CU Compressed 25kV NLEPR Insulation 133% IL Black CPE-TP Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Copper, 320 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Chlorinated Polyethylene (CPE) Jacket, Dual Rated UL/CSA. Silicone Free

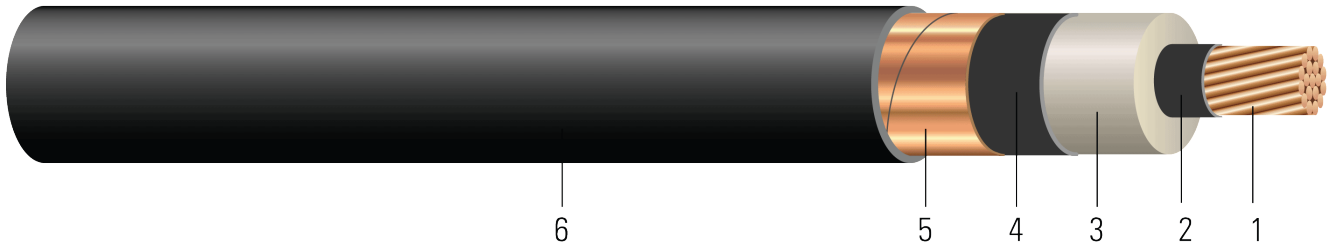


Image not to scale. See Table 1 for dimensions.

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:** 320 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)

APPLICATIONS AND FEATURES:

Southwire's 25KV 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. 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
- UL 1072 Medium-Voltage Power Cables
- UL 1685 FT4-ST1 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)

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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:

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# (UL/CSA) 1/C [#AWG or #kcmil] CU 320 MILS NL-EPR 25KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA 1/0 LARGER) FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC) [SEQUENTIAL FEET MARKS]

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	1	19	0.322	1.000	1.060	80	1.240	279	877	669	14.8	3.5
TBA	1/0	19	0.361	1.039	1.099	80	1.279	347	974	844	15.3	4.0
TBA	2/0	19	0.405	1.083	1.143	80	1.323	432	1093	1064	15.8	4.0
TBA	3/0	19	0.456	1.134	1.194	80	1.374	541	1241	1342	16.4	4.0
TBA	4/0	19	0.512	1.190	1.250	80	1.430	678	1419	1692	17.1	4.0
TBA	250	37	0.558	1.244	1.304	80	1.484	797	1583	2000	17.8	4.5
TBA	350	37	0.661	1.347	1.407	80	1.587	1109	1974	2800	19.0	4.5
TBA	500	37	0.789	1.475	1.535	110	1.775	1574	2641	4000	21.3	5.0
665044	750	61	0.968	1.664	1.724	110	1.964	2450	3650	6000	23.5	5.5
TBA	1000	61	1.117	1.813	1.873	110	2.113	3125	4479	8000	25.3	6.0

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	0.059	0.053	0.52 + j0.335	0.163 + j0.053	3315	175/185	225/250
1/0	0.102	0.128	0.055	0.051	0.483 + j0.322	0.129 + j0.051	3435	200/215	260/290
2/0	0.081	0.102	0.051	0.049	0.453 + j0.308	0.103 + j0.049	3572	230/245	300/330
3/0	0.064	0.081	0.047	0.047	0.428 + j0.292	0.082 + j0.047	3730	260/275	345/380
4/0	0.051	0.065	0.044	0.045	0.406 + j0.277	0.066 + j0.046	3903	295/315	395/445
250	0.043	0.056	0.041	0.044	0.392 + j0.263	0.057 + j0.044	4071	325/345	440/490
350	0.031	0.041	0.037	0.042	0.367 + j0.239	0.042 + j0.042	4390	390/415	545/605
500	0.022	0.030	0.032	0.040	0.343 + j0.214	0.031 + j0.04	4786	465/500	680/755
750	0.014	0.023	0.028	0.038	0.318 + j0.183	0.024 + j0.038	5372	565/610	870/970
1000	0.011	0.019	0.025	0.036	0.3 + j0.163	0.02 + j0.036	5834	640/690	1040/1160

* Ampacities are based on:
* For Duct: Table 310.60(C)(77) Detail 1.
* For Free Air: Table 310.60(C)(69).

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* 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.