

## ROME-XLP POWER CABLE, 15,000 VOLTS

Three Conductor, Shielded, with Grounding Conductor  
 AEIC CS8, MV-90

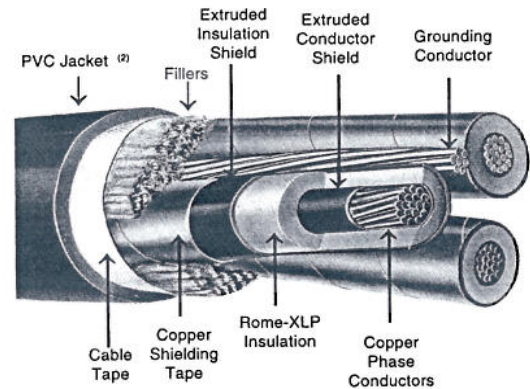
**APPLICATION:**

As medium voltage MV-90 power cable for use in main feeder, distribution and branch circuits in industrial, commercial and electric utility installations. Cables may be used in wet or dry locations in circuits not exceeding 15000 volts 100% insulation level, at conductor temperatures not exceeding 90°C for normal, 130°C for emergency overload and 250°C for short circuit conditions. Suitable for installation in conduit, duct, aerial and direct burial applications.

**STANDARDS:**

1. Conforms to ICEA S-93-639, NEMA WC74 for 5-46 kV Shielded Power Cable.
2. Conforms to ICEA S-97-682 for Utility Shielded Power Cables Rated 5 Through 46 kV.
3. Conforms to AEIC CS8 for Extruded Dielectric, Shielded Power Cables Rated 5 Through 46 kV.
4. Listed by UL as Type MV-90 per Standard 1072.
5. Overall jacket UL listed as Sunlight Resistant.
6. Cables UL listed for Direct Burial.
7. Conforms to Federal Specification J-C-30B.

**CONSTRUCTION:** Three conductors of stranded copper, extruded conductor shield, Rome-XLP crosslinked polyethylene insulation, extruded insulation shield, uncoated copper shielding tape. Three conductors twisted together with one uncoated copper grounding conductor, suitable fillers, binder tape, black PVC jacket overall, surface printed.



Size AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter Over Ins. Inches	Nom. Diam. Inches	Grounding Conductor Size AWG <sup>(1)</sup>	Approx. Net Wt. Lb./1000 Ft.	Ampacity*	
		Insulation	Jacket					Conduit	Air
<b>15000 VOLTS, 100% INSULATION LEVEL</b>									
2	7	175	110	.68	1.94	6	1885	145	165
1	19	175	110	.72	2.02	4	2200	165	185
1/0	19	175	110	.76	2.11	4	2600	195	215
2/0	19	175	110	.81	2.23	4	2950	220	245
3/0	19	175	110	.86	2.34	3	3475	250	285
4/0	19	175	110	.91	2.46	3	3910	290	325
250	37	175	110	.97	2.58	3	4500	315	360
350	37	175	140	1.07	2.92	2	5780	385	435
500	37	175	140	1.20	3.20	1	7695	470	535

\* **CONDUIT:** Three conductor cable in isolated conduit in air, 90°C Conductor Temperature, 40°C Ambient. **AIR:** Three conductor cable isolated in air, 90°C Conductor Temperature, 40°C Ambient. For other installation conditions, refer to the National Electrical Code.

- NOTES: <sup>(1)</sup> Grounding conductor sized in accordance with UL Standard 1072.  
<sup>(2)</sup> CPE jacket may also be supplied.

Information on this sheet subject to change without notice.

## Specification

### ROME-XLP POWER CABLE, 15000 VOLTS, 100% INSULATION LEVEL

#### Three Conductor, Shielded, with Grounding Conductor AEIC CS8, MV-90

#### 1. SCOPE

- 1.1 This specification describes three-conductor Rome-XLP (thermosetting-crosslinked polyethylene) insulated, polyvinyl chloride jacketed shielded power cable for use in circuits not exceeding 15,000 volts 100% insulation level 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 wet or dry locations, including conduit, duct, direct burial and aerial installation.

#### 2. STANDARDS

- 2.1 The following standards shall form a part of this specification to the extent specified herein:
- 2.1.1 ICEA Pub. No. S-93-639, NEMA Pub. No. WC74 for 5-46 kV Shielded Power Cable.
  - 2.1.2 ICEA Pub. No. S-97-682 for Utility Shielded Power Cables Rated 5 Through 46 kV.
  - 2.1.3 AEIC CS8 for Extruded Dielectric, Shielded Power Cables Rated 5 Through 46 kV.
  - 2.1.4 UL Standard 1072 for Type MV-90.

#### 3. CONDUCTORS

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

#### 4. CONDUCTOR SHIELD

- 4.1 The conductor shall be covered with a layer of extruded conducting crosslinked polyethylene compound with thickness in accordance with Table 3-1 of ICEA S-97-682. The extruded layer shall be compatible with and firmly bonded to the cable insulation and shall be in accordance with Par. 3.1 and meet the resistivity requirements of Par. 3.6.1 of ICEA S-97-682.

#### 5. INSULATION

- 5.1 Directly over the conductor shielding shall be applied a homogeneous wall of Rome-XLP insulation. The average thickness of insulation shall be 175 mils. 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 Part 4 of ICEA S-97-682 for unfilled XLPE.

#### 6. SHIELDING

- 6.1 Over the insulation shall be applied an extruded conducting thermosetting insulation shield. It shall be in intimate contact with the outer surface of the insulation and shall be free-stripping, leaving no conducting particles or other residue on the insulation surface. This layer shall be legibly identified as being conducting. The thickness of this layer shall be in accordance with Table 5-1 of ICEA S-97-682. The insulation shield shall meet the requirements of Par. 5.5.1 of ICEA S-97-682.
- 6.2 An uncoated copper tape shall be helically applied over the extruded insulation shield with a minimum lap of 12.5%. The copper tape shall meet the requirements of Part 6 of ICEA S-97-682.

#### 7. CIRCUIT IDENTIFICATION

- 7.1 A color coded tape (black, red, blue) applied under the metallic shielding tape shall provide circuit identification on each power conductor.

#### 8. ASSEMBLY

- 8.1 Three insulated and shielded phase conductors shall be cabled together with a Class B stranded, uncoated copper grounding conductor and suitable fillers to make round. Length of lay shall not exceed 35 times the phase conductor diameter. The grounding conductor shall comply with the requirements of UL Standard 1072.

#### 9. CABLE TAPE

- 9.1 The cable assembly shall be covered with a suitable tape having a minimum 10% lap.

#### 10. OVERALL JACKET

- 10.1 A polyvinyl chloride jacket shall be applied overall. The jacket shall meet the requirements of Part 7 of ICEA S-97-682 and UL 1072. The jacket shall meet the Sunlight Resistant requirements of UL Standard 1072. The jacket thickness shall be as specified in Part 7 of ICEA S-97-682 and UL 1072. The minimum thickness at any point shall be not less than 80% of the specified UL thickness.

#### 11. IDENTIFICATION

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

#### 12. TESTS

- 12.1 Cable shall be tested in accordance with ICEA S-97-682, ICEA S-93-639, AEIC CS8 and UL Standard 1072.