AL Compact 25kV TRXLPE Insulation 133% IL Black SIM-PVC Jacket. MV 105 - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Aluminum, 320 Mils Tree Retardant Cross Linked Polyethylene (TRXLPE) 133% Insulation Level, Tape Shield, SIM*pull* Polyvinyl Chloride (PVC) Jacket, Rated UL

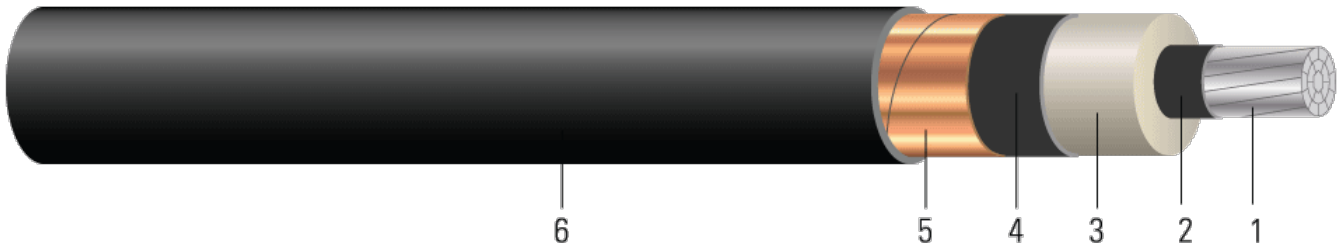


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compact stranded 8000 Series aluminum per ASTM B800 and ASTM B836
2. **Conductor Shield:** Semi-conducting cross-linked copolymer; A conductor separator is used for cable size larger than or equal to 500 Kcmil
3. **Insulation:** 320 Mils Tree Retardant Cross Linked Polyethylene (TRXLPE) 133% Insulation Level,
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
6. **Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 25KV cables are suited for use in wet and dry areas, conduits, ducts, troughs, direct burial when installed with a grounding conductor in close proximity that conforms to NEC section 311.36 and 250.4(A)(5), and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 105°C for normal operation, 140°C for emergency overload, and 250°C for short circuit conditions. Rated at -35°C for cold bend. PVC jacket is made with SIM technology and has a coefficient of friction COF of 0.2. Cable can be installed in conduit without the aid of lubrication. Rated for 1000 lbs./FT maximum sidewall pressure.

SPECIFICATIONS:

- ASTM B801 Concentric-Lay-Stranded Conductors of 8000 Series Aluminum Alloy
- ASTM B836 Compact Rounded Stranded Aluminum Conductors
- UL 1072 Medium-Voltage Power Cables
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- ICEA S-97-682 Standard for Shielded Utility Cable Rated for 5 - 46kV
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661

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SAMPLE PRINT LEGEND:

SOUTHWIRE SIMpull® POWER CABLE {UL} XXX AWG COMPACT AL.--- {ALUMAFLEX}® AA8176 XXX MILS XLP 25KV 133% INS LEVEL 25%TS MV-105 SUN. RES. {NESC} PAT www.patentSW.com

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Diameter Over Insulation	Diameter Over Insulation Shield	Jacket Thickness	Approx. OD	Copper Weight	Aluminum Weight	Approx. Weight	Max Pull Tension	Min Bending Radius	Conduit Size
	AWG/ Kcmil	No. of Strands	inch	inch	inch	mil	inch	lb/ 1000ft	lb/1000ft	lb/ 1000ft	lb	inch	inch
TBA	1/0	19	0.336	1.014	1.074	80	1.254	88	99	815	633	15	3
TBA	2/0	19	0.376	1.054	1.114	80	1.294	92	126	877	798	15.5	3.5
674586	3/0	15	0.423	1.101	1.161	80	1.341	99	158	829	1006	16.1	3.5
TBA	4/0	19	0.475	1.153	1.213	80	1.393	100	200	1038	1269	16.7	3.5
TBA	250	35	0.52	1.206	1.266	80	1.446	104	237	1126	1500	17.4	3.5
TBA	350	35	0.616	1.302	1.362	80	1.542	112	332	1305	2100	18.5	4
TBA	500	35	0.736	1.422	1.482	110	1.722	122	475	1645	3000	20.7	4.5
TBA	750	58	0.908	1.604	1.664	110	1.904	137	713	2061	4500	22.8	5
TBA	1000	58	1.117	1.813	1.873	110	2.113	154	950	2496	6000	25.4	5.5

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Strand count meets minimum number per ASTM
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	Zero Sequence Impedance	Positive Sequence Impedance	Shield Short Circuit Current 6 Cycles	Allowable Ampacity In Duct 90/105°C	Allowable Ampacity In Air 90/105°C
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	MΩ*1000ft	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
1/0	0.167	0.229	0.068	0.052	0.586+j0.372	0.230+j0.056	3359	150/165	170/185
2/0	0.133	0.182	0.064	0.05	0.537+j0.358	0.183+j0.054	3483	170/185	190/215
3/0	0.105	0.144	0.059	0.048	0.497+j0.343	0.145+j0.052	3628	195/210	220/245
4/0	0.084	0.115	0.055	0.046	0.465+j0.327	0.116+j0.050	3789	220/240	255/285
250	0.07	0.096	0.051	0.045	0.442+j0.312	0.097+j0.049	3954	245/265	280/315
350	0.051	0.07	0.046	0.043	0.410+j0.287	0.071+j0.047	4251	295/315	345/385
500	0.036	0.05	0.041	0.041	0.380+j0.260	0.051+j0.045	4623	355/385	425/475
750	0.023	0.033	0.035	0.039	0.348+j0.226	0.034+j0.042	5187	440/475	540/600
1000	0.017	0.025	0.03	0.036	0.323+j0.195	0.026+j0.042	5834	510/545	635/705

* NEC ampacities are based on:
* For Duct: Table 310.60(C)(12) Detail 1.
* For Free Air: Table 310.60(C)(4).
* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
* Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft, Spacing: one diameter spacing center-to-center.
* Capacitive Reactance is between Phase-to-Shield.

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