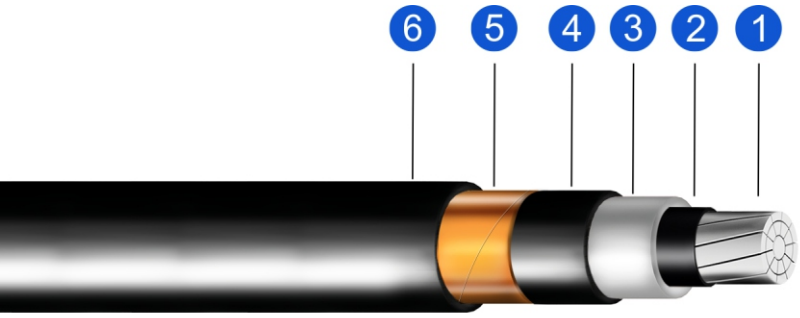
INDULINK AL TYPE MV-90 5 kV 100% and 133% I.L.

XLPE/TAPE SCREEN/PVC 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 flame retardant, sunlight and oil resistant I polyvinyl chloride (PVC).

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, trays 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 EnergyUL 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)	
840601045	4	0.21	0.469	0.531	0.677	88	117	555	76	86	---	3
840601047	2	0.27	0.522	0.585	0.731	140	129	660	100	115	---	3
840601048	1	0.30	0.554	0.617	0.763	176	136	726	120	130	---	3
840601049	1/0	0.33	0.591	0.654	0.800	223	144	810	140	150	150	3
840601050	2/0	0.37	0.631	0.694	0.870	279	152	954	160	170	170	3
840601051	3/0	0.42	0.677	0.740	0.916	354	162	1077	190	195	200	3
840601052	4/0	0.47	0.731	0.794	0.970	445	174	1223	215	225	230	3
840601053	250	0.52	0.774	0.837	1.013	527	183	1350	250	250	260	3
840601054	350	0.61	0.869	0.932	1.108	736	204	1657	305	305	320	3 ½
840601057	500	0.73	0.991	1.054	1.230	1061	230	2108	380	370	410	3 ½
840601060	750	0.90	1.156	1.219	1.395	1592	266	2810	490	470	530	4
840601062	1000	1.06	1.312	1.375	1.551	2133	300	3511	580	545	640	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)	
842401045	4	0.21	0.489	0.552	0.698	88	121	581	76	86	---	3
842401047	2	0.27	0.543	0.606	0.752	140	133	687	100	115	---	3
842401048	1	0.30	0.574	0.637	0.783	176	140	755	120	130	---	3
842401049	1/0	0.33	0.612	0.675	0.851	223	148	888	140	150	150	3
842401050	2/0	0.37	0.651	0.714	0.890	279	157	986	160	170	170	3
842401051	3/0	0.42	0.698	0.761	0.937	354	167	1110	190	195	200	3
842401052	4/0	0.47	0.752	0.815	0.990	445	178	1258	215	225	230	3
842401053	250	0.52	0.795	0.858	1.034	527	188	1386	250	250	260	3
842401054	350	0.61	0.889	0.952	1.128	736	208	1696	305	305	320	3 ½
842401057	500	0.73	1.011	1.074	1.250	1061	235	2151	380	370	410	3 ½
842401060	750	0.90	1.177	1.240	1.416	1592	270	2857	490	470	530	4
842401062	1000	1.06	1.332	1.395	1.571	2133	304	3563	580	545	640	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.