

# Single Conductor 35KV, MV-105, 133% EPR/PVC Copper Tape Shield



## APPLICATION:

35KV Shielded MV-105 cable is primarily used for power circuits in commercial, industrial, refinery and petro-chemical plants; utility power generation and substations. The cable can be installed in wet or dry applications and is for use in aerial, conduit, open tray, and underground duct installations. It can be used in direct burial if installed with a ground conductor in close proximity. The cable is approved for temperature up to 105°C and voltages up to 35000 volts.

## CONDUCTORS:

- Class B annealed compact bare copper per ASTM

## CONDUCTOR SHIELD:

- Extruded thermoset semi-conducting stress-control layer over conductor

## INSULATION:

- High dielectric strength lead-free EPR insulation, contrasting in color to the black semi-conducting shield layers

## INSULATION SHIELD:

- Extruded thermoset semi-conducting polymeric layer free stripping from insulation

## METALLIC SHIELD:

- Helically applied 5 mil annealed copper tape over the insulation shield with an overlap of 25%

## JACKET:

- Black low-friction, lead-free, flame-retardant, moisture and sunlight resistant polyvinyl chloride (PVC) jacket tightly applied over the copper tape

## STANDARDS:

- UL 1072
- UL Listed as Type MV-105 for use in accordance with NEC
- AEIC CS8
- ICEA S-93-639/NEMA WC74
- ICEA S-97-682
- UL 1685 UL Flame Exposure Test
- IEEE 1202 Flame Test (70,000 BTU/hr)/CSA FT4
- EPA 40 CFR, Part 261 for leachable lead content per TCLP method
- OSHA Acceptable

Part Number	Conductor Size	Conductor Diameter	Insulation Thickness	Insulation Diameter	Jacket Thickness	Overall Diameter	Cable Weight	Ampacity					
								Conduit in Air*		Underground Duct**		Tray***	
	AWG/kcmil	inches	mils	inches	inches	inches	lbs/kft	90°C	105°C	90°C	105°C	90°C	105°C
1/0-0135KVEPVC MV105	1/0	0.34	420	1.220	0.080	1.47	1253	195	215	200	215	195	220
2/0-0135KVEPVC MV105	2/0	0.38	420	1.250	0.080	1.49	1378	225	255	230	245	225	250
3/0-0135KVEPVC MV105	3/0	0.43	420	1.300	0.080	1.53	1532	260	290	260	275	260	285

All values are nominal and subject to correction

\* Ampacities are in accordance with Table 310.60(C)(73) of the NEC for triplexed or three single conductor copper cables in isolated conduit in air based on a conductor temperature of 90°C (194°F) or 105°C (221°F), temperature denoted in column header, and an ambient air temperature of 40°C (104°F).

\*\* Ampacities are in accordance with Table 310.60(C)(77) of the NEC for triplexed or three single conductor copper cables in underground ducts (three conductors per duct), based on a conductor temperature of 90°C (194°F) or 105°C (221°F), temperature denoted in column header, and an ambient earth temperature of 20°C (68°F), electrical duct arrangement per Figure 310.60 Detail 1, 100% load factor, and earth thermal resistance (rho) of 90.

\*\*\* Ampacities are based on single conductor Type MV-105 sizes #1/0 AWG and larger in an uncovered tray in accordance with Section 392.80(B)(2) of the NEC at an ambient air temperature of 40°C (104°F); the ampacities are based on 75% of the values per Table 310.60(C)(69), operating temperature denoted in column header. For cable trays with unventilated covers for more than 6 feet, the ampacities shall not exceed 70% of the values per Table 310.60(C)(69).



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								Conduit in Air*		Underground Duct**		Tray***	
								90°C	105°C	90°C	105°C	90°C	105°C
4/0-0135KVEPVC MV105	4/0	0.48	420	1.350	0.080	1.59	1716	295	330	295	315	295	335
250-0135KVEPVC MV105	250	0.53	420	1.400	0.080	1.64	1888	330	365	325	345	330	370
350-0135KVEPVC MV105	350	0.62	420	1.500	0.110	1.79	2396	395	440	390	415	410	455
500-0135KVEPVC MV105	500	0.74	420	1.620	0.110	1.91	2986	480	535	465	500	510	565
750-0135KVSE PVC	750	0.91	420	1.810	0.110	2.09	3954	585	655	565	610	655	730
1000-0135KVEPVC MV105	1000	1.06	420	1.960	0.110	2.25	4885	675	755	640	690	780	870

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