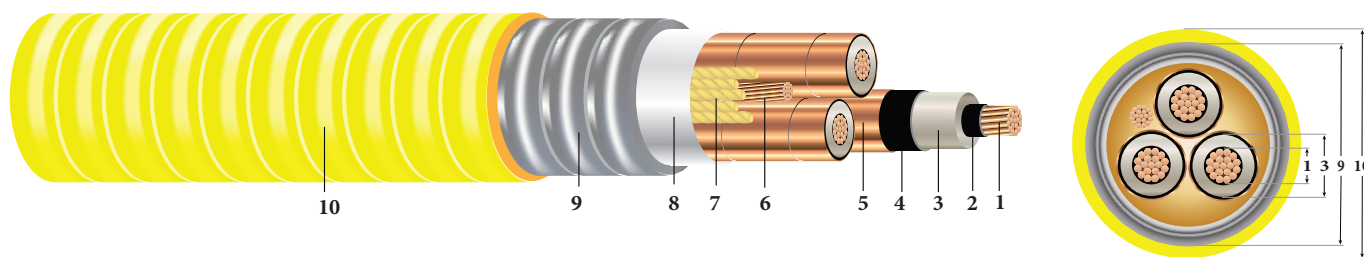


3/C CU 5KV 115 NL-EPR 133% TS AIA PVC MV-105

Type MV-105 Three Conductor Copper, 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Aluminum Interlocked Armor (AIA), Polyvinyl Chloride (PVC) Jacket



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% Insulation Level,
4. **Insulation Shield:** Stripable semi-conducting cross-linked copolymer
5. **Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
6. **Grounding Conductor:** 1 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
7. **Filler:** Wax paper filler
8. **Binder:** Polypropylene tape
9. **Aarmor:** Aluminum Interlocked Armor (AIA)
10. **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

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# (UL) 3/C [#AWG or #kcmil] CU 115 MILS NL-EPR AIA 5KV 133%/ 8KV 100% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. FOR DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



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Southwire®

Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Ground No. x AWG	Dia. Over Armor (9) inches	Jacket Thickness mils	Approx. OD (10) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches							
556605	2	0.283	0.550	0.610	1 x 6	1.583	60	1.703	1714	1593	11.9
556613	1	0.322	0.589	0.649	1 x 4	1.667	60	1.787	1991	2009	12.5
556621	1/0	0.362	0.629	0.689	1 x 4	1.753	60	1.873	2276	2534	13.1
556639	2/0	0.405	0.672	0.732	1 x 4	1.946	60	2.066	2711	3194	14.5
556647	3/0	0.456	0.723	0.783	1 x 3	2.056	60	2.176	3180	4027	15.2
556654	4/0	0.512	0.779	0.839	1 x 3	2.177	60	2.297	3711	5078	16.1
556662	250	0.558	0.834	0.894	1 x 3	2.296	75	2.446	4258	6000	17.1
556670	350	0.661	0.937	0.997	1 x 2	2.519	75	2.669	5476	8400	18.7
556688	500	0.789	1.065	1.125	1 x 1	2.795	75	2.945	7236	12000	20.6
556696	750	0.968	1.253	1.313	1 x 1/0	3.201	85	3.371	10171	18000	23.6

All dimensions are nominal and subject to normal manufacturing tolerances

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 _C @ 60Hz MΩ*MFT	X _L @ 60Hz Ω/MFT				Directly Buried † Amps	In Air ‡ Amps
	AWG	Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT	Ω/MFT	Ω/MFT	Amps	Amps	Amps
556605	2	0.162	0.203	0.036	0.040	0.203 + j0.040	0.573 + j0.514	2017	180 / 190	140 / 154
556613	1	0.129	0.161	0.033	0.039	0.162 + j0.038	0.534 + j0.492	2144	200 / 215	160 / 180
556621	1/0	0.102	0.128	0.030	0.037	0.128 + j0.037	0.503 + j0.470	2274	230 / 245	185 / 205
556639	2/0	0.081	0.102	0.027	0.036	0.102 + j0.036	0.477 + j0.448	2414	260 / 280	215 / 240
556647	3/0	0.064	0.081	0.025	0.035	0.081 + j0.035	0.456 + j0.423	2580	295 / 320	250 / 280
556654	4/0	0.051	0.064	0.023	0.034	0.065 + j0.034	0.438 + j0.398	2762	335 / 360	285 / 320
556662	250	0.043	0.054	0.022	0.033	0.055 + j0.033	0.426 + j0.375	2941	365 / 395	320 / 355
556670	350	0.031	0.039	0.019	0.032	0.040 + j0.032	0.405 + j0.337	3276	440 / 475	395 / 440
556688	500	0.022	0.028	0.016	0.030	0.029 + j0.030	0.383 + j0.296	3693	530 / 570	485 / 545
556696	750	0.014	0.020	0.014	0.029	0.020 + j0.029	0.357 + j0.247	4304	650 / 700	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)(83) 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)

