CU Compressed 35kV NLEPR Insulation 100% IL Black PVC Jacket. MV 105 - UL Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Three Conductor Copper, 345 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:** 345 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 35KV 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 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 AWG CU 345 MILS NL-EPR 35KV 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
599364	1/0	19	0.362	1.09	1.15	1x4	135	2.806	1415	3712	2534	19.6	4
TBA	2/0	19	0.405	1.133	1.193	1x4	135	2.87	1673	4186	3194	20.1	4
TBA	3/0	19	0.456	1.184	1.244	1x3	135	2.98	2044	4702	4027	20.9	4
TBA	4/0	19	0.512	1.24	1.3	1x3	135	3.101	2467	5284	5078	21.7	4
TBA	250	37	0.558	1.294	1.354	1x2	135	3.218	2883	5867	6000	22.5	4
TBA	350	37	0.661	1.397	1.457	1x2	135	3.44	3844	7123	8400	24.1	5
TBA	500	37	0.789	1.525	1.585	1x1	135	3.717	5332	8979	12000	26	5
TBA	750	61	0.968	1.714	1.774	1x1/0	135	4.125	7786	12003	18000	28.9	6

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
1/0	0.102	0.139	0.052	0.033	0.500+j0.351	0.139+j0.049	3594	195/210	215/240
2/0	0.082	0.112	0.049	0.031	0.470+j0.337	0.112+j0.047	3727	220/235	245/275
3/0	0.064	0.087	0.046	0.029	0.442+j0.322	0.087+j0.045	3885	250/270	285/315
4/0	0.051	0.07	0.042	0.027	0.420+j0.306	0.070+j0.044	4059	285/305	325/360
250	0.043	0.059	0.04	0.026	0.405+j0.292	0.059+j0.042	4226	310/335	360/400
350	0.031	0.043	0.036	0.024	0.381+j0.268	0.043+j0.040	4545	375/400	435/490
500	0.021	0.03	0.031	0.022	0.357+j0.242	0.031+j0.038	4942	450/485	535/600
750	0.014	0.021	0.027	0.02	0.331+j0.209	0.022+j0.036	5528	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).
* 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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