3/C CU 2.4kV 90 Mils NLEPR PVC MV-105

Type MV-105 Three Conductor Copper, 90 Mils No Lead Ethylene Propylene Rubber (NL-EPR) Polyvinyl Chloride (PVC) Jacket. Silicone Free

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** 90 Mils No Lead Ethylene Propylene Rubber (NL-EPR)
4. **Grounding Conductor:** Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
5. **Filler:** Wax paper filler
6. **Binder:** Poly glass tape
7. **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, 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 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:

SOUTHWIRE{R} POWER CABLE {UL} 3/C XXX AWG CU 90 MILS NL-EPR 2400V NONSHIELDED GW 1 X X AWG MV-105 FOR CT USE SUN. RES. {NESC} MAXIMUM 2400 VOLTS

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Ground	Jacket Thickness[1]	Approx. OD	Approx. Weight	Max Pull Tension	Min Bending Radius
	AWG/ Kcmil	inch	inch	No. x AWG	mil	inch	lb/1000ft	lb	inch
600429	2	0.283	0.550	1 x 6	80	1.376	1281	1593	9.6
TBA	1	0.322	0.589	1 x 4	80	1.460	1535	2009	10.2
600411	1/0	0.362	0.629	1 x 4	80	1.547	1796	2534	10.8
600403	2/0	0.405	0.672	1 x 4	80	1.640	2114	3194	11.5
TBA	3/0	0.456	0.723	1 x 3	95	1.780	2597	4027	12.5
600395	4/0	0.512	0.779	1 x 3	110	1.774	2985	5078	13.3
TBA	250	0.558	0.834	1 x 3	110	2.049	3594	6000	14.3
600445	350	0.661	0.881	1 x 2	110	2.122	4273	8400	14.9
679271	350	0.661	0.881	1 x 1	110	2.122	4562	8400	14.9
600387	500	0.789	1.065	1 x 1	110	2.548	6429	12000	17.8
TBA	750	0.968	1.253	1 x 0	125	2.984	9267	18000	20.9

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
1 Comply with ICEA S-93-639 Appendix C for jacket thickness determination

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 In Duct 90/105°C†	Allowable Ampacity In Air 90/105°C‡
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
2	0.162	0.203	0.037	15089	135/145	140/154
1	0.129	0.161	0.036	19029	155/165	160/180
1/0	0.102	0.128	0.034	24011	175/190	185/205
2/0	0.081	0.102	0.033	30264	200/220	215/240
3/0	0.064	0.081	0.032	38154	230/250	250/280
4/0	0.051	0.064	0.031	48114	265/285	285/320
250	0.043	0.054	0.031	56845	290/315	320/355
350	0.031	0.039	0.030	79583	355/380	395/440
350	0.031	0.039	0.030	79583	355/380	395/440
500	0.022	0.028	0.029	113690	430/460	485/545
750	0.014	0.020	0.028	170535	530/570	615/685

† Ampacities are based on TABLE 310.60(C)(79) Detail 1. of the 2020 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)
‡ Ampacities are based on TABLE 310.60(C)(71) of the 2020 National Electrical Code (40°C Ambient Air Temperature)