

# MV-105 5kV/8kV, 15kV, 25kV, 35kV

UL 1072, IEEE 1202, ASTM B-8, AEIC CS8, ICEA S-97-682, ICEA S-93-639/NEMA WC 74

- Medium Voltage 5kV 133%/8kV 100%, 15kV, 25kV, 35kV 133% Aluminum Conductor, Copper Tape Shielded Power Cable



## Applications:

**INDUSTRIAL AND COMMERCIAL:** Chemical Plants, Petrochemical Plants, Electrical Utility Plants, Water Treatment Facilities, Textile Mills, Steel Mills, Paper Mills, Airports, Shopping Malls, Military Bases, Medical Facilities, Sports Stadiums

**Installations:** In Cable Tray, Conduit in Air, Aerial with Messenger Supported Direct Buried, Underground Duct, Wet and Dry Locations, Wet and Dry Locations For use in Class I - Division 2, Class, II - Division 2 and Class III - Division 1 hazardous locations per NEC Articles 501, 502 and 503

## Construction

<b>Conductors</b>	Class B compressed annealed uncoated aluminium
<b>Conductor shield</b>	Extruded layer of semiconducting compound applied under simultaneous triple extrusion process
<b>Insulation</b>	Extruded layer of 105°C rated Ethylene Propylene Rubber (EPR)
<b>Insulation shield</b>	Extruded layer of semiconducting compound applied by triple extrusion process
<b>Metallic shield</b>	5 mil bare copper tape applied helically with a 25% overlap
<b>Jacket</b>	Extruded layer of black sunlight resistant Polyvinyl Chloride (PVC)

## Characteristic

<b>Maximum conductor operating temperature</b>	+105°C
<b>Maximum short-circuit conductor temperature</b>	+250°C
<b>Lowest ambient temperature for fixed installation</b>	-40°C
<b>Lowest installation temperature</b>	-5°C
<b>Minimum bending radius</b>	12xD (D-overall diameter of cable)
<ul style="list-style-type: none"> <li>• Flame retardant PVC jacket</li> <li>• Listed for CT use for sizes 1/0 AWG and larger</li> </ul>	

## Approvals

(UL) E231073

## 5kV 133%/8kV 100% INSULATION LEVEL

Part Number	Conductor Size	Insulation Thickness	Diameter over Insulation	Jacket Thickness	Outer Diameter	Cable Weight	Ampacities *			
							Isolated in Air	Direct Buried	Underground Duct	
	<b>AWG / MCM</b>	<b>mils</b>	<b>inches</b>	<b>mils</b>	<b>inches</b>	<b>lbs / 1000ft</b>	<b>A</b>			
MV105-5kV2-1	2 AWG		0.57	60	0.82	518	215	250	155	
MV105-5kV1-1	1 AWG		0.61		0.84	584	250	280	180	
MV105-5kV1/0-1	1/0 AWG		0.63		0.89	678	290	320	210	
MV105-5kV2/0-1	2/0 AWG		0.67		0.94	792	330	365	235	
MV105-5kV3/0-1	3/0 AWG		0.72	80	0.98	925	385	415	270	
MV105-5kV4/0-1	4/0 AWG	115	0.78		1.04	1093	445	465	310	
MV105-5kV250-1	250 MCM		0.83		1.10	1242	495	510	345	
MV105-5kV350-1	350 MCM		0.94		1.22	1624	615	615	415	
MV105-5kV500-1	500 MCM		1.07		1.36	2185	775	745	505	
MV105-5kV750-1	750 MCM		1.26		1.57	3102	1000	910	630	
MV105-5kV1000-1	1000 MCM		1.42		110	1.77	4068	1200	1055	720

## 15kV 133% INSULATION LEVEL

Part Number	Conductor Size	Insulation Thickness	Diameter over Insulation	Jacket Thickness	Outer Diameter	Cable Weight	Ampacities *			
							Isolated in Air	Direct Buried	Underground Duct	
	<b>AWG / MCM</b>	<b>mils</b>	<b>inches</b>	<b>mils</b>	<b>inches</b>	<b>lbs / 1000ft</b>	<b>A</b>			
MV105-15kV2-1	2 AWG		0.76	80	1.03	700	215	225	165	
MV105-15kV1-1	1 AWG		0.80		1.07	790	250	260	185	
MV105-15kV1/0-1	1/0 AWG		0.84		1.10	867	290	295	215	
MV105-15kV2/0-1	2/0 AWG		0.89		1.15	994	335	335	245	
MV105-15kV3/0-1	3/0 AWG		0.93	110	1.19	1135	385	380	275	
MV105-15kV4/0-1	4/0 AWG	220	0.99		1.25	1314	445	435	315	
MV105-15kV250-1	250 MCM		1.05		1.31	1471	495	475	345	
MV105-15kV350-1	350 MCM		1.16		1.45	1901	610	575	415	
MV105-15kV500-1	500 MCM		1.28		1.57	2459	765	700	500	
MV105-15kV750-1	750 MCM		1.46		1.81	3471	990	865	610	
MV105-15kV1000-1	1000 MCM		1.63		110	1.98	4404	1185	1005	690

\* Ampacities „Underground Duct“ per NEC 2011 Table 310.60 (C) (78). Ampacities „Isolated in Air“ per NEC 2011 Table 310.60 (C) (70). Am-

## 25kV 133% INSULATION LEVEL

Part Number	Conductor Size	Insulation Thickness	Diameter over Insulation	Jacket Thickness	Outer Diameter	Cable Weight	Ampacities *		
							Isolated in Air	Direct Buried	Underground Duct
	AWG / MCM	mils	inches	mils	inches	lbs / 1000ft	A		
MV 105-25kV1-1	1	320	1.00	70	1.30	1100	250	260	185
MV 105-25kV1/0-1	1/0		1.05		1.35	1210	290	295	215
MV 105-25kV2/0-1	2/0		1.10		1.40	1350	330	335	245
MV 105-25kV3/0-1	3/0		1.15		1.45	1500	380	380	275
MV 105-25kV4/0-1	4/0		1.20		1.50	1710	445	435	315
MV 105-25kV250-1	250		1.25		1.55	1880	490	475	345
MV 105-25kV350-1	350		1.35	1.65	2162	605	575	415	
MV 105-25kV500-1	500		1.50	1.85	3060	755	700	500	
MV 105-25kV750-1	750		1.65	100	2.00	4080	970	865	610
MV 105-25kV1000-1	1000		1.80	2.15	5060	1160	1005	690	

## 35kV 133% INSULATION LEVEL

Part Number	Conductor Size	Insulation Thickness	Diameter over Insulation	Jacket Thickness	Outer Diameter	Cable Weight	Ampacities *		
							Isolated in Air	Direct Buried	Underground Duct
	AWG / MCM	mils	inches	mils	inches	lbs / 1000ft	A		
MV 105-35kV1/0-1	1/0	420	1.25	70	1.55	1378	290	295	215
MV 105-35kV2/0-1	2/0		1.30		1.60	1498	330	335	245
MV 105-35kV3/0-1	3/0		1.35		1.65	1650	380	380	275
MV 105-35kV4/0-1	4/0		1.40		1.70	1850	445	435	315
MV 105-35kV250-1	250		1.45	1.75	2050	490	475	345	
MV 105-35kV350-1	350		1.55	1.90	2565	605	575	415	
MV 105-35kV500-1	500		1.70	100	2.05	3172	755	700	500
MV 105-35kV750-1	750		1.90	2.25	4143	970	865	610	
MV 105-35kV1000-1	1000		2.00	2.40	5100	1160	1005	690	

\* Ampacities „Underground Duct“ per NEC 2023 Table 315.60(C)(11). Ampacities „Isolated in Air“ per NEC 2023 Table 315.60(C)(3). Ampacities „Direct Buried“ per NEC 2023 Table 315.60(C)(15).