Specification Sheet

BWC Part Number #: BWC-2/0-0135KVEPVCMV105

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

Application

This 35KV Shielded MV-105 cable is primarily intended for power circuits in commercial, industrial, refinery, and petrochemical plants, as well as utility power generation and substations. The cable is suitable for wet or dry applications and can be used in aerial, conduit, open tray, and underground duct installations. It can also be directly buried if installed with a ground conductor in close proximity. The cable is approved for operating temperatures up to 105°C and voltages up to 35,000 volts.

Construction

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

Standards

This cable meets or exceeds the following standards where applicable:

- UL 1072 and is UL Listed as Type MV-105
- AEIC CS8
- ICEA S-93-639/NEMA WC74 and ICEA S-97-682
- UL 1685 UL Flame Exposure Test
- IEEE 1202 Flame Test (70,000 BTU/hr)/CSA FT4

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- EPA 40 CFR, Part 261 for leachable lead content
- OSHA Acceptable

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PART NUMBER	COND SIZE (AWG/ KCMIL)	COND DIAMETER (INCH)	INSULATION THICKNESS (MILS)	INSULATION DIAMETER (INCH)	JACKET THICKNESS (INCH)	OVERALL DIAMTER (INCH)	CABLE WEIGHT (LBS/KFT)	AMPACITY CONDUIT IN AIR* 90C/105C	AMPACITY UNDERGROUND DUCT ** 90C/105C	AMPACITY TRAY*** 90C/105C
BWC-1/0-0135KVEPVCMV105	1/0	.34	420	1.220	.080	1.47	1253	195/215	200/215	195/220
BWC-2/0-0135KVEPVCMV105	2/0	.38	420	1.250	.080	1.49	1378	225/255	230/245	225/250
BWC-3/0-0135KVEPVCMV105	3/0	.43	420	1.300	.080	1.53	1532	260/290	260/275	260/285
BWC-4/0-0135KVEPVCMV105	4/0	.48	420	1.350	.080	1.59	1716	295/330	295/315	295/335
BWC-250-0135KVEPVCMV105	250	.53	420	1.400	.080	1.64	1888	330/365	325/345	330/370
BWC-350-0135KVEPVCMV105	350	.62	420	1.500	.110	1.79	2396	395/400	390/415	410/455
BWC-500-0135KVEPVCMV105	500	.74	420	1.620	.110	1.91	2986	480/535	465/500	510/565
BWC-750-0135KVEPVCMV105	750	.91	420	1.810	.110	2.09	3954	585/655	565/610	655/730
BWC-1000-0135KVEPVCMV105	1000	1.06	420	1.960	.110	2.25	4885	675/755	640/690	780/870

*Table data sourced from the provided document. 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).*

*** ***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).*

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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.