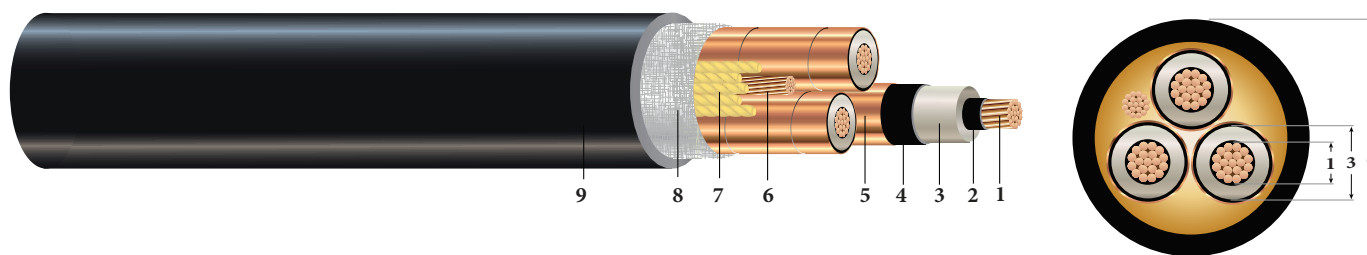


## 3/C CU 5KV 115 NL-EPR 133% TS PVC MV-105

Type MV-105 Three Conductor Copper, 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA



Images not to scale. See Table 1 for Dimensions

### CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Conductor Shield:** Semi-conducting cross-linked copolymer
- Insulation:** 115 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
- Grounding Conductor:** 1 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
- Filler:** Wax paper filler
- Binder:** Poly glass tape
- 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. For uses in Class I and II, Division 2 hazardous locations per NEC Article 501 and 502. 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 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test
- 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
- CSA C22.2 No. 2556 / UL 2556 - Cable Test Methods

### SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# (UL/CSA) 3/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) FOR DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET



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**Table 1 – Weights & Measurements**

Stock Code	Cond. Size AWG	Diameter over			Ground No. x AWG	Jacket Thickness <sup>1</sup> mils	Approx. OD (9) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches						
956292 <sup>◇</sup>	2	0.283	0.550	0.610	1 x 6	80	1.549	1564	1593	10.8
558148	1	0.322	0.589	0.649	1 x 4	80	1.633	1834	2009	11.4
956300 <sup>◇</sup>	1/0	0.362	0.629	0.689	1 x 4	80	1.719	2112	2534	12.0
958371 <sup>◇</sup>	2/0	0.405	0.672	0.732	1 x 4	110	1.872	2550	3194	13.1
558171	3/0	0.456	0.723	0.783	1 x 3	110	1.982	3012	4027	13.9
957456 <sup>◇</sup>	4/0	0.512	0.779	0.839	1 x 3	110	2.103	3536	5078	14.7
958386	250	0.558	0.834	0.894	1 x 3	110	2.222	4007	6000	15.6
955179 <sup>◇</sup>	350	0.661	0.937	0.997	1 x 2	110	2.445	5204	8400	17.1
958397 <sup>◇</sup>	500	0.789	1.065	1.125	1 x 1	110	2.721	6940	12000	19.0
557496	750	0.968	1.253	1.313	1 x 0	135	3.177	9920	18000	22.2

All dimensions are nominal and subject to normal manufacturing tolerances

<sup>1</sup> Comply with ICEA S-93-639 Appendix C for jacket thickness determination

<sup>◇</sup> Standard stock item

**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 Ω/MFT	AC @ 90°C Ω/MFT	X <sub>C</sub> @ 60Hz MΩ*MFT	X <sub>L</sub> @ 60Hz Ω/MFT				In Duct † Amps	In Air ‡ Amps
956292 <sup>◇</sup>	2	0.162	0.203	0.036	0.040	0.203 + j0.040	0.573 + j0.514	2017	135 / 145	140 / 154
558148	1	0.129	0.161	0.033	0.039	0.162 + j0.038	0.534 + j0.492	2144	155 / 165	160 / 180
956300 <sup>◇</sup>	1/0	0.102	0.128	0.030	0.037	0.128 + j0.037	0.503 + j0.470	2274	175 / 190	185 / 205
958371 <sup>◇</sup>	2/0	0.081	0.102	0.027	0.036	0.102 + j0.036	0.477 + j0.448	2414	200 / 220	215 / 240
558171	3/0	0.064	0.081	0.025	0.035	0.081 + j0.035	0.456 + j0.423	2580	230 / 250	250 / 280
957456 <sup>◇</sup>	4/0	0.051	0.064	0.023	0.034	0.065 + j0.034	0.438 + j0.398	2762	265 / 285	285 / 320
958386	250	0.043	0.054	0.022	0.033	0.055 + j0.033	0.426 + j0.375	2941	290 / 315	320 / 355
955179 <sup>◇</sup>	350	0.031	0.039	0.019	0.032	0.040 + j0.032	0.405 + j0.337	3276	355 / 380	395 / 440
958397 <sup>◇</sup>	500	0.022	0.028	0.016	0.030	0.029 + j0.030	0.383 + j0.296	3693	430 / 460	485 / 545
557496	750	0.014	0.020	0.014	0.029	0.020 + j0.029	0.357 + j0.247	4304	530 / 570	615 / 685

\* Calculations are based on 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)(79) 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)(71) of the 2014 National Electrical Code (40°C Ambient Air Temperature)

