

# MC-HL ARMORED



- ▶ **3 Conductors**
- ▶ **EPR**
- ▶ **PVC**
- ▶ **MC-HL/MV-105**
- ▶ **5kV – 133%**
- ▶ **8kV – 100%**

## PRODUCT CONSTRUCTION

**Conductor:** 6 AWG through 1000 kcmil bare annealed copper per ASTM B3. Compact stranding per ASTM B496.

**Extruded Strand Shield (ESS):** Extruded thermoset semi-conductor stress control layer over the conductor per ICEA S-93-639 and UL 1072.

**Insulation:** 115 mil Ethylene Propylene Rubber (EPR) insulation per ICEA S-93-639 and UL 1072.

**Extruded Insulation Shield (EIS):** Thermoset semi-conducting polymeric layer, free stripping from the insulation per ICEA S-93-639 and UL 1072.

**Shield:** 5 mil annealed bare copper tape with 25% overlap.

**Grounding Conductor(s):** Three split Class B stranded bare annealed copper ground conductors sized in accordance with UL 1072 and NEC Article 250.

**Armor:** Impervious, continuously welded and corrugated aluminum alloy sheath per UL 1072 and 1569. Meets grounding requirements of NEC Article 250.

**Jacket:** Flame-retardant, moisture- and sunlight-resistant Polyvinyl Chloride (PVC), yellow. Low-temperature performance meets ASTM D746 brittleness temperature at or below -40°C.

## APPLICATIONS

Variable Frequency Drives: 3-conductor CCW armored cables with three symmetrical grounding wires are the preferred wiring method for use with AC motors controlled by pulse-width modulated inverters in VFD applications. For use in Class I, II and III, Divisions 1 and 2; or Class 1, Zones 1 and 2 hazardous locations per NEC Articles 501, 502, 503 and 505. For installation on metal racks, troughs, in raceways and cable trays, or secured to supports not more than six feet apart. For exposed and concealed work in wet or dry locations, directly buried or embedded in concrete. For use on feeders and branch circuits in industrial power distribution systems per NEC Articles 328 and 330.

## FEATURES

Armor provides impervious barrier to moisture, gas and liquids. The strand shield, EPR insulation and insulation shield are extruded in one operation. The EPR insulation system has outstanding corona resistance and high dielectric strength, and it provides electrical stability under stress. Meets cold impact test at -40°C.

## COMPLIANCES

**Industry:** UL Type MV-105. UL Type MC-HL, XHHW-2, CT USE, SUN RES, DIR BUR -40°C, FT4. UL Listed Marine Shipboard, American Bureau of Shipping (ABS) Listed for CWCMC.

**Design Adherence:** ICEA S-93-639/WC74, 5-46 kV Shielded Power Cable. AEIC CS8 Specification for Shielded Power Cable, 5-46 kV.

UL 1072 Medium-Voltage Power Cables. UL 1569 Metal Clad Cables. UL 2225 Cables and Cable Fittings for Use in Hazardous Locations.

UL 1309 Marine Shipboard Cable. CSA C68.3

**Flame Tests:** ICEA T-29-520 (210,000 BTU/hr). IEEE 383 (70,000 BTU/hr). CSA FT4. IEEE 1202 (70,000 BTU/hr). UL 1072.

IEC 60332-3 Category A.

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Insul. Thick. (Mils)	Nom. Diam. Over Armor (Inches)	PVC Jkt. Thick (Mils)	Nom. Diam. Over PVC Jkt. (Inches)	Copper Phase Conductors				
							Copper Grounding Conductor (AWG)	Weight (lbs./1000 ft.)		Ampacity	
								Net	Copper	In Air	Direct Burial
<b>5000 VOLTS – 133% INSULATION LEVEL or 8000 VOLTS – 100% INSULATION LEVEL</b>											
USA6-035KVMCHL	6	7	115	1.37	50	1.48	3 X #10	1121	460	88	115
USA4-035KVMCHL	4	7	115	1.51	60	1.65	3 X #10	1418	616	115	150
USA2-035KVMCHL	2	7	115	1.64	60	1.78	3 X #10	1731	860	154	190
USA1-035KVMCHL	1	19	115	1.69	60	1.82	3 X #8	1978	1074	180	215
USA1/0-035KVMCHL	1/0	19	115	1.78	60	1.91	3 X #8	2259	1290	205	245
USA2/0-035KVMCHL	2/0	19	115	1.92	60	2.05	3 X #8	2626	1556	240	280
USA4/0-035KVMCHL	4/0	19	115	2.15	60	2.28	3 X #7	3650	2344	320	360
USA250-035KVMCHL	250	37	115	2.23	60	2.36	3 X #7	4060	2759	355	395
USA350-035KVMCHL	350	37	115	2.45	75	2.61	3 X #6	5045	3713	440	475
USA500-035KVMCHL	500	37	115	2.75	75	2.92	3 X #5	7137	5191	545	570
USA750-035KVMCHL	750	61	115	3.32	85	3.50	3 X #4	10268	7629	685	700
USA1000-035KVMCHL	1000	61	115	3.76	85	3.94	3 X #4	13051	10070	790	785