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

Type MV-105 Three Conductor Copper, 220 Mils Tree Retardant Cross Linked Polyethylene (TRXLPE) 133% Insulation Level, Tape Shield, 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 Tree Retardant Cross Linked Polyethylene (TRXLPE) 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:** Poly glass tape
9. **Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 15KV cables are suited for use in wet and dry areas, conduits, ducts, troughs, 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)

Copyright © 2024 Southwire Company, LLC. All Rights Reserved

UPDATED: March 19, 2024, 1:57 p.m.UTC REVISION: 1.000.001

- 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 XLP 15KV 133% INS LEVEL 25%TS GW 1 X X AWG CU MV-105 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	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	lb/1000ft	lb/1000ft	lb	inch
673477	2	7	0.282	0.755	0.815	1x6	110	2.051	911	2156	1592	14.3
673482	1	19	0.322	0.800	0.860	1x4	110	2.136	1130	2463	2008	14.9
673488	1/0	19	0.361	0.840	0.900	1x4	110	2.222	1343	2767	2534	15.5
653545	2/0	19	0.405	0.884	0.944	1x4	110	2.317	1610	3122	3194	16.2
653546	3/0	19	0.456	0.934	0.994	1x3	110	2.425	1979	3571	4027	16.9
673496	4/0	19	0.512	0.990	1.050	1x3	110	2.546	2401	4091	5078	17.8
653547	250	37	0.558	1.044	1.104	1x3	110	2.663	2772	4564	6000	18.6
653548	350	37	0.661	1.147	1.207	1x2	135	2.935	3773	5898	8400	20.5
653549	500	37	0.789	1.275	1.335	1x1	135	3.212	5259	7620	12000	22.4
TBA	750	61	0.968	1.464	1.524	1x1/0	135	3.617	7427	10641	18000	25.3

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

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	0.067	0.047	0.579 + j0.421	0.204 + j0.048	2571	150/160	165/185
1	0.128	0.162	0.061	0.045	0.535 + j0.402	0.162 + j0.045	2695	170/185	185/210
1/0	0.102	0.128	0.057	0.043	0.5 + j0.385	0.128 + j0.043	2816	195/210	215/240
2/0	0.081	0.102	0.053	0.042	0.471 + j0.367	0.102 + j0.042	2952	220/235	245/275
3/0	0.064	0.081	0.048	0.040	0.447 + j0.347	0.081 + j0.04	3110	250/270	285/315
4/0	0.051	0.065	0.044	0.039	0.426 + j0.328	0.065 + j0.039	3284	285/305	325/360
250	0.043	0.056	0.042	0.038	0.413 + j0.31	0.056 + j0.038	3451	310/335	360/400
350	0.031	0.041	0.037	0.036	0.388 + j0.28	0.041 + j0.036	3770	375/400	435/490
500	0.022	0.030	0.032	0.034	0.365 + j0.248	0.03 + j0.034	4167	450/485	535/600
750	0.014	0.023	0.028	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.

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.