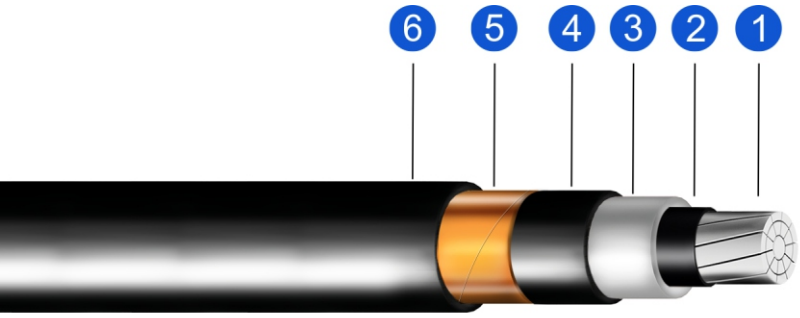
INDULINK AL TYPE MV-90 5 kV 100% and 133% I.L.

XLPE/TAPE SCREEN/LLDPE JACKET POWER CABLE



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: Tree-retardant cross-linked polyethylene (TR-XLPE).
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 sunlight linear low density thermoplastic polyethylene (LLDPE).

FEATURES AND APPLICATIONS

- INDULINK AL MV-90 is suitable for use in wet or dry locations, in open air (exposed to sunlight), raceways, troughs, ducts and direct burial.
- Typical installations include feeder or branch circuits in generating stations, industrial and commercial installations.
- Rated at maximum operating temperature of 90 °C for normal operation, 130 °C for emergency overload and 250 °C for short-circuit conditions.
- True triple and dry curing extrusion system.
- 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-90 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 Distribubtion of Electric Energy

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)	
828201045	4	0.21	0.469	0.531	0.677	88	117	232	76	86	3
828201047	2	0.27	0.522	0.585	0.731	140	129	278	100	115	3
828201048	1	0.30	0.554	0.617	0.763	176	136	307	120	130	3
828201049	1/0	0.33	0.591	0.654	0.800	223	144	344	140	150	3
828201050	2/0	0.37	0.631	0.694	0.870	279	152	402	160	170	3
828201051	3/0	0.42	0.677	0.740	0.916	354	162	456	190	195	3
828201052	4/0	0.47	0.731	0.794	0.970	445	174	520	215	225	3
828201053	250	0.52	0.774	0.837	1.013	527	183	576	250	250	3
828201054	350	0.61	0.869	0.932	1.108	736	204	711	305	305	3 ½
828201057	500	0.73	0.991	1.054	1.230	1061	230	910	380	370	3 ½
828201060	750	0.90	1.156	1.219	1.395	1592	266	1221	490	470	4
828201062	1000	1.06	1.312	1.375	1.551	2133	300	1532	580	545	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)	
830001045	4	0.21	0.489	0.552	0.698	88	121	243	76	86	3
830001047	2	0.27	0.543	0.606	0.752	140	133	290	100	115	3
830001048	1	0.30	0.574	0.637	0.783	176	140	319	120	130	3
830001049	1/0	0.33	0.612	0.675	0.851	223	148	373	140	150	3
830001050	2/0	0.37	0.651	0.714	0.890	279	157	416	160	170	3
830001051	3/0	0.42	0.698	0.761	0.937	354	167	470	190	195	3
830001052	4/0	0.47	0.752	0.815	0.990	445	178	535	215	225	3
830001053	250	0.52	0.795	0.858	1.034	527	188	591	250	250	3
830001054	350	0.61	0.889	0.952	1.128	736	208	728	305	305	3 ½
830001057	500	0.73	1.011	1.074	1.250	1061	235	928	380	370	3 ½
830001060	750	0.90	1.177	1.240	1.416	1592	270	1242	490	470	4
830001062	1000	1.06	1.332	1.395	1.571	2133	304	1555	580	545	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 90°C (194 °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 90°C (194°F).

(3) Ampacities are in accordance with Section 392.80(B)(2) of the NEC for single Type MV-90 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 90°C (194°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.