

ROME-XLP POWER CABLE, 5000 VOLTS

Single Conductor, Shielded, 100% and 133% Insulation Levels
MV-90

APPLICATION:
As 5000 volt shielded power cable, Type MV-90, for general purpose applications in accordance with the National Electrical Code at conductor temperatures not exceeding 90°C in wet or dry locations for normal operation, 130°C for emergency overload, and 250°C for short circuit conditions. Suitable for installation in conduit, trough, ducts, aerial and direct burial applications.

STANDARDS:

- Listed by Underwriters Laboratories as 5000-volt power cable, Type MV-90, per UL Standard 1072.
- Conforms to ICEA S-93-639 and NEMA WC74 for 5-46 kV Shielded Power Cables.
- Conforms to Federal specification J-C-30B.

CONSTRUCTION: Annealed copper conductor, conductor shield, Rome-XLP thermosetting chemically crosslinked polyethylene insulation, PolyKote, semiconducting tape, #22 AWG metallic wire shielding, tape, black polyvinyl chloride jacket overall, surface printed.

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	Conduit
2001-5000 VOLTS, SHIELDED, 100% and 133% INSULATION LEVELS (GROUNDED AND UNGROUNDED NEUTRAL)								
8	7	90	60	.34	.56	155	64	55
6	7	90	60	.38	.60	195	85	75
4	7	90	60	.42	.65	255	110	97
2	7	90	60	.48	.70	345	145	130
1	19	90	60	.52	.74	405	170	155
1/0	19	90	60	.56	.78	485	195	180
2/0	19	90	80	.60	.87	620	220	205
3/0	19	90	80	.65	.92	735	250	240
4/0	19	90	80	.71	.98	890	290	280
250	37	90	80	.76	1.02	1025	320	315
350	37	90	80	.86	1.12	1360	385	385
500	37	90	80	.99	1.25	1860	470	475
750	61	90	80	1.17	1.44	2790	585	600
1000	61	90	80	1.32	1.58	3550	670	690

* **DUCT:** Three cables per duct, 90°C Conductor Temperature, 20°C Ambient, One Circuit, 100% Load Factor, Rho = 90. **CONDUIT:** Three cables in isolated conduit in air, 90°C Conductor Temperature, 40°C Ambient. 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) Copper metallic tape shield available on request.

Information on this sheet subject to change without notice.

Specification

ROME-XLP POWER CABLE, 5000 VOLTS

Single Conductor, Shielded, 100% and 133% Insulation Levels 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 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 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 Underwriters Laboratories Standard 1072 for Medium-Voltage Solid-Dielectric Cable.
 - 2.1.2 ICEA Pub. No. S-93-639 and NEMA Pub. No. WC74 for 5-46 kV Shielded Power Cables.

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 Section 3 of ICEA.

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 90 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 Section 4.3.1 of ICEA and UL 1072.

6. SHIELDING

- 6.1 A thin uniform layer of Rome "PolyKote" (black semiconducting polymeric coating) shall be applied directly over the insulation. A semiconducting non-metallic tape shall be wrapped over the "PolyKote" to act as a conductive bedding between the "PolyKote" layer and the metallic shielding. Shielding shall comply with Section 5.1.1.1 of ICEA. A special marker tape applied over the semiconducting tape shall identify the tape and "PolyKote" layers as conducting.
- 6.2 A serving of evenly spaced #22 AWG solid uncoated copper wires shall be applied concentrically over the semiconducting tape. The metallic wire shielding shall meet the requirements of Section 6 of ICEA.

7. SEPARATOR TAPE

- 7.1 A suitable separator tape shall be applied over the cable shielding system.

8. JACKET

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

9. IDENTIFICATION

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

10. TESTS

- 10.1 Cable shall be tested in accordance with ICEA S-93-639 and UL Standard 1072.