

## ROME INTERLOCKED ARMOR POWER CABLE, 5000 VOLTS

3 Conductor, Rome-XLPE Insulated, Shielded, Aluminum or Steel Armor  
Type MV-90 or Type MC, CT Use

<p><b>APPLICATION:</b> As armored Type MV-90 cable for installation aerially or in rack, tray, trough, cable trays, or direct buried; for power circuits not exceeding 5000 volts in manufacturing and processing plants, substations and generating stations. May be used in NEC Class I and II, Div. 2 and Class III, Div. 1 and 2 hazardous locations.</p> <p><b>STANDARDS:</b></p> <ol style="list-style-type: none"> <li>Listed by UL as Type MV-90 per Standard 1072.</li> <li>Also listed for use as Type MC per Standard 1569.</li> <li>Overall jacket UL listed as Sunlight Resistant.</li> <li>Cables pass UL and IEEE-383 ribbon burner flame tests and are UL listed For CT Use.</li> <li>Cables pass ICEA 210,000 BTU/Hr. ribbon burner flame test.</li> <li>Cables pass IEEE-1202/CSA FT4 (70,000 BTU/hr) cable tray flame test.</li> <li>Cables UL listed for Direct Burial.</li> <li>Conforms to ICEA S-93-639, NEMA WC74 for 5-46 kV Shielded Power Cable.</li> </ol> <p><b>CONSTRUCTION:</b> Three conductors of stranded copper, extruded conductor shield, Rome-XLPE (crosslinked polyethylene) insulation, extruded thermoset insulation shield, uncoated copper shielding tape. Three conductors twisted together with one uncoated copper grounding conductor, suitable fillers, binder tape, aluminum or galvanized steel interlocked armor, yellow PVC jacket overall.</p>										
						<b>COPPER PHASE CONDUCTORS</b>				
Size AWG or kcmil	No. of Strands	Nominal Insulation Thickness Mils	Nominal Diameter Over Armor Inches	Nominal PVC Jkt. Thickness Mils	Nominal Diameter Over PVC Jkt Inches	Copper Grounding Conductor AWG	Approx. Net Wt. Lb./1000 Ft		Ampacity *	Ampacity **
							Alum. Armor	Steel Armor		
<b>5000 VOLTS, SHIELDED, 100% and 133% INSULATION LEVELS</b>										
8	7	90	.98	50	1.09	8	725	860	52	59
6	7	90	1.06	50	1.17	6	945	1095	69	79
4	7	90	1.16	50	1.27	6	1140	1315	91	105
2	7	90	1.29	50	1.40	6	1500	1690	125	140
1	19	90	1.37	50	1.48	4	1730	1930	140	160
1/0	19	90	1.46	50	1.57	4	2030	2240	165	185
2/0	19	90	1.56	60	1.68	4	2475	2715	190	215
3/0	19	90	1.67	60	1.80	3	2980	3255	220	250
4/0	19	90	1.83	60	1.95	3	3425	3795	255	285
250	37	90	1.92	60	2.05	3	3800	4220	280	320
350	37	90	2.15	60	2.28	2	5105	5595	350	395
500	37	90	2.42	75	2.58	1	6865	7415	425	485
750	61	90	2.81	75	2.97	1/0	9645	10245	525	615

\* AMPACITY for cables installed in uncovered cable tray without maintained spacing; 90°C conductor temperature, 40°C ambient.

\*\*AMPACITY for cables installed in uncovered cable tray with maintained spacing of one cable diameter; 90°C conductor temperature, 40°C ambient. For other installation conditions refer to the NEC.

NOTES: (1) Cables can be AEIC CS8 rated. Insulation level will be 100%.

Information on this sheet subject to change without notice.

## Specification

### ROME INTERLOCKED ARMOR POWER CABLE, 5000 VOLTS, 100% AND 133% INSULATION LEVELS

#### 3 Conductor, Rome-XLPE Insulated, Shielded, Aluminum or Steel Armor Type MV-90 or Type MC, CT Use

#### 1. SCOPE

- 1.1 This specification describes three conductor Rome-XLPE (thermosetting crosslinked polyethylene) insulated shielded, aluminum or galvanized steel interlocked armor Type MV-90 power cable for use in circuits not exceeding 5000 volts phase to phase at conductor temperatures of 90°C for continuous normal operation, 130°C for emergency overload conditions and 250°C for short circuit conditions. Cables are intended for installation indoors or outdoors, aerially, in rack, trough or cable trays, or for direct burial.

#### 2. STANDARDS

- 2.1 The following standards shall form a part of this specification to the extent specified herein:
  - 2.1.1 UL Standard 1072 for Type MV-90 cable.
  - 2.1.2 ICEA Pub. No. S-93-639, NEMA Pub. No. WC74 for 5-46 kV Shielded Power Cable.

#### 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 firmly bonded to the cable insulation. The conductor shield shall meet the requirements of Section 3 of ICEA.

#### 5. INSULATION

- 5.1 Directly over the conductor shield shall be applied a homogeneous wall of Rome-XLPE insulation. The nominal thickness shall be 90 mils and the minimum point-maximum point thickness shall be in accordance with ICEA and UL Standards. Physical and electrical properties of the insulation shall be in accordance with Section 4.3.1 of ICEA and UL 1072.

#### 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 residue on the insulation surface. This layer shall be legible identified as being conducting. Shielding comply with ICEA and UL requirements.
- 6.2 An uncoated copper tape shall be helically applied over the semiconducting tape with a minimum lap of 12.5%. The copper tape shall meet the requirements of Section 6 of ICEA.

#### 7. PHASE IDENTIFICATION

- 7.1 A colored tape shall be applied longitudinally under the copper shielding tape to provide phase identification.

#### 8. ASSEMBLY

- 8.1 Three 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 A suitable cable tape shall be applied over the assembly to hold the core together and provide bedding for the armor.

#### 10. ARMOR

- 10.1 An aluminum or galvanized steel interlocked armor shall be applied over the cable core. Armor shall be in accordance with UL Standard 1072 and Par. 7.3.3 of ICEA.

#### 11. COVERING

- 11.1 Shall be PVC meeting the requirements of ICEA Table 7-1 and the Sunlight Resistant requirements of UL 1072. The jacket thickness shall be as specified in Part 7 of ICEA and UL 1072.

#### 12. IDENTIFICATION

- 12.1 An ink print legend shall be applied to the surface of the PVC covering providing cable and manufacturer identification.

#### 13. TESTS

- 13.1 Cables shall be tested in accordance with UL requirements for Type MV-90 cable and ICEA S-93-639.