AL Compact 5/8kV NLEPR Insulation 133/100% IL SIM-PVC Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Aluminum, 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, SIM Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA

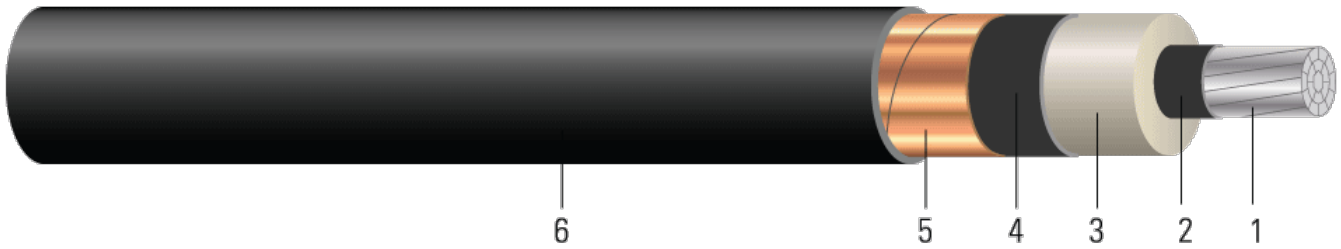

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compact stranded 8000 Series aluminum per ASTM B800 and ASTM B836
2. **Conductor Shield:** Semi-conducting cross-linked copolymer; A conductor separator is used for cable size larger than or equal to 500 Kcmil
3. **Insulation:** 115 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:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Tanner's 5KV 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. PVC jacket is made with SIM technology and has a coefficient of friction COF of 0.2. Cable can be installed in conduit without the aid of lubrication. Rated for 1000 lbs./FT maximum sidewall pressure.

SPECIFICATIONS:

- ASTM B801 Concentric-Lay-Stranded Conductors of 8000 Series Aluminum Alloy
- ASTM B836 Compact Rounded Stranded Aluminum Conductors
- UL 1072 Medium-Voltage Power Cables
- UL 1685 FT4 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
- 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)

- 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} TANNER SIM POWER CABLE {UL} XX AWG COMPACT AL.--- AA8176 115 MILS NL-EPR 5KV 133%/8KV 100% INS LEVEL 25%TS MV-105 FOR CT USE SUN RES {NESC} -- {CSA} XX AWG COMPACT AL.--- AA8176 2.92mm (115 mils) NL-EPR 5KV 133%/8KV 100% INS LEVEL 25%TS MV68.10 SR 105{D}C FT4 -25{D}C LTDD -- PAT -- RoHS

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	Aluminum 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/ 1000ft	lb	inch	inch
05C-APNDS-0002	2	7	0.268	0.536	0.640	55	0.790	56	62	342	398	9.4	2.5
05C-APNDS-0001	1	19	0.298	0.566	0.626	55	0.756	12	78	287	502	9.0	2.5
05C-APNDS-0100	1/0	10	0.336	0.604	0.664	55	0.814	56	99	377	633	9.7	2.5
05C-APNDS-0200	2/0	12	0.376	0.644	0.704	80	0.884	58	125	446	798	10.6	2.5
05C-APNDS-0300	3/0	18	0.422	0.691	0.751	80	0.931	62	158	502	1006	11.1	3.0
05C-APNDS-0400	4/0	19	0.474	0.743	0.803	80	0.983	65	199	569	1269	11.7	3.0
05C-APNDS-250M	250	22	0.520	0.796	0.856	80	1.036	71	235	635	1500	12.4	3.0
05C-APNDS-350M	350	35	0.615	0.892	0.952	80	1.132	78	329	777	2100	13.5	3.5
05C-APNDS-500M	500	35	0.735	1.034	1.094	80	1.274	88	471	990	3000	15.2	3.5
05C-APNDS-600M	600	41	0.812	1.103	1.163	80	1.343	93	565	1122	3600	16.1	4.0
05C-APNDS-750M	750	58	0.908	1.206	1.266	80	1.446	100	706	1315	4500	17.3	4.0
05C-APNDS-1000M	1000	58	1.060	1.044	1.104	80	1.598	112	942	1627	6000	19.1	4.5

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Strand count meets minimum number per ASTM
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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	0.267	0.336	0.036	0.045	0.369 + j0.272	0.031 + j0.038	1877	115/125	150/165
1	0.211	0.266	0.033	0.043	0.369 + j0.281	0.027 + j0.037	1970	130/140	175/195
1/0	0.168	0.211	0.030	0.041	0.370 + j0.259	0.033 + j0.034	2088	150/160	200/225
2/0	0.133	0.167	0.028	0.041	0.370 + j0.259	0.033 + j0.034	2212	170/185	230/260
3/0	0.105	0.133	0.025	0.040	0.370 + j0.259	0.033 + j0.034	2354	195/210	270/300
4/0	0.084	0.105	0.023	0.038	0.370 + j0.259	0.033 + j0.034	2515	225/245	310/350
250	0.071	0.090	0.022	0.038	0.370 + j0.259	0.033 + j0.034	2683	250/270	345/385
350	0.050	0.065	0.019	0.036	0.370 + j0.259	0.033 + j0.034	2977	305/325	430/480
500	0.035	0.046	0.016	0.034	0.370 + j0.272	0.031 + j0.038	3349	370/400	545/605
600	0.029	0.039	0.015	0.033	0.370 + j0.289	0.024 + j0.032	3618	410/442	611/679
750	0.024	0.033	0.014	0.032	0.370 + j0.289	0.024 + j0.032	3916	470/505	710/790
1000	0.018	0.026	0.012	0.031	0.370 + j0.289	0.024 + j0.032	4387	545/590	855/950

* NEC ampacities are based on:
* For Duct: Table 310.60(C)(12) Detail 1.
* For Free Air: Table 310.60(C)(4).
* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
* Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft, Spacing: one diameter spacing center-to-center.
* Capacitive Reactance is between Phase-to-Shield.