 TSP PVC, Shielded with control pair and an ambient temperature of 43 °C and a required ampacity of 34 Ampere.

1. Factor ambient temperature: 0.87
2. Percentage factor current carrying conductors: 80

55 A x 0.87 x 0.8 = 38 A > 34 A
Our recommendation is a AWG8 + 1 TSP AWG14,
Item no. **A2170804**

Note: The given values are reference numbers to calculate the required cable sizes. LUTZE Inc. is not responsible for the conformity of the values provided by the NEC.