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

3 Conductor, 220 Mils No Lead Ethylene Propylene Rubber NL EPR, 133% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Inner Jacket, Aluminum Interlocked Armor (AIA), Polyvinyl Chloride (PVC) Jacket. Silicone Free

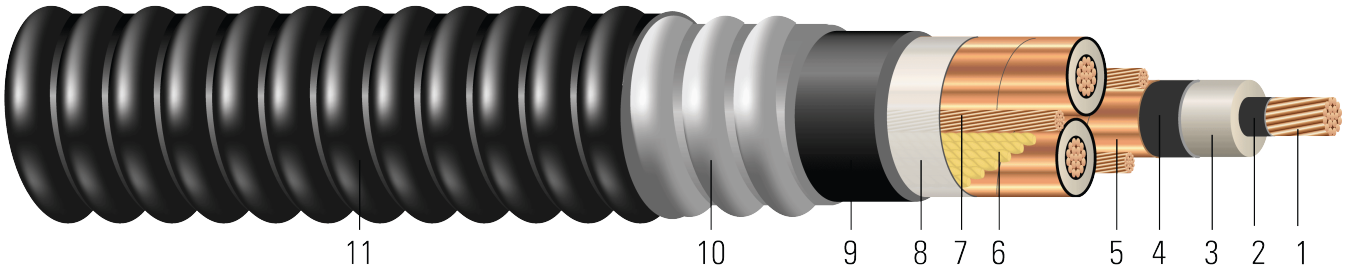


Image not to scale. See Table 1 for dimensions.

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:** Three separate ground wires with a combined circular mil of 50% of the phase conductor. Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
7. **Filler:** Wax paper filler
8. **Binder:** Polypropylene tape
9. **Inner Jacket:** 125 mils PVC inner jacket
10. **Armor:** Aluminum Interlocked Armor (AIA)
11. **Overall Jacket:** Black Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 15KV Teck type 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. The ground is sized to equal 50% of the phase conductor. Silicone free cable.

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

Copyright © 2024 Southwire Company, LLC. All Rights Reserved

UPDATED: Dec. 11, 2023, 9:29 p.m.UTC REVISION: 1.000.000

- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)
- 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 KCMIL CU 220 MILS NL-EPR 15KV 133% INS LEVEL 25%TS GW 3 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	Inner Jacket Thickness	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	mil	inch	mil	inch	lb/ 1000ft	lb/ 1000ft	lb	inch
TBA	1/0	19	0.361	0.839	0.899	3x8	60	2.307	75	2.457	1169	3041	2534	17.1
TBA	2/0	19	0.405	0.883	0.943	3x8	60	2.402	75	2.552	1428	3417	3194	17.8
TBA	3/0	19	0.456	0.934	0.994	3x7	60	2.512	75	2.662	1790	3913	4027	18.6
TBA	4/0	19	0.512	0.990	1.050	3x7	75	2.633	75	2.783	2202	4474	5078	19.4
TBA	250	37	0.558	1.044	1.104	3x7	75	2.749	75	2.899	2565	4994	6000	20.2
TBA	350	37	0.661	1.147	1.207	3x6	75	2.972	75	3.122	3549	6261	8400	21.8
552046	500	37	0.789	1.252	1.312	3x1	75	3.475	85	3.645	5776	9544	12000	25.5
TBA	750	61	0.968	1.464	1.524	3x4	85	3.657	90	3.837	7427	11181	18000	26.8

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

^ Black outer jacket

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	0.128	0.043	0.043	0.500 + 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
3/0	0.064	0.081	0.037	0.040	0.447 + j0.347	0.081 + j0.040	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 + j0.310	0.056 + j0.038	3451	310/335	360/400
350	0.031	0.041	0.028	0.036	0.388 + j0.280	0.041 + j0.036	3770	375/400	435/490
500	0.022	0.030	0.025	0.034	0.365 + j0.248	0.030 + j0.034	4167	450/485	535/600
750	0.014	0.023	0.021	0.032	0.339 + j0.210	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.

Copyright © 2024 Southwire Company, LLC. All Rights Reserved

* Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.
* Capacitive Reactance is between Phase-to-Shield.