CCW® Armored Power, 8 kV 133%, Shielded, 3/C VFD

UL Type MC-HL or MV-105, CSA Type HL, EPR, 105°C, Cable Tray Use, Sunlight-Resistant Direct Burial, ABS CWCMC

Product Construction:

Conductor:
- 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:
- 140 mils 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

Phase Identification:
- Color-coded polymeric identification tape laid under the shield - black, red and blue

Grounding Conductors:
- Three (3) split Class B stranded bare annealed copper grounding conductors
- Sized in accordance with UL 1072 and NEC Article 250

Cable Assembly:
- Insulated and grounding conductors are cabled together with non-hygroscopic fillers when required
- Binder tape is applied over the cabled core

CCW Armor:
- Impervious, continuously welded and corrugated aluminum alloy sheath per UL 1072 and UL 1569
- CCW armor conductivity meets the grounding requirements of the NEC

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 (3) symmetrical grounding wires are the preferred wiring method for use with AC motors controlled by pulse-width modulated inverters in VFD applications
- CCW armored medium-voltage power cables offer an economical, rugged and reliable alternative to labor-intensive cable in conduit wiring methods
- For use on feeders and branch circuits in industrial power distribution systems per NEC Articles 328 and 330
- For use in Class I, II and III, Divisions 1 and 2; and Class I, Zones 1 and 2 hazardous locations per NEC Articles 501, 502, 503 and 505
- Installed on metal racks, troughs, in raceways, in cable trays or secured to supports spaced not more than six feet apart
- Installed in both exposed and concealed work, wet or dry locations, directly buried or embedded in concrete
- Recognized for use on fixed or floating offshore petroleum facilities as recommended by the American Petroleum Institute

Features:

- CCW armor provides an impervious barrier to moisture, gas and liquids and meets the grounding requirements of UL 1072 and the NEC

Features: (cont'd.)

- Triple Extrusion: The strand shield, EPR insulation and insulation shield are all extruded in one operation
- General Cable's EPR insulation system has outstanding corona resistance and high dielectric strength, and it provides electrical stability under stress
- Cable meets cold impact at -40°C
- 105°C continuous operating temperature, wet or dry
- 140°C emergency rating
- 250°C short circuit rating

Specifications:

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 68.10

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

Compliances:
- UL Type MV-105 or MC-HL, SUN RES, CT USE, DIR BUR, -40°C, FT4, UL File # E90501
- UL Listed Marine Shipboard, UL File # E85994
- CSA Type HL, SR, FT4, -40°C, CSA File # 27161
- American Bureau of Shipping (ABS) Listed for CWCMC

General Cable

ABS Canadian Standard Association UL LISTED

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CATALOG NUMBER	COND. SIZE AWG (kcmil)	NO. OF COND.	INSULATION THICKNESS mils	INSULATION THICKNESS mm	NOMINAL O.D. OVER INSULATION INCHES	NOMINAL O.D. OVER INSULATION mm	BARE GROUND AWG	NOMINAL CORE O.D. INCHES	NOMINAL CORE O.D. mm	NOMINAL ARMOR O.D. INCHES	NOMINAL ARMOR O.D. mm	JACKET THICKNESS mils	JACKET THICKNESS mm	NOMINAL OVERALL O.D. INCHES	NOMINAL OVERALL O.D. mm	APPROXIMATE NET WEIGHT LBS/1000 FT	APPROXIMATE NET WEIGHT kg/1000 m	AMPACITY IN AIR[1]	AMPACITY DIRECT BURIAL[2]
3/C WITH GROUND MC-HL OR MV-105, 140 MILS EPR, 8 kV 133% INSULATION LEVEL																			
9815.00603310	6 (7/W) (13.3 mm²)	3	140	3.6	0.48	12.2	3 x #10	1.20	30.5	1.60	40.6	60	1.52	1.73	43.9	1,350	2,009	105	120
9815.00403310	4 (7/W) (21.2 mm²)	3	140	3.6	0.53	13.5	3 x #10	1.29	32.8	1.70	43.2	60	1.52	1.83	46.5	1,600	2,381	135	155
9815.00203310	2 (7/W) (33.6 mm²)	3	140	3.6	0.58	14.7	3 x #10	1.42	36.1	1.85	47.0	60	1.52	1.98	50.3	2,000	2,976	185	200
9815.00103308	1 (19/W) (42.4 mm²)	3	140	3.6	0.62	15.7	3 x #8	1.52	38.6	1.93	49.0	60	1.52	2.06	52.3	2,275	3,386	210	225
9815.11003308	1/0 (19/W) (53.5 mm²)	3	140	3.6	0.65	16.5	3 x #8	1.61	40.9	2.03	51.6	60	1.52	2.16	54.9	2,600	3,869	240	255
9815.21003308	2/0 (19/W) (67.4 mm²)	3	140	3.6	0.69	17.5	3 x #8	1.66	42.2	2.14	54.4	60	1.52	2.27	57.7	2,950	4,390	275	290
9815.41003307	4/0 (19/W) (107 mm²)	3	140	3.6	0.79	20.1	3 x #7	1.87	47.5	2.40	61.0	75	1.91	2.56	65.0	4,025	5,990	360	375
9815.25003306	250 (37/W) (127 mm²)	3	140	3.6	0.85	21.6	3 x #6	2.06	52.3	2.59	65.8	75	1.91	2.75	69.9	4,600	6,846	400	410
9815.35003306	350 (37/W) (177 mm²)	3	140	3.6	0.94	23.9	3 x #6	2.15	54.6	2.85	72.4	75	1.91	3.01	76.5	5,800	8,631	490	495
9815.50003305	500 (37/W) (253 mm²)	3	140	3.6	1.06	26.9	3 x #5	2.44	62.0	3.19	81.0	85	2.16	3.37	85.6	7,800	11,608	600	590
9815.75003304	750 (61/W) (380 mm²)	3	140	3.6	1.26	32.0	3 x #4	3.19	81.0	3.68	93.5	85	2.16	3.86	98.0	10,750	15,998	745	720
9815.10003304	1000 (61/W) (507 mm²)	3	140	3.6	1.42	36.1	3 x #4	3.48	88.4	3.98	101.1	85	2.16	4.16	105.7	13,550	20,165	860	810

Dimensions and weights are nominal; subject to industry tolerances.
[1] In-air ampacities are per NEC Table 310.60(C)(71) for three insulated copper conductors rated 105°C, cabled with an overall covering and isolated in air at 40°C ambient temperature.
[2] Direct burial ampacities are per NEC Table 310.60(C)(83) for three insulated copper conductors rated 105°C, cabled within an overall covering and directly buried in earth at 20°C ambient earth temperature.