CU Compressed 15kV NLEPR Insulation 133% IL GSIA Red PVC Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Three Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Galvanized Steel Interlocked Armor (GSIA), Polyvinyl Chloride (PVC) Jacket. Silicone Free

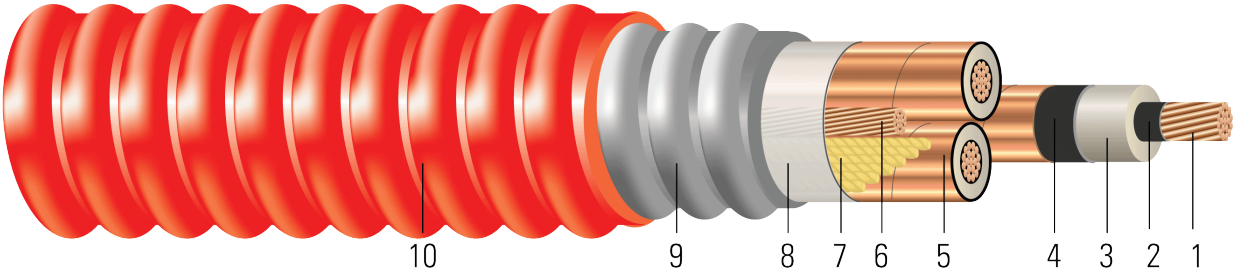

Image not to scale. See Table 1 for dimensions.

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. **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:** Polypropylene tape
9. **Armor:** Galvanized Steel Interlocked Armor (GSIA)
10. **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 Vertical-Tray Fire Propagation and Smoke Release Test
- 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 X AWG CU 220 MILS NL-EPR 15KV 133% 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	Diameter Over armor	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Max Pull Tension	Min Bending Radius
	AWG/ Kcmil	No. of Strands	inch	inch	inch	No. x AWG	inch	mil	inch	lb/ 1000ft	lb/ 1000ft	lb	inch
610105	2	7	0.282	0.755	0.815	1x6	2.122	65	2.254	904	2951	1592	15.7
TBA	1	3132	0.322	0.800	0.860	1x4	2.222	60	2.342	962	3627	2008	16.3
TBA	1/0	3463	0.361	0.839	0.899	1x4	2.307	75	2.457	1169	4047	2534	17.1
TBA	2/0	3925	0.405	0.883	0.943	1x4	2.402	75	2.552	1428	4472	3194	17.8
581972	2/0	19	0.405	0.884	0.944	1x1	2.400	80	2.566	1736	4213	3194	17.9
TBA	3/0	4452	0.456	0.934	0.994	1x3	2.512	75	2.662	1790	5023	4027	18.6
TBA	4/0	5084	0.512	0.990	1.050	1x3	2.633	75	2.783	2202	5645	5078	19.4
560801	250	37	0.558	1.028	1.088	1x2	2.931	80	3.097	2812	6317	6000	21.6
611038	350	37	0.661	1.127	1.187	1x2	2.925	80	3.091	3769	7056	8400	21.6
581973	500	37	0.789	1.252	1.312	1x1	3.195	90	3.383	5254	9059	12000	23.6
670992	500	37	0.789	1.252	1.312	1x1/0	3.195	90	3.383	5322	9127	12000	23.6
TBA	750	11961	0.968	1.464	1.524	1x1/0	3.657	90	3.837	7427	12868	18000	26.8

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

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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	0.047	0.579 + j0.421	0.204 + j0.048	2571	150/160	165/185
1	0.128	0.162	0.047	0.045	0.535 + j0.402	0.162 + j0.045	2695	170/185	185/210
1/0	0.102	0.128	0.043	0.043	0.5 + j0.385	0.128 + j0.043	2816	195/210	215/240
2/0	0.081	0.102	0.040	0.042	0.471 + j0.367	0.102 + j0.042	2952	220/235	245/275
2/0	0.081	0.102	0.040	0.042	0.471 + j0.367	0.102 + j0.042	2952	220/235	245/275
3/0	0.064	0.081	0.037	0.040	0.447 + j0.347	0.081 + j0.04	3110	250/270	285/315
4/0	0.051	0.065	0.034	0.039	0.426 + j0.328	0.065 + j0.039	3284	285/305	325/360
250	0.043	0.056	0.032	0.038	0.413 + j0.31	0.056 + j0.038	3451	310/335	360/400
350	0.031	0.041	0.028	0.036	0.388 + j0.28	0.041 + j0.036	3770	375/400	435/490
500	0.022	0.030	0.025	0.034	0.365 + j0.248	0.03 + j0.034	4167	450/485	535/600
500	0.022	0.030	0.025	0.034	0.365 + j0.248	0.03 + j0.034	4167	450/485	535/600
750	0.014	0.023	0.021	0.032	0.339 + j0.21	0.024 + j0.032	4752	545/585	670/745

* Ampacities are based on:
* For Duct: Table 310.60(C)(79) Detail 1.
* For Free Air: Table 310.60(C)(71).
* 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.