



### CONSTRUCTION

- 1- Conductor:** Class B compact stranded 1350 aluminum as per ASTM B-400.
- 2- Conductor shield:** Extruded thermoset semi-conducting stress control layer
- 3- Insulation:** Ethylene propylene rubber (EPR).
- 4- Insulation shield:** Extruded thermoset strippable semi-conducting insulation shield.
- 5- Copper tape shield:** 5 mils bare copper tape helically applied with 25 % minimum overlap.
- 6- Jacket:** black flame retardant, sunlight and oil resistant I polyvinyl chloride (PVC).

### FEATURES AND APPLICATIONS

- EPRONAX AL type MV-105 is suitable for use in wet or dry locations, in open air (exposed to sunlight), raceways, troughs, ducts, trays and direct burial.
- Typical installations include feeder or branch circuits in generating stations, industrial and commercial installations.
- Rated at maximum operating temperature of 105 °C for normal operation, 140 °C for emergency overload and 250 °C for short-circuit conditions. Superior current carrying capacity.
- True triple and dry curing extrusion system.
- Excellent flexibility.
- Excellent corona and moisture resistance.
- Cold bend tested at -35 °C.
- NEC guidelines must be followed for proper application.
- FT4 (70,000 BTU/hr) Flame test and CT use (1/0 AWG and larger).
- UL listed as MV-105 under file E-500191.

### STANDARDS

ASTM B-400 - Standard Specification for Compact Round Concentric-Lay-Stranded Aluminum 1350 Conductors  
UL 1072 - Medium-Voltage Power Cables  
ICEA S-93-639 - 5-46 kV Shielded Power Cable for use in the Transmission and Distribution of Electric Energy  
UL 1685 - Safety Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables  
IEEE 1202 – Flame-propagation testing of wire and cable

### ALUMINUM CONDUCTOR, 5 kV 100 % INSULATION LEVEL, 90 MILS

PRODUCT CODE	COND. SIZE (AWG or kcmil)	NOMINAL CONDUCTOR DIAMETER (inches)	NOMINAL INSULATION DIAM. (inches)	NOMINAL INSULATION SHIELD DIAM. (inches)	NOMINAL DIAMETER OVER JACKET (inches)	APPROX. WEIGHT (lb/kft)			AMPACITY (A)			CONDUIT SIZE (inches)
						ALUMINUM	COPPER	TOTAL	CONDUIT IN AIR (1)	UNDERGROUND DUCT (2)	TRAY (3)	
830801045	4	0.21	0.469	0.531	0.677	88	117	583	85	93	---	3
830801047	2	0.27	0.522	0.585	0.731	140	129	692	115	125	---	3
830801048	1	0.30	0.554	0.617	0.763	176	136	761	135	140	---	3
830801049	1/0	0.33	0.591	0.654	0.800	223	144	848	155	160	170	3
830801050	2/0	0.37	0.631	0.694	0.870	279	152	995	175	185	195	3
830801051	3/0	0.42	0.677	0.740	0.916	354	162	1121	210	210	225	3
830801052	4/0	0.47	0.731	0.794	0.970	445	174	1272	240	245	260	3
830801053	250	0.52	0.774	0.837	1.013	527	183	1402	280	270	290	3
830801054	350	0.61	0.869	0.932	1.108	736	204	1716	340	325	360	3 ½
830801057	500	0.73	0.991	1.054	1.230	1061	230	2176	425	400	455	3 ½
830801060	750	0.90	1.156	1.219	1.395	1592	266	2891	545	505	595	4
830801062	1000	1.06	1.312	1.375	1.551	2133	300	3603	645	590	715	5

### ALUMINUM CONDUCTOR, 5 kV 133 % INSULATION LEVEL, 115 MILS

PRODUCT CODE	COND. SIZE (AWG or kcmil)	NOMINAL CONDUCTOR DIAMETER (inches)	NOMINAL INSULATION DIAM. (inches)	NOMINAL INSULATION SHIELD DIAM. (inches)	NOMINAL DIAMETER OVER JACKET (inches)	APPROX. WEIGHT (lb/kft)			AMPACITY (A)			CONDUIT SIZE (inches)
						ALUMINUM	COPPER	TOTAL	CONDUIT IN AIR (1)	UNDERGROUND DUCT (2)	TRAY (3)	
832801045	4	0.21	0.489	0.552	0.698	88	121	613	85	93	---	3
832801047	2	0.27	0.543	0.606	0.752	140	133	723	115	125	---	3
832801048	1	0.30	0.574	0.637	0.783	176	140	794	135	140	---	3
832801049	1/0	0.33	0.612	0.675	0.851	223	148	930	155	160	170	3
832801050	2/0	0.37	0.651	0.714	0.890	279	157	1031	175	185	195	3
832801051	3/0	0.42	0.698	0.761	0.937	354	167	1159	210	210	225	3
832801052	4/0	0.47	0.752	0.815	0.990	445	178	1312	240	245	260	3
832801053	250	0.52	0.795	0.858	1.034	527	188	1443	280	270	290	3
832801054	350	0.61	0.889	0.952	1.128	736	208	1761	340	325	360	3 ½
832801057	500	0.73	1.011	1.074	1.250	1061	235	2226	425	400	455	3 ½
832801060	750	0.90	1.177	1.240	1.416	1592	270	2947	545	505	595	4
832801062	1000	1.06	1.332	1.395	1.571	2133	304	3665	645	590	715	5

(1) Ampacities are in accordance with table 310.60(C)(74) of the NEC for insulated triplexed or three single-conductor aluminum cables in isolated conduit in air based on conductor temperatures of 105°C (221°F) and ambient air temperature of 40°C (104°F).

(2) Ampacities are in accordance with table 310.60(C)(78) of the NEC for three single-insulated aluminum conductors in underground electrical ducts (three conductors per electrical duct) based on ambient earth temperature of 20°C (68°F) electrical duct arrangement in accordance with figure 31060 detail 1 100 percent load factor thermal resistance (rho) of 90 conductor temperatures of 105°C (221°F).

(3) Ampacities are in accordance with Section 392.80(B)(2) of the NEC for single Type MV-105 conductor cables or single conductors cabled together (triplexed quadruplexed etc) installed in uncovered cable tray at ambient temperature of 40°C (104°F) and conductor temperatures of 105°C (221°F) The ampacities shall not exceed 75 percent of the allowable ampacities in Table 310.60(C) (70). Where the cable trays are covered for more than 18 m (6 ft) with solid unventilated covers the ampacities for 1/0 AWG and larger single conductor cables shall not exceed 93 percent of the values shown above. Jam ratio has not been considered and should be checked to avoid possible jamming.

Values are nominal and subject to manufacturing tolerances.