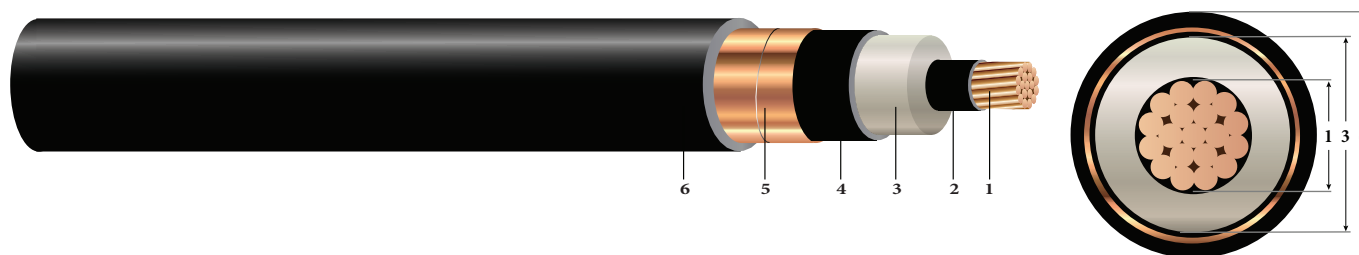


1/C CU 5KV 115 NL-EPR 133% TS SIMpull® PVC MV-105

Type MV-105 Single Conductor Copper, 115 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:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133%/100% Insulation Level for 5/8kV
4. **Insulation Shield:** Stripable 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 5KV 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 B3 Soft or annealed copper
- ASTM B8 Concentric-lay-standard copper
- 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 - LIGHTNING BOLT] ## (UL/CSA) 1/C [#AWG or #kcmil] CU 115 MILS NL-EPR 5KV 133%/ 8KV 100%
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						
954636 [◇]	2	0.283	0.550	0.610	65	0.760	454	531	9.1	2.5
954644	1	0.322	0.589	0.649	65	0.799	522	670	9.6	2.5
955005 [◇]	1/0	0.362	0.629	0.689	65	0.839	609	845	10.1	2.5
955013 [◇]	2/0	0.405	0.672	0.732	65	0.882	714	1065	10.6	2.5
955021	3/0	0.456	0.723	0.783	80	0.963	871	1342	11.6	3
955088 [◇]	4/0	0.512	0.779	0.839	80	1.019	1034	1693	12.2	3
955039 [◇]	250	0.558	0.834	0.894	80	1.074	1180	2000	12.9	3
955047 [◇]	350	0.661	0.937	0.997	80	1.177	1540	2800	14.1	3.5
955054 [◇]	500	0.789	1.065	1.125	80	1.305	2067	4000	15.7	4
679638 [◇]	600	0.866	1.151	1.211	80	1.391	2419	4800	16.7	4
679723	750	0.968	1.253	1.313	80	1.493	2932	6000	17.9	5
955070	1000	1.117	1.402	1.462	80	1.642	3777	8000	19.7	5

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

[◇] Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance* Ω/MFT	Zero Sequence Impedance* Ω/MFT	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT	X _C @ 60Hz MΩ*MFT	X _L @ 60Hz Ω/MFT				In Duct † Amps	In Air ‡ Amps
954636 [◇]	2	0.162	0.203	0.036	0.044	0.203 + j0.044	0.568 + j0.512	2017	145 / 155	190 / 215
954644	1	0.129	0.161	0.033	0.043	0.162 + j0.043	0.530 + j0.490	2144	170 / 180	225 / 250
955005 [◇]	1/0	0.102	0.128	0.030	0.041	0.128 + j0.041	0.498 + j0.468	2274	195 / 210	260 / 290
955013 [◇]	2/0	0.081	0.101	0.027	0.040	0.102 + j0.040	0.473 + j0.446	2414	220 / 235	300 / 330
955021	3/0	0.064	0.081	0.025	0.039	0.081 + j0.039	0.452 + j0.422	2580	250 / 270	345 / 385
955088 [◇]	4/0	0.051	0.064	0.023	0.038	0.065 + j0.037	0.434 + j0.397	2762	290 / 310	400 / 445
955039 [◇]	250	0.043	0.054	0.022	0.037	0.055 + j0.037	0.423 + j0.375	2941	320 / 345	445 / 495
955047 [◇]	350	0.031	0.039	0.019	0.035	0.040 + j0.035	0.402 + j0.336	3276	385 / 415	550 / 615
955054 [◇]	500	0.022	0.028	0.016	0.033	0.029 + j0.033	0.381 + j0.296	3693	470 / 505	695 / 775
679638 [◇]	600	0.018	0.024	0.015	0.033	0.024 + j0.033	0.369 + j0.272	3972	516 / 555	777 / 865
679723	750	0.014	0.020	0.014	0.032	0.020 + j0.032	0.355 + j0.247	4304	585 / 630	900 / 1000
955070	1000	0.011	0.016	0.012	0.031	0.016 + j0.030	0.336 + j0.216	4789	670 / 720	1075 / 1200

* 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)(77) 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)(69) of the 2014 National Electrical Code (40°C Ambient Air Temperature)

