

## 3/C CU 2.4kV 90 EPR AIA PVC MV-105

Type MV-105 Three Conductor Copper, 90 Mils Ethylene Propylene Rubber (EPR) Aluminum Interlocked Armor (AIA), Polyvinyl Chloride (PVC) Jacket. Silicone Free

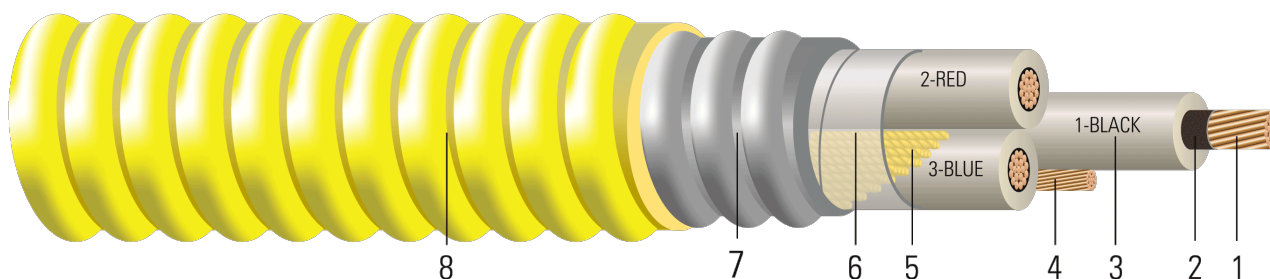


Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
- Conductor Shield:** Semi-conducting cross-linked copolymer
- Insulation:** 90 Mils Ethylene Propylene Rubber (EPR)
- Grounding Conductor:** Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
- Filler:** Wax paper filler
- Binder:** Polypropylene tape
- Armor:** Aluminum Interlocked Armor (AIA)
- Overall Jacket:** Polyvinyl Chloride (PVC)

### APPLICATIONS AND FEATURES:

Southwire's 2.4KV 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, 130°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 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 1072 Medium-Voltage Power Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-96-659 (NEMA WC 71) 2001-5000 V Nonshielded Cables
- 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:

{SQFTG\_DUAL} SOUTHWIRE{R} POWER CABLE MASTER-DESIGN {UL} 3/C XXX AWG CU 90 MILS NL-EPR 2400V  
NONSHIELDED GW 1 X X AWG CU MV-105 FOR CT USE - SUN. RES. - FOR DIRECT BURIAL - WET & DRY LOC. {NESC}



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | [www.southwire.com](http://www.southwire.com)



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**Table 1 – Weights and Measurements**

Stock Number	Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Ground	Jacket Thickness <sup>1</sup>	Approx. OD	Approx. Weight	Max Pull Tension	Min Bending Radius
	AWG/Kcmil	inch	inch	No. x AWG	mil	inch	lb/1000ft	lb	inch
890086◇	2	0.283	0.501	1 x 6	50	1.394	1273	1593	9.7
TBA	1	0.322	0.54	1 x 4	60	1.523	1607	2009	10.6
606467	1/0	0.362	0.58	1 x 4	60	1.709	1903	2534	12
552212	2/0	0.405	0.623	1 x 4	60	1.797	2209	3194	12.6
TBA	3/0	0.456	0.674	1 x 3	60	1.913	2588	4027	13.4
552213	4/0	0.512	0.73	1 x 3	60	2.034	3063	5078	14.2
TBA	250	0.558	0.784	1 x 3	60	2.15	3499	6000	15
551526◇	350	0.661	0.887	1 x 2	60	2.349	4805	8400	16.6
890645◇	500	0.789	1.015	1 x 1	75	2.619	6483	12000	18.6
552256	750	0.968	1.204	1 x 0	75	3.076	8815	18000	21.5

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item

**Table 2 – Electrical and Engineering Data**

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Shield Short Circuit Current 6 Cycles	Allowable Ampacity Directly Buried 90/105°C <sup>†</sup>	Allowable Ampacity In Air 90/105°C <sup>‡</sup>
AWG/Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
2	0.162	0.203	0.037	15089	180/190	140/154
1	0.129	0.161	0.035	19029	200/215	160/180
1/0	0.102	0.128	0.034	24011	230/245	185/205
2/0	0.081	0.102	0.033	30264	260/280	215/240
3/0	0.064	0.081	0.032	38154	295/320	250/280
4/0	0.051	0.064	0.031	48114	335/360	285/320
250	0.043	0.054	0.031	56845	365/395	320/355
350	0.031	0.039	0.030	79583	440/475	395/440
500	0.022	0.028	0.028	113690	530/570	485/545
750	0.014	0.020	0.027	170535	650/700	615/685

<sup>†</sup> Ampacities are based on TABLE 310.60(C)(83) of the 2020 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

<sup>‡</sup> Ampacities are based on TABLE 310.60(C)(71) of the 2020 National Electrical Code (40°C Ambient Air Temperature)

