CU Compressed 2.4kV NLEPR Insulation 100% IL SIM-PVC Jacket. MV 90

Type MV-90 Single Conductor Copper, No Lead Ethylene Propylene Rubber (NL-EPR) SIMpull Polyvinyl Chloride (PVC) Jacket



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:** No Lead Ethylene Propylene Rubber (NL-EPR)
4. **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, direct burial, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation, 130°C for emergency overload, and 250°C for short circuit conditions. Rated at -35°C for cold bend when UL listed. Rated at -25°C for cold bend and cold impact and marked with "LTDD" when CSA listed or dual UL/CSA listed. 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 Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ASTM B496 Compact Round Concentric-lay-standard copper
- UL 1072 Medium-Voltage Power Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- ICEA S-96-659 (NEMA WC 71) 2001-5000 V Nonshielded Cables
- CT USE Sizes 1/0 AWG and Larger
- 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® POWER CABLE {UL} # AWG CU XXX MILS NL-EPR 2400V NONSHIELDED MV-90 SUN. RES. FOR CT USE {NESC}

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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Diameter Over Insulation	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Max Pull Tension	Min Bending Radius	Conduit Size*
	AWG/ Kcmil	No. of Strands	inch	inch	mil	inch	lb/1000ft	lb/1000ft	lb	inch	inch
607457	2	7	0.282	0.570	25	0.746	204	413	530	5.9	2.5
607465	1	19	0.322	0.610	85	0.786	258	484	669	6.2	2.5
607226	1/0	19	0.361	0.650	85	0.826	326	568	844	6.6	2.5
607234	2/0	19	0.405	0.695	85	0.871	410	671	1064	6.9	2.5
607242	3/0	19	0.456	0.745	105	0.955	518	830	1342	7.6	3.0
607259	4/0	19	0.512	0.785	105	0.995	653	978	1692	7.9	3.0
607267	250	37	0.558	0.870	120	1.112	771	1179	2000	8.8	3.5
607283	350	37	0.661	0.965	120	1.207	1080	1531	2800	9.6	3.5
607309	500	37	0.789	1.090	115	1.322	1543	2039	4000	10.5	4.0
607119	750	61	0.968	1.335	135	1.611	2315	3038	6000	12.8	4.5
607325	1000	61	1.117	1.485	135	1.761	3087	3893	8000	14.0	5.0

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Conduit size based on 3 phase 40% fill-factor without ground

Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Allowable Ampacity In Duct 90/105°C	Allowable Ampacity In Air 90/105°C
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
2	0.162	0.204	0.0434	145/155	190/215
1	0.128	0.162	0.0417	170/180	225/250
1/0	0.102	0.128	0.0401	195/210	260/290
2/0	0.081	0.102	0.0387	220/235	300/330
3/0	0.064	0.081	0.0381	250/270	345/385
4/0	0.051	0.065	0.0368	290/310	400/445
250	0.043	0.056	0.0373	320/345	445/495
350	0.031	0.041	0.0355	385/415	550/615
500	0.022	0.030	0.0337	470/505	695/775
750	0.014	0.023	0.0329	585/630	900/1000
1000	0.011	0.019	0.0317	670/720	1075/1200

* Ampacities are based on:
* For Duct: Table 310.60(C)(77) Detail 1.
* For Free Air: Table 310.60(C)(69).
* Inductive impedance is based on non-ferrous conduit with one diameter spacing.
* Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.
* Capacitive Reactance is between Phase-to-Shield.