

# XLP POWER CABLE, 15000 VOLTS

Single Conductor, Shielded, 133% Insulation Level  
AEIC CS8, MV-90

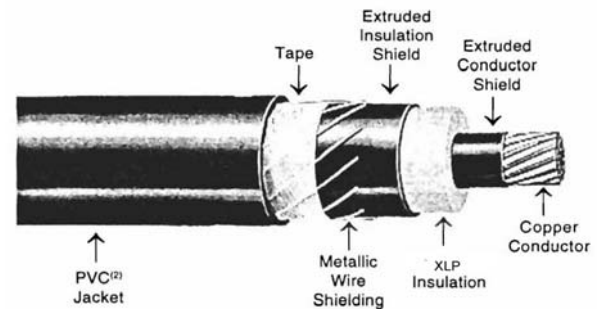
**APPLICATION:** As medium voltage MV-90 power cable for use in main feeder, distribution and branch circuits in industrial, commercial and electric utility installations. Cables may be used in wet or dry locations in circuits not exceeding 15000 volts 133% insulation level, at conductor temperatures 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.

**STANDARDS:**

1. Conforms to ICEA S-93-639, NEMA WC74 for 5-46 kV 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 Cable Rated 5 Through 46 kV.
4. Listed by UL as Type MV-90, per UL 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	Approx. Net Wt. lbs/1000 ft	Copper Weight lbs/1000 ft	Ampacity*	
			Insulation	Jacket					Duct	Conduit
<b>15000 VOLTS, SHIELDED, 133% INSULATION LEVEL (UNGROUND NEUTRAL)</b>										
2-0115KVXSPU	2	7	220	80	.77	1.07	585	221	155	150
1-0115KVXSPU	1	19	220	80	.81	1.11	660	274	175	170
1/0-0115KVXSPU	1/0	19	220	80	.85	1.15	750	342	200	195
2/0-0115KVXSPU	2/0	19	220	80	.90	1.20	855	427	230	225
3/0-0115KVXSPU	3/0	19	220	80	.95	1.25	990	554	260	260
4/0-0115KVXSPU	4/0	19	220	80	1.00	1.31	1155	672	295	295
250-0115KVXSPU	250	37	220	80	1.06	1.39	1335	791	325	330
350-0115KVXSPU	350	37	220	80	1.17	1.49	1705	1105	390	395
500-0115KVXSPU	500	37	220	80	1.29	1.62	2230	1568	465	480
750-0115KVXSPU	750	61	220	110	1.48	1.87	3235	2344	565	585
1000-0115KVXSPU	1000	61	220	110	1.63	2.04	4120	3114	640	675

\*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, 15000 VOLTS

#### Single Conductor, Shielded, 133% Insulation Level 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 15,000 volts 133% 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 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 220 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 the 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.