

1/C AL 25kV 260 TRXLPE 100% SIMpull® PVC MV-105

Type MV-105 Single Conductor Aluminum, 260 Mils Tree Retardant Cross Linked Polyethylene (TRXLPE) 100% Insulation Level, Tape Shield, SIMpull Polyvinyl Chloride (PVC) Jacket, Rated UL

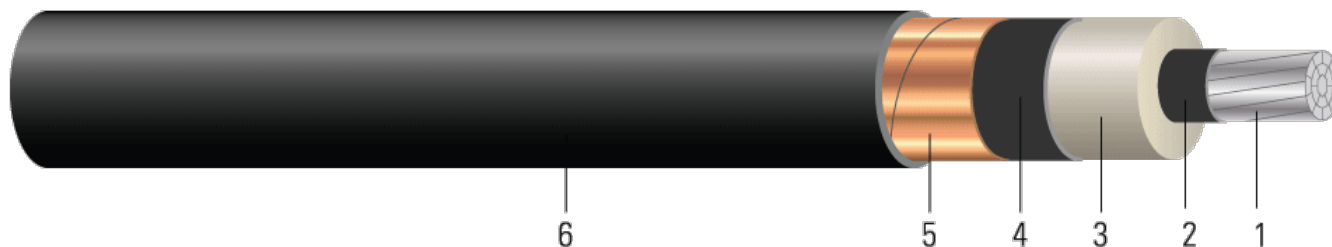


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Class B compact stranded 8000 Series aluminum per ASTM B800 and ASTM B836
- Conductor Shield:** Semi-conducting cross-linked copolymer; A conductor separator is used for cable size larger than or equal to 500 Kcmil
- Insulation:** 260 Mils Tree Retardant Cross Linked Polyethylene (TRXLPE) 100% Insulation Level,
- Insulation Shield:** Strippable semi-conducting cross-linked copolymer
- Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
- 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
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV
- 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

SAMPLE PRINT LEGEND:

SOUTHWIRE SIMpull{R} POWER CABLE MASTER-DESIGN {UL} XXX AWG COMPACT AL.--- {ALUMAFLEX}{R} AA8176 XXX MILS XLP 25KV 100% INS LEVEL 25%TS MV-105 SUN. RES. {NESC} PAT www.patentSW.com



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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Diameter Over Insulation Shield	Jacket Thickness ¹	Approx. OD	Approx. Weight	Max Pull Tension	Min Bending Radius	Conduit Size*
	AWG/Kcmil	inch	inch	inch	mil	inch	lb/1000ft	lb	inch	inch
TBA	1/0	0.336	0.894	0.954	80	1.134	665	633	13.6	3.5
TBA	2/0	0.376	0.934	0.994	80	1.174	721	798	14.1	4
TBA	3/0	0.423	0.98	1.04	80	1.22	788	1006	14.6	4
TBA	4/0	0.475	1.032	1.092	80	1.272	868	1270	15.2	4
TBA	250	0.520	1.086	1.146	80	1.326	947	1500	15.9	4
TBA	350	0.616	1.181	1.241	80	1.421	1112	2100	17.1	5
TBA	500	0.736	1.301	1.361	80	1.541	1345	3000	18.4	5
TBA	750	0.908	1.484	1.544	110	1.784	1828	4500	21.4	6
TBA	1000	1.060	1.636	1.696	110	1.936	2186	6000	23.2	6
TBA	1250	1.25	1.83	1.89	110	2.13	2580	7500	25.5	6

All dimensions are nominal and subject to normal manufacturing tolerances

∅ Cable marked with this symbol is a standard stock item

* Conduit size based on 3 phase 40% fill-factor without ground

¹ Comply with ICEA S-93-639 Appendix C for jacket thickness determination

Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	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	Amp	Amp	Amp
1/0	0.164	0.211	0.0518	0.046	2736	155/165	200/225
2/0	0.13	0.167	0.0483	0.044	2851	175/190	230/260
3/0	0.103	0.133	0.045	0.042	2983	200/215	270/300
4/0	0.082	0.105	0.041	0.041	3132	230/245	310/345
250	0.069	0.09	0.039	0.04	3287	250/270	345/380
350	0.05	0.065	0.038	0.035	3559	305/330	430/475
500	0.035	0.046	0.031	0.036	3904	370/400	530/590
750	0.023	0.033	0.027	0.034	4429	455/490	685/765
1000	0.0173	0.026	0.024	0.032	5028	525/565	825/920
1250	0.0138	0.023	0.021	0.031	5421	-/-	-/-

* Calculations are based on three cables triplexed / 5 mil 25 % over lapping copper tape shield Earth resistivity of 100 ohms-meter

† Ampacities are based on TABLE 310.60(C)(78) Detail 1. of the 2020 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(70) of the 2020 National Electrical Code (40°C Ambient Air Temperature)

