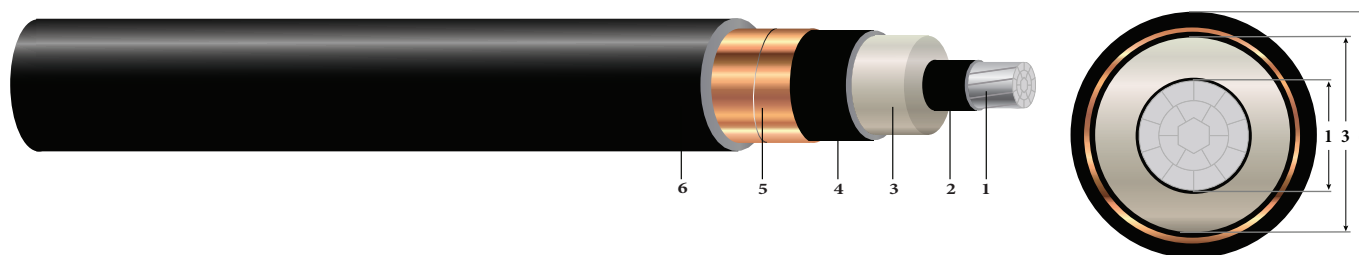


1/C AL 15KV 220 NL-EPR 133% TS SIMpull® PVC MV-105

Type MV-105 Single Conductor Aluminum, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, SIMpull® Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA



Images 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:** 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level,
- Insulation Shield:** Stripable 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 15KV cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, 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. ST1 (low smoke) Rated for sizes 1/0 and larger. 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 B800 8000 Series Aluminum Alloy Wire
- 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 5-46 KV Utility
- UL 1685/FT4-ST1 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 AWG and Larger)
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test (1/0 AWG and Larger)
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- CSA C22.2 No.230 - Tray Cables - Rated TC-ER (1/0 AWG and Larger)
- CSA C22.2 No. 2556 / UL 2556 - Cable Test Methods

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# (UL/CSA) 1/C [#AWG or #kcmil] AL 220 MILS NL-EPR 15KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA 1/0 LARGER) FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire®

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Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Jacket Thickness ¹ mils	Approx. OD (6) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches	Conduit Size* inches
		Cond. (1)	Insul. (3)	Insul. Shield						
		inches	inches	inches						
560195	2	0.268	0.745	0.805	80	0.985	482	398	11.8	3
560200	1	0.299	0.776	0.836	80	1.016	518	502	12.2	3
560214	1/0	0.336	0.813	0.873	80	1.053	562	634	12.6	3
560215	2/0	0.376	0.853	0.913	80	1.093	613	799	13.1	3
560217	3/0	0.423	0.900	0.960	80	1.140	677	1007	13.7	3.5
560246 ^o	4/0	0.475	0.952	1.012	80	1.192	751	1270	14.3	3.5
560247	250	0.520	1.006	1.066	80	1.246	825	1500	15.0	3.5
560248 ^o	350	0.616	1.102	1.162	80	1.342	982	2100	16.1	4
560117 ^o	500	0.736	1.222	1.282	80	1.462	1201	3000	17.5	5
563210	600	0.813	1.330	1.390	80	1.570	1378	3600	18.8	5
560118 ^o	750	0.908	1.425	1.485	80	1.665	1582	4500	20.0	5
560124	1000	1.060	1.577	1.637	110	1.877	2020	6000	22.5	6

All dimensions are nominal and subject to normal manufacturing tolerances

* 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

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C	AC @ 90°C	X _C @ 60Hz	X _L @ 60Hz				In Duct †	In Air ‡
		Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT				Amps	Amps
560195	2	0.266	0.334	0.055	0.052	0.335 + j0.052	0.705 + j0.425	2651	120 / 130	150 / 170
560200	1	0.211	0.265	0.051	0.050	0.266 + j0.050	0.636 + j0.411	2752	135 / 145	175 / 195
560214	1/0	0.168	0.211	0.048	0.048	0.212 + j0.048	0.580 + j0.394	2873	155 / 165	200 / 225
560215	2/0	0.133	0.167	0.044	0.046	0.168 + j0.046	0.535 + j0.377	3003	175 / 190	235 / 260
560217	3/0	0.105	0.132	0.041	0.044	0.133 + j0.044	0.497 + j0.359	3156	200 / 215	270 / 300
560246 ^o	4/0	0.084	0.105	0.038	0.043	0.106 + j0.043	0.467 + j0.339	3325	230 / 245	310 / 350
560247	250	0.071	0.089	0.036	0.042	0.090 + j0.042	0.446 + j0.321	3501	250 / 270	345 / 385
560248 ^o	350	0.051	0.064	0.031	0.040	0.064 + j0.040	0.413 + j0.292	3813	305 / 330	430 / 480
560117 ^o	500	0.035	0.045	0.027	0.037	0.046 + j0.037	0.383 + j0.260	4203	370 / 400	535 / 600
563210	600	0.030	0.038	0.027	0.037	0.038 + j0.037	0.365 + j0.236	4555	/	/
560118 ^o	750	0.024	0.030	0.024	0.036	0.031 + j0.036	0.348 + j0.217	4864	455 / 490	700 / 780
560124	1000	0.018	0.023	0.021	0.035	0.024 + j0.035	0.326 + j0.191	5358	525 / 565	840 / 940

* Calculations are based on three cables triplexed / 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

† Ampacities are based on TABLE 310.60(C)(78) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(70) of the 2014 National Electrical Code (40°C Ambient Air Temperature)

