

ROME INTERLOCKED ARMOR POWER CABLE, 15000 VOLTS

3 Conductor, Rome-EPR Insulated, 133% Insulation Level, Aluminum or Steel Armor
Type MV-90 or Type MC, CT Use

APPLICATION:
As armored Type MV-90 cable for installation aerially, rack, tray, trough, cable trays, or direct buried; for power circuits not exceeding 15000 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.

STANDARDS:

- Listed by UL as Type MV-90 per Standard 1072.
- Also listed for use as Type MC per Standard 1569.
- Overall jacket UL listed as Sunlight Resistant.
- Cables pass UL and IEEE-383 ribbon burner flame test and are UL listed For CT Use.
- Cables pass IEEE-1202/CSA FT4 (70,000 BTU/hr) cable tray flame test.
- Cables pass ICEA 210,000 BTU/hr Ribbon Burner Flame Test.
- Cables UL listed for Direct Burial.
- Conforms to ICEA S-93-639, NEMA WC74 for 5-46 kV Shielded Power Cable.
- Conforms to ICEA S-97-682 for Utility Shielded Power Cables Rated 5 Through 46 kV.
- Conforms to AEIC CS8 for Extruded Dielectric, Shielded Power Cables Rated 5 Through 46 kV.

CONSTRUCTION: Three conductors of stranded copper, extruded conductor shield, Rome-EPR (ethylene propylene rubber) insulation, extruded thermoset insulation shield, uncoated copper shield tape. Three conductors twisted together with one uncoated copper grounding conductor, suitable fillers, binder tape, aluminum or galvanized steel interlocked armor, red PVC jacket overall.

| Size AWG or kcmil | No. of Strands | Nom. Insul. Thick. Mils | Nom. Diam. Over Ins. Inches | Nom. Diam. Over Armor Inches | Nom. PVC Jkt. Thick Mils | Nom. Diam. Over PVC Jkt. Inches | COPPERPHASE CONDUCTORS | | | | |
|---|----------------------|----------------------------------|---|--|-----------------------------------|---|--|---------------------------------|----------------|------------|-------------|
| | | | | | | | Copper Grounding Conduc- tor AWG | Approx. Net Wt. lb./1000 Ft. | | Ampacity * | Ampacity ** |
| | | | | | | | | Alum. Armor | Steel Armor | | |
| 15000 VOLTS, 133% INSULATION LEVEL | | | | | | | | | | | |
| 2 | 7 | 220 | .78 | 2.11 | 60 | 2.24 | 6 | 2605 | 3125 | 145 | 165 |
| 1 | 19 | 220 | .82 | 2.20 | 60 | 2.33 | 4 | 2835 | 3390 | 165 | 185 |
| 1/0 | 19 | 220 | .86 | 2.28 | 60 | 2.41 | 4 | 3100 | 3620 | 195 | 215 |
| 2/0 | 19 | 220 | .90 | 2.39 | 75 | 2.55 | 4 | 3530 | 4025 | 220 | 245 |
| 3/0 | 19 | 220 | .95 | 2.50 | 75 | 2.66 | 3 | 3990 | 4510 | 250 | 285 |
| 4/0 | 19 | 220 | 1.01 | 2.61 | 75 | 2.77 | 3 | 4615 | 5200 | 290 | 325 |
| 250 | 37 | 220 | 1.06 | 2.79 | 75 | 2.95 | 3 | 5315 | 5895 | 315 | 360 |
| 350 | 37 | 220 | 1.17 | 3.01 | 75 | 3.17 | 2 | 6600 | 7225 | 385 | 435 |
| 500 | 37 | 220 | 1.30 | 3.29 | 85 | 3.47 | 1 | 8710 | 9350 | 470 | 535 |
| 750 | 61 | 220 | 1.49 | 3.67 | 85 | 3.85 | 1/0 | 11695 | 12850 | 570 | 670 |

* 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.

NOTE: 1. Phase identification is provided by a longitudinal narrow colored tape (1/C black, 1/C red, 1/C blue) between the semiconducting insulation shield and the copper shielding tape.

Information on this sheet subject to change without notice.

Specification

ROME INTERLOCKED ARMOR POWER CABLE, 15000 VOLTS

3 Conductor, Rome-EPR Insulated, 133% Insulation Level,

Aluminum or Steel Armor

Type MV-90 or Type MC, CT Use

1. SCOPE

1.1 This specification describes three conductor Rome-EPR (ethylene propylene rubber) insulated, aluminum or galvanized steel interlocked armor Type MV-90 power cable for use in 133% insulation level circuits not exceeding 15,000 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.

2.1.3 ICEA Pub. No. S-97-682 for Utility Shielded Power Cables Rated 5 Through 46 kV.

2.1.4 AEIC CS8 for Extruded Dielectric, Shielded Power Cables Rated 5 Through 46 kV.

3. CONDUCTORS

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

4. CONDUCTOR SHIELD

4.1 Conductors shall be covered with a layer of extruded conducting thermosetting 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 shield shall be applied a homogenous wall of Rome-EPR insulation. The nominal insulation thickness shall be 220 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 Part 4 of ICEA S-97-682 for a Class II insulation.

6. SHIELDING

6.1 Over the insulation shall be applied an extruded conducting thermosetting insulation shield. It shall be 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. 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 S-93-639.

11. COVERING

11.1 Shall be PVC meeting the requirements of Part 7 of ICEA S-93-639 and UL 1072. The covering shall meet the Sunlight Resistant requirements of UL 1072. The jacket thickness shall be as specified in Part 7 of ICEA S-93-639 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 ICEA S-93-639, ICEA S-97-682, AEIC CS8 and UL Standard 1072.