CU Compressed 15kV NLEPR Insulation 133% IL Black LSZH-TP Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Thermoplastic SOLONON® Low Smoke Zero Halogen (LSZH-TP) Jacket, Rated UL. Silicone Free

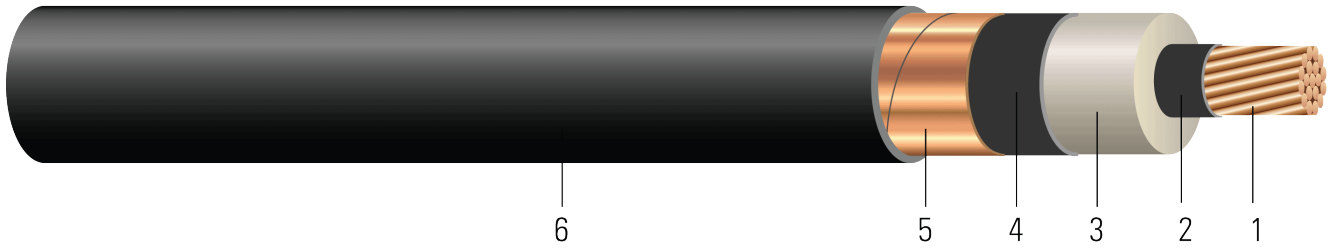


Image not to scale. See Table 1 for dimensions.

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:** 220 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:** Thermoplastic SOLONON® Low Smoke Zero Halogen (LSZH-TP)
   UL-1072 does not list polyolefin jacket. However, this LSZH meets the general definition of a thermoplastic polyolefin.

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 -25°C for cold bend. ST1 (low smoke) Rated for sizes 1/0 and larger. 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
- ASTM B496 Compact Round Concentric-lay-standard copper
- UL 1072 Medium-Voltage Power Cables
- UL 1685 FT4-ST1 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- 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-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- ICEA S-97-682 Standard for Shielded Utility Cable Rated for 5 - 46kV
- 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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- NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems (500kcmil & 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 POWER CABLE SOLONON® {UL} X AWG CU 220 MILS NL-EPR SOLONON® 15KV 133% 25%TS MV-105 SUN. RES. {NESC}

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
585535	1	19	0.322	0.800	0.860	80	1.040	329	739	669	12.4	3.0
550784	1/0	19	0.361	0.840	0.900	80	1.080	398	831	844	12.9	3.0
TBA	2/0	19	0.405	0.884	0.944	80	1.124		945	1064	13.4	3.5
671270	3/0	19	0.456	0.934	0.994	80	1.174	597	1086	1342	14.0	3.5
550786	4/0	19	0.512	0.990	1.050	80	1.230	738	1260	1692	14.7	3.5
550788	350	37	0.661	1.147	1.207	80	1.387	1177	1795	2800	16.6	4.0
550789	500	37	0.789	1.252	1.312	80	1.492	1648	2329	4000	17.9	4.5
550790	750	61	0.968	1.464	1.524	110	1.764	2435	3358	6000	21.1	5.0
550643	1500	91	1.370	1.900	1.960	110	2.200	4783	6031	12000	26.4	

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

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	0.128	0.162	0.047	0.049	0.532 + j0.401	0.162 + j0.049	2695	175/185	225/250
1/0	0.102	0.128	0.043	0.047	0.496 + j0.384	0.128 + j0.047	2816	200/215	260/290
2/0	0.081	0.102	0.040	0.045	0.468 + j0.367	0.103 + j0.045	2952	230/245	300/335
3/0	0.064	0.081	0.037	0.043	0.444 + j0.347	0.082 + j0.044	3110	260/275	345/385
4/0	0.051	0.065	0.034	0.042	0.424 + j0.328	0.066 + j0.042	3284	295/315	400/445
350	0.031	0.041	0.028	0.039	0.386 + j0.281	0.042 + j0.039	3770	390/415	550/610
500	0.022	0.030	0.025	0.037	0.363 + j0.249	0.031 + j0.037	4167	465/500	685/765
750	0.014	0.023	0.021	0.035	0.337 + j0.211	0.024 + j0.035	4752	565/610	885/990
1500	0.007	0.017	0.016	0.032	0.293 + j0.152	0.018 + j0.031	6010	815/880	1345/1500

* 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.