

1/C CU 2.4kV NL-EPR SIMpull® PVC MV-90 CT Rated

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. 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 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
- 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{R} POWER CABLE {UL} # AWG CU XXX MILS NL-EPR 2400V NONSHIELDED MV-90 SUN. RES.
FOR CT USE {NESC}



Table 1 – Weights and Measurements

Stock Number	Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Jacket Thickness ¹	Approx. OD	Approx. Weight	Max Pull Tension	Min Bending Radius	Conduit Size*
	AWG/Kcmil	inch	inch	mil	mil	inch	lb/1000ft	lb	inch	inch
607457	2	0.283	0.563	125	80	0.723	401	531	5.8	2
607465	1	0.322	0.602	125	80	0.762	466	670	6.1	2.5
607226	1/0	0.362	0.642	125	80	0.802	550	845	6.4	2.5
607234	2/0	0.405	0.685	125	80	0.845	651	1065	6.8	2.5
607242	3/0	0.456	0.736	125	95	0.926	804	1342	7.4	3
607259	4/0	0.512	0.792	125	95	0.982	963	1693	7.9	3
607267	250	0.558	0.878	140	110	1.098	1161	2000	8.8	3.5
607283	350	0.661	0.981	140	110	1.201	1519	2800	9.6	3.5
607309	500	0.789	1.109	140	110	1.329	2042	4000	10.6	4
607119	750	0.968	1.318	155	125	1.568	2973	6000	12.5	5
607325	1000	1.117	1.467	155	125	1.717	3821	8000	13.7	5

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	Shield Short Circuit Current 6 Cycles	Allowable Ampacity In Duct 90°C [†]	Allowable Ampacity In Air 90°C [‡]
AWG/Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
2	0.162	0.203	0.043	15089	145	190
1	0.129	0.161	0.042	19029	170	225
1/0	0.102	0.128	0.040	24011	195	260
2/0	0.081	0.101	0.039	30264	220	300
3/0	0.064	0.081	0.038	38154	250	345
4/0	0.051	0.064	0.037	48114	290	400
250	0.043	0.054	0.037	56845	320	445
350	0.031	0.039	0.035	79583	385	550
500	0.022	0.028	0.034	113690	470	695
750	0.014	0.020	0.033	170535	585	900
1000	0.011	0.016	0.032	227380	670	1075

[†] Ampacities are based on TABLE 310.60(C)(77) 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)(69) of the 2020 National Electrical Code (40°C Ambient Air Temperature)

