

Copper Single Conductor 15-25KV MV-105 EPR/PVC Copper Tape Shield



APPLICATION:

15-25KV 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 25kV.

CONDUCTORS:

- Class B annealed compact or compressed bare copper per ASTM

CONDUCTOR SHIELD:

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

INSULATION:

- High dielectric strength EPR insulation with or without lead, contrasting in color to the black semi-conducting shield layers, extruded over the conductor shield

INSULATION SHIELD:

- Extruded, strippable semi-conducting layer over the 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
- Optional water block available upon request

STANDARDS:

Meets or exceeds the following standards as applicable:

- 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
- IEEE 1202 Flame Test (70,000 BTU/hr)/CSA FT4
- EPA 40 CFR, Part 261 for leachable lead content per TCLP method
- ASTM B3, B496
- Sunlight Resistant, listed and marked
- NFPA 70 NEC
- OSHA Acceptable
- UL 1685 (Sizes 1/0 AWG and larger) UL Flame Exposure Test
- Sizes 1/0 AWG and larger are listed and marked "FOR CT USE"
- Temperature Rating: 105°C Continuous, 140°C Emergency Overload, 250°C Short Circuit

Part Number	Conductor Size	Conductor Diameter	Insulation Thickness	Insulation Diameter	Jacket Thickness	Overall Diameter	Cable Weight	Ampacity					
	AWG/kcmil	inches	inches	inches	inches	inches	lbs/kft	Conduit in Air*		Underground Duct**		Tray***	
								90°C	105°C	90°C	105°C	90°C	105°C
15kV 133% Insulation Level													
2-0115KVEPUCMV105	2	0.268	0.220	0.76	0.080	1.01	720	150	165	155	165	-	-
1-0115KVEPUCMV105	1	0.310	0.220	0.79	0.080	1.02	733	170	190	175	185	-	-
1/0-0115KVEPUCMV105	1/0	0.336	0.220	0.83	0.080	1.08	893	195	215	200	215	195	220
2/0-0115KVEPUCMV105	2/0	0.376	0.220	0.87	0.080	1.12	1008	225	255	230	245	225	250
4/0-0115KVEPUCMV105	4/0	0.475	0.220	0.97	0.080	1.22	1332	295	330	295	315	300	335
250-0115KVEPUCMV105	250	0.520	0.220	1.05	0.080	1.30	1465	330	365	325	345	335	370
350-0115KVEPUCMV105	350	0.620	0.220	1.12	0.080	1.35	1783	395	440	390	415	415	460
500-0115KVEPUCMV105	500	0.736	0.220	1.23	0.080	1.49	2419	480	535	465	500	515	575



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								Conduit in Air*		Underground Duct**		Tray***	
	AWG/kcmil	inches	inches	inches	inches	inches	lbs/kft	90°C	105°C	90°C	105°C	90°C	105°C
15kV 133% Insulation Level													
750-0115KVEPUCMV105	750	0.908	0.220	1.41	0.080	1.67	3328	585	655	565	610	665	745
1000-0115KVEPUCMV105	1000	1.060	0.220	1.58	0.110	1.86	4219	675	755	640	690	795	890
25kV 100% Insulation Level													
1/0-0125KVEPUCMV105	1/0	0.336	0.260	0.94	0.080	1.20	965	195	215	200	215	195	220
4/0-0125KVEPUCMV105	4/0	0.475	0.260	1.08	0.080	1.34	1404	295	330	295	315	300	335
500-0125KVEPUCMV105	500	0.736	0.260	1.34	0.080	1.60	2497	480	535	465	500	515	575

All values are nominal and subject to correction

* Ampacities are in accordance with Table 311.60(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 311.60(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 311.60 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 311.60(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 311.60(C)(69).



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