



Specification Sheet

BWC Part Number #: BWC-500-015KVSEPMV105

Single Conductor 5/8KV, Shielded, MV-105, Shielded, MV-105 133%/100%

Application

This 5/8KV Shielded MV-105 cable is primarily used for power circuits in commercial settings, industrial plants, refineries, and petrochemical plants, as well as in utility power generation and substations. It is suitable for wet or dry applications and can be installed in aerial, conduit, open tray, and underground duct installations. If installed with a ground conductor in close proximity, it can also be used in direct burial applications. The cable is approved for temperatures up to 105°C and can handle up to 5000 volts in ungrounded systems and 8000 volts in grounded systems.

Construction

- **Conductor:** Class B annealed compact or compressed bare copper per ASTM standards.
- **Conductor Shield:** An extruded thermoset semi-conducting stress-control layer is applied over the conductor.
- **Insulation:** The cable features a high dielectric strength, lead-free EPR insulation. Its color contrasts with the black semi-conducting shield layers.
- **Insulation Shield:** An extruded thermoset semi-conducting polymeric layer is applied over the insulation and is free-stripping.
- **Metallic Shield:** A 5 mil annealed copper tape is helically applied over the insulation shield with a 25% overlap.
- **Jacket:** A black, low-friction, lead-free, flame-retardant, and moisture- and sunlight-resistant polyvinyl chloride (PVC) jacket is tightly applied over the copper tape shield.

Standards

This cable meets or exceeds the following standards:

- UL 1072 and is UL Listed as Type MV-105
- AEIC CS8
- ICEA S-93-639/NEMA WC74 and ICEA S-97-682
- IEEE 1202 Flame Test (70,000 BTU/hr)/CSA FT4

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Information on this specification is subject to change without notice. REV 03062023





Specification Sheet

- UL 1685 UL Flame Exposure Test (Sizes 1/0 AWG and larger)
- Sizes 1/0 AWG and larger are marked "Sunlight-Resistant FOR CT USE"
- OSHA Acceptable
- EPA 40 CFR, Part 261 per TCLP method





Specification Sheet

PART NUMBER	COND SIZE (AWG/ KCMIL)	COND DIAMETER (INCH)	INSULATION THICKNESS (MILS)	INSULATION DIAMETER (INCH)	JACKET THICKNESS (INCH)	OVERALL DIAMETER (INCH)	CABLE WEIGHT (LBS/KFT)	AMPACITY CONDUIT IN AIR* 90C/105C	AMPACITY UNDERGROUND DUCT ** 90C/105C	AMPACITY TRAY*** 90C/105C
BWC-6-015VSEPMV105	6	.17	115	.450	.060	.65	295	83/93	90/97	-
BWC-4-015VSEPMV105	4	.22	115	.50	.060	.70	365	110/120	115/125	-
BWC-2-015VSEPMV105	2	.27	115	.550	.060	.76	471	150/165	155/165	-
BWC-1/0-015VSEPMV105	1/0	.34	115	.620	.060	.82	623	195/215	200/215	195/220
BWC-2/0-015VSEPMV105	2/0	.38	115	.660	.060	.86	728	225/255	230/245	225/250
BWC-4/0-015VSEPMV105	4/0	.48	115	.760	.080	1.00	1053	295/330	295/315	300/335
BWC-250-015VSEPMV105	250	.53	115	.810	.080	1.05	1199	330/365	325/345	335/370
BWC-350-015VSEPMV105	350	.62	115	.910	.080	1.14	1559	395/440	390/415	415/460
BWC-500-015VSEPMV105	500	.74	115	1.030	.080	1.27	2088	480/535	465/500	515/575
BWC-750-015VSEPMV105	750	.91	115	1.210	.080	1.45	2962	585/655	565/610	655/745
BWC-1000-015VSEPMV105	1000	1.06	115	1.370	.080	1.60	3815	675/755	640/690	795/890

*Table data sourced from. All values are nominal and subject to correction.

* **Conduit in Air Ampacities:** Based on three single conductor cables in isolated conduit in air, with a 40°C ambient air temperature, per NEC Table 310.60(C)(73).

** **Underground Duct Ampacities:** Based on three single conductor cables in an underground duct, with a 20°C ambient earth temperature, 100% load factor, and RHO of 90, per NEC Table 310.60(C)(77).





Specification Sheet

*** **Tray Ampacities:** For sizes 1/0 AWG and larger in an uncovered tray with 40°C ambient air, based on 75% of values from NEC Table 310.60(C)(69).



ALL SPECIFIED PARAMETERS WITHOUT A TOLERANCE ARE NOMINAL AND SUBJECT TO VERIFICATION. BEST WIRE IS NOT RESPONSIBLE FOR UNKNOWN PERFORMANCE ATTRIBUTES THAT WERE NOT MADE KNOWN TO BEST WIRE AT THE TIME OF DESIGN.

