

## ROME-EPR PVC POWER CABLE, 5000 VOLTS

Single Conductor, Nonshielded, Jacketed  
MV-90 Wet or Dry

**APPLICATION:**

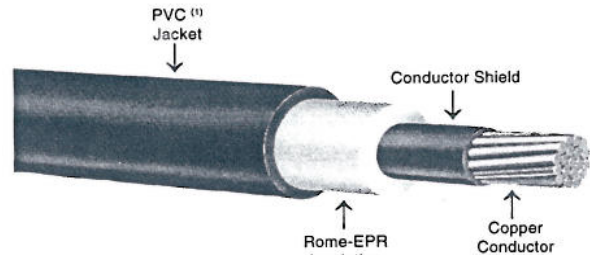
A - Where NEC jurisdiction applies; as 5,000-volt nonshielded power cable, Type MV-90, for use at conductor temperatures not exceeding 90°C in wet or dry locations. Cables meet requirements of Article 310.6 of the National Electrical Code.

B - For other applications, as nonshielded power cables for use at 5000 volts 100% insulation level (grounded neutral) and 133% insulation level (ungrounded neutral) under the following conditions:

- (a) Single conductors mounted on insulators in free air in indoor or outdoor locations. Circuit voltages are 2400 volts, 4160 volts and 4800 volts.
- (b) Random lay singles in metal conduit and nonmetallic conduit in dry locations at circuit voltage of 2400 volts, 4160 volts and 4800 volts, and in damp or wet locations at circuit voltages of 2400 volts and 4160 volts.
- (c) Triplexed singles in metal conduit and nonmetallic conduit in damp or wet locations at circuit voltage of 4800 volts.
- (d) Single conductors or triplexed singles in cable tray, spaced block supports or in messenger supported rings in dry, damp or wet locations at circuit voltages of 2400 volts and 4160 volts.
- (e) Triplexed singles in cable tray, spaced block supports or in messenger supported rings in damp or wet locations at circuit voltage of 4800 volts.
- (f) Single conductors or triplexed singles, aerially, field-spun to grounded messenger in dry, damp or wet locations at circuit voltages of 2400 volts, 4160 volts and 4800 volts.

**STANDARDS:**

1. Listed by Underwriters Laboratories as 5,000 volt nonshielded cable, Type MV-90, per UL Standard 1072.
2. Conforms to ICEA S-96-659 and NEMA WC71 for Nonshielded Cables Rated 2001-5000 Volts.



**CONSTRUCTION:** Annealed copper conductor, conductor shield, Rome-EPR insulation, discharge and moisture resistant PVC jacket, surface printed.

Size AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter Inches	COPPER CONDUCTOR		
		Insulation	Jacket		Approx. Net Wt. Lb./1000 Ft.	Ampacity*	
						Conduit	Duct
<b>5000 VOLTS, NONSHIELDED</b>							
8	7	125	80	.58	185	55	64
6	7	125	80	.62	225	75	85
4	7	125	80	.67	290	97	110
2	7	125	80	.73	385	130	145
1	19	125	80	.76	455	155	170
1/0	19	125	80	.80	535	180	195
2/0	19	125	80	.85	635	205	220
3/0	19	125	95	.93	790	240	250
4/0	19	125	95	.98	940	280	290
250	37	140	110	1.09	1135	315	320
350	37	140	110	1.19	1485	385	385
500	37	140	110	1.32	2000	475	470
750	61	155	125	1.56	2940	600	585
1000	61	155	125	1.71	3790	690	670

\***CONDUIT:** Three cables in isolated conduit in air, 90°C Conductor Temperature, 40°C Ambient. **DUCT:** Three cables per duct, 90°C Conductor Temperature, 20°C Ambient, One Circuit, 100% Load Factor, Rho=90. For other installation conditions, refer to the National Electrical Code.

NOTE: 1. Hypalon jacket may also be supplied.

Information on this sheet subject to change without notice.

## Specification

### ROME-EPR PVC POWER CABLE, 5000 VOLTS

#### Single Conductor, Nonshielded, Jacketed MV-90 Wet or Dry

#### 1. SCOPE

1.1 This specification describes single conductor Rome-EPR insulated, PVC jacketed nonshielded power cable for use in circuits not exceeding 5000 volts phase to phase at conductor temperatures of 90°C continuous normal operation, 130°C for emergency overload conditions and 250°C for short circuit conditions. Cables are intended for use as Type MV-90 in applications meeting the requirements of Article 310.6 of the National Electrical Code. For other applications, they are intended for use as nonshielded power cables rated 5000 volts 100% insulation level and 133% insulation level.

#### 2. STANDARDS

2.1 The following standards shall form a part of this specification to the extent specified herein:

2.1.1 Underwriters Laboratories Standard 1072 for Medium-Voltage Solid-Dielectric Cable.

2.1.2 ICEA Pub. No. S-96-659 and NEMA Pub. No. WC71 for Nonshielded Cables Rated 2001-5000 Volts.

#### 3. CONDUCTORS

3.1 Class B stranded annealed uncoated copper per Part 2 of ICEA.

#### 4. CONDUCTOR SHIELDING

4.1 The conductor shall be covered with a layer of semiconducting tape completely covering the conductor and firmly bonded to the cable insulation. The conductor shield shall meet the requirements of Part 3 of ICEA.

#### 5. INSULATION

5.1 Directly over the conductor shield shall be applied a homogeneous wall of Rome-EPR insulation. The average thickness of the insulation shall be as specified in Table 4-3, Type E-2 of ICEA and in Table 310.63 of the National Electrical Code for wet or dry locations. Minimum thickness at any point shall be not less than 90% of the specified thickness. Physical and electrical properties of the insulation shall be in accordance with Table 4-5, Type E-2 of ICEA.

#### 6. JACKET

6.1 A PVC jacket shall be applied directly over the insulation. The jacket shall meet the requirements of Table 5-1 of ICEA for Polyvinyl Chloride. The average thickness of the jacket shall be as specified in Table 4-3, Type E-2 of ICEA and in Table 310.63 of the National Electrical Code for wet or dry locations. The minimum thickness at any point shall be not less than 80% of the specified thickness.

#### 7. IDENTIFICATION

7.1 All cable shall be identified by means of surface ink printing indicating manufacturer, size, insulation type, voltage rating, and UL designations.

#### 8. TESTS

8.1 Cable shall be tested in accordance with ICEA S-96-659 and UL Standard 1072.