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

Type MV-105 Three Conductor Copper, 175 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 100% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA. 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:** 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. **Grounding Conductor:** Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
7. **Filler:** Wax paper filler
8. **Binder:** Poly glass tape
9. **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, 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 -40°C for cold bend and cold impact and marked with "LTGG" when CSA listed or dual UL/CSA listed. 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 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
- ICEA S-58-679 Cable Conductor Identification Method 3 (1-BLACK, 2-RED, 3-BLUE)
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- 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® POWER CABLE {UL} 3/C XXX KCMIL CU 175 MILS NL-EPR 15KV 100% INS LEVEL 25%TS GW 1 X X AWG CU MV-105 FOR CT USE SUN. RES. FOR DIRECT BURIAL {NESC}

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Diameter Over Insulation	Diameter Over Insulation Shield	Ground	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Max Pull Tension	Min Bending Radius	Conduit Size
	AWG/ Kcmil	No. of Strands	inch	inch	inch	No. x AWG	mil	inch	lb/ 1000ft	lb/ 1000ft	lb	inch	inch
TBA	2	7	0.283	0.671	0.731	1x6	110	1.822	886	1890	1592	12.8	2.5
TBA	1	19	0.322	0.71	0.77	1x4	110	1.906	1104	2176	2008	13.3	2.5
TBA	1/0	19	0.362	0.75	0.81	1x4	110	1.993	1320	2462	2534	14	2.5
TBA	2/0	19	0.405	0.793	0.853	1x4	110	2.085	1588	2805	3194	14.6	2.5
TBA	3/0	19	0.456	0.844	0.904	1x3	110	2.196	1959	3265	4027	15.4	3
649373	4/0	19	0.512	0.9	0.96	1x3	110	2.352	2397	3802	5078	16.5	3
TBA	250	37	0.558	0.954	1.014	1x2	110	2.433	2798	4309	6000	17	3
649371	350	37	0.661	1.037	1.097	1x2	110	2.648	3766	5436	8400	18.5	3.5
679439	500	37	0.789	1.162	1.222	1x1	135	2.957	5253	7283	12000	20.7	4
TBA	750	61	0.968	1.374	1.434	1x1/0	135	3.39	7702	10133	18000	23.7	4.5

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
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.

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	0.038	0.028	0.588+j0.502	0.221+j0.045	2296	150/160	165/185
1	0.128	0.175	0.035	0.026	0.544+j0.482	0.175+j0.043	2417	170/185	185/210
1/0	0.102	0.139	0.033	0.025	0.509+j0.463	0.139+j0.041	2541	195/210	215/240
2/0	0.082	0.112	0.03	0.023	0.483+j0.444	0.112+j0.040	2674	220/235	245/275
3/0	0.064	0.087	0.028	0.022	0.458+j0.423	0.087+j0.038	2832	250/270	285/315
4/0	0.051	0.07	0.026	0.02	0.440+j0.401	0.070+j0.037	3005	285/305	325/360
250	0.043	0.059	0.024	0.02	0.427+j0.381	0.059+j0.036	3173	310/335	360/400
350	0.031	0.043	0.02	0.018	0.407+j0.352	0.043+j0.034	3430	375/400	435/490
500	0.021	0.03	0.017	0.016	0.386+j0.315	0.030+j0.032	3817	450/485	535/600
750	0.014	0.021	0.015	0.015	0.361+j0.263	0.021+j0.031	4474	545/585	670/745

* NEC ampacities are based on:
* For Duct: Table 310.60(C)(13) Detail 1.
* For Free Air: Table 310.60(C)(5).

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* 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.
* Capacitive Reactance is between Phase-to-Shield.

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