

Medium Voltage Single Conductor 5 kV – 35 kV



A Viakable Company

Ampacity Data

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	55	61	—	—
6	75	84	83	93
4	97	110	110	120
2	130	145	150	165
1	155	175	170	190
1/0	180	200	195	215
2/0	205	225	225	255
3/0	240	270	260	290
4/0	280	305	295	330
250	315	355	330	365
350	385	430	395	440
500	475	530	480	535
750	600	665	585	655
1000	690	770	675	755

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)(73) Ampacities of an Insulated Triplexed or Three Single Conductor Copper Cables in Isolated Conduit in Air Based on Conductor Temperatures of 90 °C (194 °F) and 105 °C (221 °F) and Ambient Air Temperature of 40 °C (104 °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	43	48	—	—
6	58	65	65	72
4	76	85	84	94
2	100	115	115	130
1	120	135	130	150
1/0	140	155	150	170
2/0	160	175	175	200
3/0	190	210	200	225
4/0	215	240	230	260
250	250	280	255	290
350	305	340	310	350
500	380	425	385	430
750	490	545	485	540
1000	580	645	565	640

NEC Table 310.60(C)(74) Ampacities of an Insulated Triplexed or Three Single Conductor Aluminum Cables in Isolated Conduit in Air Based on Conductor Temperatures of 90 °C (194 °F) and 105 °C (221 °F) and Ambient Air Temperature of 40 °C (104 °F)*

Technical Data

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	65	74	—	—
6	90	99	100	110
4	120	130	130	140
2	160	175	170	195
1	185	205	195	225
1/0	215	240	225	255
2/0	250	275	260	295
3/0	290	320	300	340
4/0	335	375	345	390
250	375	415	380	430
350	465	515	470	525
500	580	645	580	650
750	750	835	730	820
1000	880	980	850	950

NEC Table 310.60(C)(67) Ampacities of Insulated Single Copper Conductor Cables Triplexed in Air Based on Conductor Temperatures of 90 °C (194 °F) and 105 °C (221 °F) and Ambient Air Temperature of 40 °C (104 °F)*

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	50	57	—	—
6	70	77	75	84
4	90	100	100	110
2	125	135	130	150
1	145	160	150	175
1/0	170	185	175	200
2/0	195	215	200	230
3/0	225	250	230	265
4/0	265	290	270	305
250	295	325	300	335
350	365	405	370	415
500	460	510	460	515
750	600	665	590	660
1000	715	800	700	780

NEC Table 310.60(C)(68) Ampacities of Insulated Single Aluminum Conductor Cables Triplexed in Air Based on Conductor Temperatures of 90 °C (194 °F) and 105 °C (221 °F) and Ambient Air Temperature of 40 °C (104 °F)*

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