Control Cables 2 up to 40C

Number of Conductors	Ampacity*							
	18 AWG	16 AWG	14 AWG		12 AWG		10 AWG	
	90 °C	90 °C	75 °C	90 °C	75 °C	90 °C	75 °C	90 °C
2 to 3	14.0	18.0	20.0	25.0	25.0	30.0	35.0	40.0
4 to 6	11.2	14.4	16.0	20.0	20.0	24.0	28.0	32.0
7 to 9	9.8	12.6	14.0	17.5	17.5	21.0	24.5	28.0
10 to 20	7.0	9.0	10.0	12.5	12.5	15.0	17.5	20.0
21 to 30	6.3	8.1	9.0	11.3	11.3	13.5	15.8	18.0
31 to 40	5.6	7.2	8.0	10.0	10.0	12.0	14.0	16.0

Multiconductors 2, 3 and 4C

Conductor Size AWG/kcmil	Copper	
	75 °C	90 °C
8	50	55
6	65	75
4	85	95
2	115	130
1	130	145
1/0	150	170
2/0	175	195
3/0	200	225
4/0	230	260
250	255	290
300	285	320
350	310	350
400	335	380
500	380	430
600	420	475
750	475	535
1000	545	615

NEC Table 310.15(B)(16) (formerly Table 310.16) Allowable Ampacities of Insulated Conductors Rated Up to and Including 2000 Volts, 60 °C Through 90 °C (140 °F Through 194 °F), Not More Than Three Current-Carrying Conductors in Raceway, Cable, or Earth (Directly Buried), Based on Ambient Temperature of 30 °C (86 °F).

Multiconductors 2, 3 and 4C

Conductor Size AWG/kcmil	Aluminum	
	75 °C	90 °C
6	50	55
4	65	75
3	75	85
2	90	100
1	100	115
1/0	120	135
2/0	135	150
3/0	155	175
4/0	180	205
250	205	230
300	230	260
350	250	280
400	270	305
500	310	350
600	340	385
700	375	425
750	385	435
800	395	445
900	425	480
1000	445	500

NEC Table 310.15(B)(16) (formerly Table 310.16) Allowable Ampacities of Insulated Conductors Rated Up to and Including 2000 Volts, 60 °C Through 90 °C (140 °F Through 194 °F), Not More Than Three Current-Carrying Conductors in Raceway, Cable, or Earth (Directly Buried), Based on Ambient Temperature of 30 °C (86 °F).

MV Cable Copper

Conductor Size AWG/kcmil	2001 – 5000 V		5001 – 35000 V	
	90 °C	105 °C	90 °C	105 °C
	MV-90	MV-105	MV-90	MV-105
8	59	64	—	—
6	78	84	88	95
4	100	110	115	125
2	135	145	150	160
1	155	165	170	185
1/0	175	190	195	210
2/0	200	220	220	235
3/0	230	250	250	270
4/0	265	285	285	305
250	290	315	310	335
350	355	380	375	400
500	430	460	450	485
750	530	570	545	585
1000	600	645	615	660

Rating Voltage	Minimum Size AWG
5 kV	8
8 kV	6
15 kV	2
25 kV	1
35 kV	1/0

NEC Table 310.60(C)(79) Ampacities of Three Insulated Copper Conductors Cabled Within an Overall Covering (Three-Conductor Cable) in Underground Electrical Ducts (One Cable per Electrical Duct) Based on Ambient Earth Temperature of 20 °C (68 °F), Electrical Duct Arrangement in Accordance with Figure 310.60, 100 Percent Load Factor, Thermal Resistance (RHO) of 90, Conductor Temperatures of 90 °C (194 °F) and 105 °C (221 °C). One Circuit (See Figure 310.60, Detail 1.)

MV Cable Aluminum

Conductor Size AWG/kcmil	2001 – 5000 V		5001 – 35000 V	
	90 °C	105 °C	90 °C	105 °C
	MV-90	MV-105	MV-90	MV-105
8	46	50	—	—
6	61	66	69	74
4	80	86	89	96
2	105	110	115	125
1	120	130	135	145
1/0	140	150	150	165
2/0	160	170	170	185
3/0	180	195	195	210
4/0	205	220	220	240
250	230	245	245	265
350	280	310	295	315
500	340	365	355	385
750	425	460	440	475
1000	495	535	510	545

NEC Table 310.60(C)(80) Ampacities of Three Insulated Aluminum Conductors Cabled Within an Overall Covering (Three-Conductor Cable) in Underground Electrical Ducts (One Cable per Electrical Duct) Based on Ambient Earth Temperature of 20 °C (68 °F), Electrical Duct Arrangement in Accordance with Figure 310.60, 100 Percent Load Factor, Thermal Resistance (RHO) of 90, Conductor Temperatures of 90 °C (194 °F) and 105 °C (221 °C). One Circuit (See Figure 310.60, Detail 1)

MV Cable Copper

Conductor Size AWG/kcmil	2001 – 5000 V		5001 – 35000 V	
	90 °C	105 °C	90 °C	105 °C
	MV-90	MV-105	MV-90	MV-105
8	85	89	—	—
6	105	115	115	120
4	135	150	145	155
2	180	190	185	200
1	200	215	210	225
1/0	230	245	240	255
2/0	260	280	270	290
3/0	295	320	305	330
4/0	335	360	350	375
250	365	395	380	410
350	440	475	460	495
500	530	570	550	590
750	650	700	665	720
1000	730	785	750	810

NEC Table 310.60(C)(83) Ampacities of Three Insulated Copper Conductors Cabled Within an Overall Covering (Three-Conductor Cable), Directly Buried in Earth Based on Ambient Earth Temperature of 20 °C (68 °F), Arrangement per Figure 310.60, 100 Percent Load Factor, Thermal Resistance (RHO) of 90, Conductor Temperatures of 90 °C (194 °F) and 105 °C (221 °F). One Circuit (See Figure 310.60, Detail 5.)

MV Cable Aluminum

Conductor Size AWG/kcmil	2001 – 5000 V		5001 – 35000 V	
	90 °C	105 °C	90 °C	105 °C
	MV-90	MV-105	MV-90	MV-105
8	65	70	—	—
6	80	88	90	95
4	105	115	115	125
2	140	150	145	155
1	155	170	165	175
1/0	180	190	185	200
2/0	205	220	210	225
3/0	230	250	240	260
4/0	260	280	270	295
250	285	310	300	320
350	345	375	360	390
500	420	450	435	470
750	520	560	540	580
1000	600	650	620	665

NEC Table 310.60(C)(84) Ampacities of Three Insulated Aluminum Conductors Cabled Within an Overall Covering (Three-Conductor Cable), Directly Buried in Earth Based on Ambient Earth Temperature of 20 °C (68 °F), Arrangement per Figure 310.60, 100 Percent Load Factor, Thermal Resistance (RHO) of 90, Conductor Temperatures of 90 °C (194 °F) and 105 °C (221 °F). One Circuit (See Figure 310.60, Detail 5.)

NEC Table 310.60(C)(4) Ambient Temperature Correction Factors

For ambient temperatures other than 40 °C (104 °F), multiply the allowable ampacities specified in the ampacity tables by the appropriate factor shown below.			
Ambient Temperature (°C)	Temperature Rating of Conductor		Ambient Temperature (°F)
	90 °C	105 °C	
10 or less	1.26	1.21	50 or less
11–15	1.22	1.18	51–59
16–20	1.18	1.14	60–68
21–25	1.14	1.11	69–77
26–30	1.10	1.07	78–86
31–35	1.05	1.04	87–95
36–40	1.00	1.00	96–104
41–45	0.95	0.96	105–113
46–50	0.89	0.92	114–122
51–55	0.84	0.88	123–131
56–60	0.77	0.83	132–140
61–65	0.71	0.78	141–149
66–70	0.63	0.73	150–158
71–75	0.55	0.68	159–167
76–80	0.45	0.62	168–176
81–85	0.32	0.55	177–185
86–90	—	0.48	186–194
91–95	—	0.39	195–203
96–100	—	0.28	204–212