

XLP POWER CABLE, 5000 VOLTS

Single Conductor, Shielded, 100% and 133% Insulation Levels
 AEIC CS8, MV-90

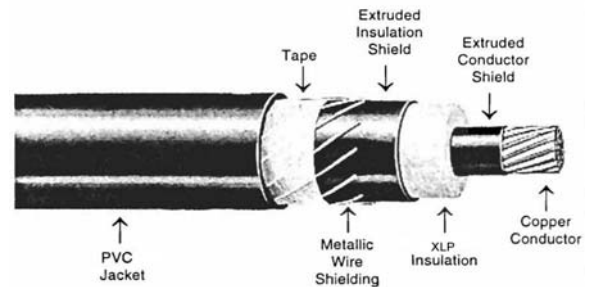
APPLICATION: As medium voltage MV-90 power cable for use in main feeder, distribution and branch circuits in industrial, commercial and electric utility installations. Cables may be used in wet or dry locations in circuits not exceeding 5000 volts at conductor temperatures not exceeding 90°C for normal, 130°C for emergency overload and 250°C for short-circuit conditions. Suitable for installation in conduit, trough, ducts, aerial and direct burial applications.

STANDARDS:

1. Conforms to ICEA S-93-639, NEMA WC74 for 5-46kV 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. Conforms to Federal Specification J-C-30B.

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

OPTIONAL JACKETS: CPE, HYPALON®, LSZH (Low Smoke Zero Halogen)



USAWC Part #	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. lbs/1000 ft	Copper Weight lbs/1000 ft	Ampacity*	
									Duct	Conduit
5000 VOLTS, SHIELDED, 100% and 133% INSULATION LEVELS (GROUNDED and UNGROUNDED NEUTRAL)										
4-015KVXSP	4	7	90	60	.45	.71	290	141	110	97
2-015KVXSP	2	7	90	60	.51	.77	385	217	145	130
1-015KVXSP	1	19	90	60	.55	.81	440	279	170	155
1/0-015KVXSP	1/0	19	90	80	.59	.89	565	338	195	180
2/0-015KVXSP	2/0	19	90	80	.63	.94	665	427	220	205
3/0-015KVXSP	3/0	19	90	80	.68	.99	790	529	250	240
4/0-015KVXSP	4/0	19	90	80	.74	1.04	950	669	290	280
250-015KVXSP	250	37	90	80	.80	1.10	1095	788	320	315
350-015KVXSP	350	37	90	80	.90	1.21	1445	1097	385	385
500-015KVXSP	500	37	90	80	1.03	1.35	1960	1563	470	475
750-015KVXSP	750	61	90	80	1.22	1.54	2825	2340	585	600
1000-015KVXSP	1000	61	90	80	1.37	1.69	3645	3113	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 NEC

Specification

XLP POWER CABLE, 5000 VOLTS

Single Conductor, Shielded, 100% and 133% Insulation Levels AEIC CS8, MV-90`

1. SCOPE

- 1.1 This specification describes single conductor XLP (thermosetting crosslinked polyethylene) insulated, shielded power cables for use in circuits not exceeding 5000 volts 100% and 133% insulation levels 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 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 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 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 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 A serving of evenly spaced #22 AWG solid uncoated copper wires shall be applied concentrically over the extruded insulation shield. The metallic wire shielding shall meet the requirements of Par. 6.3 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. This jacket shall meet the requirements of Part 7 of ICEA S-97-682 and the Sunlight Resistant requirements of UL Standard 1072. The thickness of the jacket 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.

9. IDENTIFICATION

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

10. TESTS

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