

## ROME-XLP POWER CABLE, 35000 VOLTS

Single Conductor, Shielded, 100% Insulation Level  
AEIC CS8, MV-90

<p><b>APPLICATION:</b> 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 35000 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, trough, ducts, aerial and direct burial applications.</p> <p><b>STANDARDS:</b></p> <ol style="list-style-type: none"> <li>1. Conforms to ICEA S-93-639, NEMA WC74 for 5-46 kV Shielded Power Cable.</li> <li>2. Conforms to ICEA S-97-682 for Utility Shielded Power Cables Rated 5 Through 46 kV.</li> <li>3. Conforms to AEIC CS8 for Extruded Dielectric, Shielded Power Cables Rated 5 Through 46 kV.</li> <li>4. Listed by UL as Type MV-90, per UL Standard 1072.</li> <li>5. Conforms to Federal Specification J-C-30B.</li> </ol> <p><b>CONSTRUCTION:</b> Annealed copper conductor, extruded conductor shield, Rome-XLP thermosetting chemically crosslinked polyethylene insulation, extruded insulation shield, 5 mil copper shielding tape, black polyvinyl chloride jacket overall, surface printed.</p>									
Size AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter Over Ins. Inches	Nominal Diameter Inches	COPPER CONDUCTOR			
		Insulation	Jacket			Approx. Net Wt. Lb./1000 Ft.	Ampacity*		
							Duct	D. Burial	
<b>35000 VOLTS, SHIELDED, 100% INSULATION LEVEL (GROUNDED NEUTRAL)</b>									
1/0	19	345	80	1.11	1.38	1120	200	275	
2/0	19	345	80	1.15	1.42	1245	230	310	
3/0	19	345	80	1.20	1.47	1395	260	355	
4/0	19	345	80	1.26	1.53	1583	295	405	
250	37	345	80	1.34	1.59	1785	325	440	
350	37	345	80	1.43	1.69	2190	390	535	
500	37	345	110	1.56	1.90	2875	465	650	
750	61	345	110	1.75	2.09	3825	565	805	
1000	61	345	110	1.90	2.24	4750	640	930	

\* **DUCT:** Three cables per duct, 90°C Conductor Temperature, 20°C Ambient, One Circuit, 100% Load Factor, Rho = 90. **DIRECT BURIAL:** Three cables, maintained spacing (7.5"), 90°C Conductor Temperature, 20°C Ambient, 100% Load Factor, Rho= 90. For other installation conditions, refer to the National Electrical Code.

NOTES: (1) Cables may be direct buried where NEC jurisdiction applies if the metallic shield is grounded through an effective grounding path meeting the requirements of 250.4(A)(5) or 250.4(B)(4).  
(2) CPE jacket may also be supplied.

Information on this sheet subject to change without notice.

## Specification

### ROME-XLP POWER CABLE, 35000 VOLTS

#### Single Conductor, Shielded, 100% Insulation Level AEC CS8, MV-90

#### 1. SCOPE

- 1.1 This specification describes single conductor Rome-XLP (thermosetting crosslinked polyethylene) insulated, shielded power cables for use in circuits not exceeding 35,000 volts 100% insulation level 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 power cable applications, 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 AEC CS8 for Extruded Dielectric, Shielded Power Cables Rated 5 Through 46 kV.
  - 2.1.4 Underwriters Laboratories Standard 1072 for Medium-Voltage Solid-Dielectric Cable.

#### 3. CONDUCTORS

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

#### 4. CONDUCTOR SHIELDING

- 4.1 Conductors 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 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 345 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 Directly over the extruded insulation shield shall be a helically applied 5 mil uncoated copper shielding tape with a minimum lap of 12.5%. This tape shall meet the requirements of Part 6 of ICEA S-97-682.

#### 7. JACKET

- 7.1 A polyvinyl chloride jacket shall be applied overall. This jacket shall meet the requirements of Part 7 of ICEA S-97-682 and 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.

#### 8. IDENTIFICATION

- 8.1 All cable shall be identified by means of surface ink printing indicating manufacturer, size, insulation type, voltage rating, insulation level, year of manufacture and UL designations.

#### 9. TESTS

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