CU Compressed 15kV NLEPR Insulation 133% IL Black CPE-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 Chlorinated Polyethylene (CPE-TP) Jacket, Dual Rated UL/CSA. Silicone Free

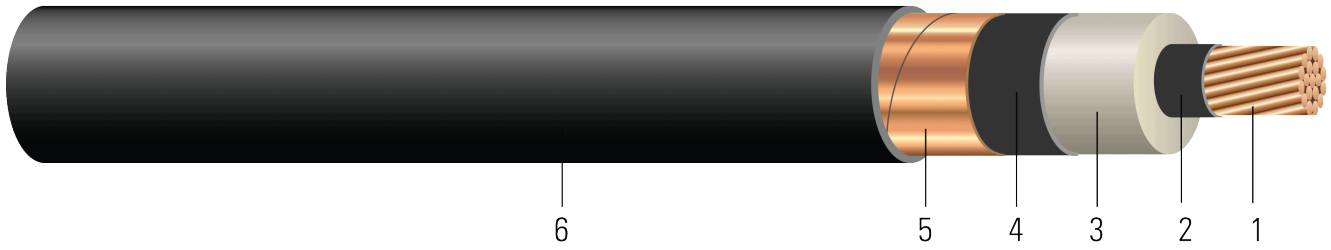


Image not to scale. See Table 1 for dimensions.

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:** 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 Chlorinated Polyethylene (CPE-TP)

APPLICATIONS AND FEATURES:

Southwire's 15KV cables are silicone free 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 -40°C for cold bend and cold impact and marked with "LTGG" when CSA listed or dual UL/CSA listed. Rated for 1000 lbs./FT maximum sidewall pressure. CT rated 1/0 and larger.

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 (1/0 and Larger)
- CSA C22.2 No.230 Tray Cables - Rated TC
- 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
- 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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- 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 {NESC} -- {UL} XX AWG CU 220 MILS NL-EPR CPE JKT 15KV 133% INS LEVEL 25%TS TYPE MV-105 FOR CT USE SUN RES OIL RES I/II FT4/IEEE 1202 -40°C -- {CSA} XX AWG CU 5.59mm (220 mils) NL-EPR CPE JKT 15KV 133% INS LEVEL 25%TS MV68.10 SR 90°C -40°C LTGG

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
550502◊	2	7	0.282	0.755	0.815	80	0.995	271	647	530	11.9	3.0
TBA	1	19	0.322	0.800	0.860	80	1.040	275	684	669	12.4	3.0
550503	1/0	19	0.361	0.840	0.900	80	1.080	398	823	844	12.9	3.0
550504◊!	2/0	19	0.405	0.884	0.944	80	1.124	487	937	1064	13.4	3.5
570935	3/0	19	0.456	0.934	0.994	80	1.174	597	1077	1342	14.0	3.5
550505◊	4/0	19	0.512	0.990	1.050	80	1.230	738	1251	1692	14.7	3.5
550506	250	37	0.558	1.028	1.088	80	1.268	859	1397	2000	15.2	3.5
550507◊	350	37	0.661	1.147	1.207	80	1.387	1177	1784	2800	16.6	4.0
550508◊	500	37	0.789	1.252	1.312	80	1.492	1648	2317	4000	17.9	4.5
550510◊	750	61	0.968	1.464	1.524	110	1.764	2435	3339	6000	21.1	5.0
550511	1000	61	1.117	1.613	1.673	110	1.913	3218	4220	8000	22.9	5.5
TBA	1250	91	1.250	1.750	1.810	110	2.050	3895	5011	10000	24.6	6.0
641440	1500	91	1.370	1.930	1.990	110	2.230	4785	6027	12000	26.7	
593519	2000	127	1.583	2.143	2.203	110	2.443	6345	7739	16000	29.3	

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
! No CSA certified product

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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	0.204	0.051	0.051	0.575 + j0.42	0.204 + j0.052	2571	155/165	195/215
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
250	0.043	0.056	0.032	0.041	0.41 + j0.31	0.057 + j0.041	3451	325/345	445/495
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
1000	0.011	0.019	0.019	0.034	0.319 + j0.186	0.02 + j0.034	5214	640/690	1060/1185
1250	0.009	0.018	0.017	0.033	0.305 - j0.089	0.019 - j0.223	5638	715/770	1210/1350
1500	0.007	0.017	0.016	0.032	0.293 + j0.152	0.018 + j0.031	6010	815/880	1345/1500
2000	0.005	0.017	0.014	0.031	0.275 + j0.13	0.018 + j0.029	6670	940/1010	1575/1755

* 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.