

Medium Voltage Multiconductors 2 kV – 35 kV



A Viakable Company

Ampacity Data

Copper 100% and 133% Insulation Levels

Size AWG or kcmil	2001 – 5000 Volts		5001 – 35000 Volts	
	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.)

Aluminum 100% and 133% Insulation Levels

Size AWG or kcmil	2001 – 5000 Volts		5001 – 35000 Volts	
	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

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.)

Ampacity Data *continued*

Copper 100% and 133% Insulation Levels

Size AWG or kcmil	2001 – 5000 Volts		5001 – 35000 Volts	
	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

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.)

Aluminum 100% and 133% Insulation Levels

Size AWG or kcmil	2001 – 5000 Volts		5001 – 35000 Volts	
	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

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.)