CU Compact 15kV NLEPR Insulation 100% IL Black SIM-PVC Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Compact Copper, 175 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 100% Insulation Level, Tape Shield, SIM*pull*® Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compact stranded per ASTM B496
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** 175 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 100% 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:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 15KV 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:

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- ASTM B3 Soft or Annealed Copper Wire
- ASTM B496 Compact Round Concentric-lay-standard copper
- 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)
- 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 CPT CU 175 MILS NL-EPR 15KV 100% INS LEVEL 25%TS MV-105 SUN. RES. {NESC} PAT www.patentSW.com

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
TBA	2	7	0.268	0.656	0.716	80	0.896	264	575	530	10.8	2
TBA	1	19	0.299	0.687	0.747	80	0.927	321	649	669	11.1	2.5
TBA	1/0	19	0.336	0.724	0.784	80	0.964	391	739	844	11.6	2.5
TBA	2/0	19	0.376	0.764	0.824	80	1.004	479	848	1064	12	2.5
TBA	3/0	19	0.423	0.811	0.871	80	1.051	590	984	1342	12.6	2.5
TBA	4/0	19	0.475	0.863	0.923	80	1.103	729	1151	1692	13.2	3
TBA	250	37	0.52	0.916	0.976	80	1.156	852	1307	2000	13.9	3
TBA	350	37	0.616	1.012	1.072	80	1.252	1168	1675	2800	15	3
583511	500	35	0.736	1.162	1.222	80	1.402	1647	2211	4000	16.8	3.5
TBA	750	61	0.908	1.314	1.374	80	1.554	2429	3109	6000	18.6	4
TBA	1000	61	1.06	1.466	1.526	110	1.766	3211	4068	8000	21.2	4.5

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Strand count meets minimum number per ASTM
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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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
2	0.162	0.221	0.04	0.049	0.576+j0.503	0.222+j0.055	2249	150/160	165/185
1	0.128	0.175	0.037	0.048	0.532+j0.487	0.176+j0.052	2345	170/185	185/210
1/0	0.102	0.139	0.034	0.046	0.498+j0.470	0.140+j0.050	2460	195/210	215/240
2/0	0.082	0.112	0.032	0.044	0.472+j0.452	0.113+j0.048	2584	220/235	245/275
3/0	0.064	0.087	0.029	0.043	0.448+j0.432	0.088+j0.046	2730	250/270	285/315
4/0	0.051	0.07	0.027	0.041	0.431+j0.411	0.071+j0.045	2891	285/305	325/360
250	0.043	0.059	0.025	0.04	0.419+j0.392	0.060+j0.044	3055	310/335	360/400
350	0.031	0.043	0.022	0.038	0.400+j0.359	0.044+j0.042	3352	375/400	435/490
500	0.021	0.03	0.021	0.037	0.379+j0.315	0.031+j0.040	3817	450/485	535/600
750	0.014	0.021	0.016	0.034	0.360+j0.276	0.022+j0.038	4288	545/585	670/745
1000	0.011	0.018	0.014	0.033	0.344+j0.244	0.019+j0.037	4759	615/660	770/860

* NEC ampacities are based on:
* For Duct: Table 310.60(C)(11) Detail 1.
* For Free Air: Table 310.60(C)(3).
* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
* Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft, Spacing: one diameter spacing center-to-center..
* Capacitive Reactance is between Phase-to-Shield.

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