CU Compressed 35kV NLEPR Insulation 133% IL Black SIM-PVC Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Copper, 420 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, SIMpull Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA

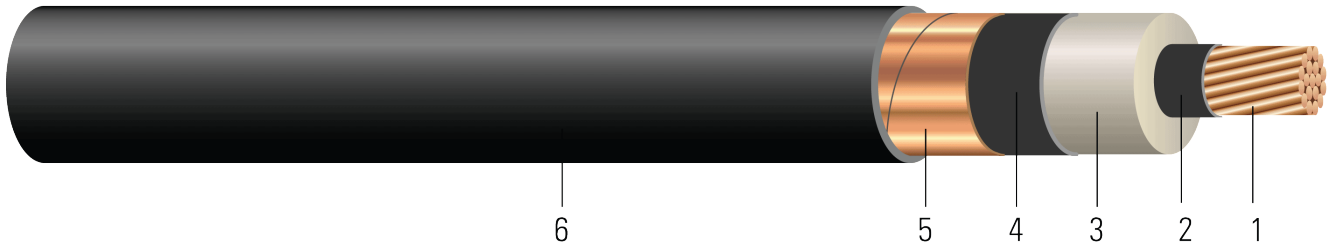


Image not to scale. See Table 1 for dimensions.

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:** 420 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level,
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
6. **Overall Jacket:** Sunlight resistant Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 35KV cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial when installed with a grounding conductor in close proximity that conforms to NEC section 311.36 and 250.4(A)(5), 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 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
- UL 1072 Medium-Voltage Power Cables
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- CSA C22.2 No.230 Tray Cables - Rated TC-ER (1/0 AWG and Larger)
- CSA C22.2 No. 2556 / UL 2556 Cable Test Methods
- CSA C68.10 Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test (1/0 and Larger)
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)

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- 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 SIMpull® POWER CABLE {UL} XXX KCMIL CU 420 MILS NL-EPR 35KV 133% INS LEVEL 25%TS MV-105 FOR CT USE SUN RES (NESC) -- {CSA} 750 KCMIL CU 10.67mm (420 mils) NL-EPR 35KV 133% INS LEVEL 25%TS SR TC-ER 105°C FT4 -25°C LTDD -- PAT www.patentSW.com -- RoHS

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Diameter Over Insulation	Diameter Over Insulation Shield	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Max Pull Tension	Min Bending Radius	Conduit Size*
	AWG/ Kcmil	No. of Strands	inch	inch	inch	mil	inch	lb/1000ft	lb/1000ft	lb	inch	inch
890065◊	1/0	19	0.361	1.240	1.300	80	1.480	429	1249	844	17.7	4.5
890082	2/0	19	0.405	1.284	1.344	80	1.524	517	1377	1064	18.2	4.5
672689	3/0	19	0.456	1.334	1.394	80	1.574	628	1532	1342	18.8	4.5
890066◊	4/0	19	0.512	1.376	1.436	80	1.616	766	1708	1692	19.3	4.5
890083^	250	37	0.558	1.428	1.488	110	1.728	889	1983	2000	20.7	5.0
605709	250	37	0.558	1.428	1.488	110	1.728	889	1975	2000	20.7	5.0
890067◊	350	37	0.661	1.527	1.587	110	1.827	1205	2385	2800	21.9	5.5
890068◊	500	37	0.789	1.652	1.712	110	1.952	1677	2976	4000	23.4	5.5
TBA	600	61	0.865	1.761	1.821	110	2.061	1889	3358	4800	24.7	6.0
890084◊	750	61	0.968	1.864	1.924	110	2.164	2465	3972	6000	25.9	6.0
890085	1000	61	1.117	2.013	2.073	110	2.313	3248	4898	8000	27.7	
675797	1250	91	1.250	2.150	2.210	110	2.450	4030	5816	10000	29.4	

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

^ Non SimPull Jacket. Non CSA listed.

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Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	Zero Sequence Impedance	Positive Sequence Impedance	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	MΩ*1000ft	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
1/0	0.102	0.128	0.064	0.054	0.465 + j0.274	0.129 + j0.054	4055	200/215	260/290
2/0	0.081	0.102	0.060	0.052	0.434 + j0.263	0.103 + j0.052	4192	230/245	300/330
3/0	0.064	0.081	0.056	0.050	0.408 + j0.25	0.082 + j0.05	4350	260/275	345/380
4/0	0.051	0.065	0.052	0.048	0.387 + j0.237	0.066 + j0.049	4523	295/315	395/445
250	0.043	0.056	0.049	0.048	0.372 + j0.227	0.057 + j0.048	4690	325/345	440/490
250	0.043	0.056	0.049	0.048	0.372 + j0.227	0.057 + j0.048	4690	325/345	440/490
350	0.031	0.041	0.044	0.045	0.347 + j0.207	0.042 + j0.045	5009	390/415	545/605
500	0.022	0.030	0.039	0.043	0.324 + j0.187	0.031 + j0.043	5406	465/500	680/755
600	0.018	0.026	0.037	0.042	0.312 + j0.174	0.027 + j0.041	5673	505/544	765/841
750	0.014	0.023	0.034	0.040	0.3 + j0.161	0.024 + j0.04	5992	565/610	870/970
1000	0.011	0.019	0.030	0.038	0.283 + j0.145	0.02 + j0.038	6453	640/690	1040/1160
1250	0.009	0.018	0.028	0.037	0.271 - j0.124	0.019 - j0.219	6878	715/770	1185/1320

* 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.