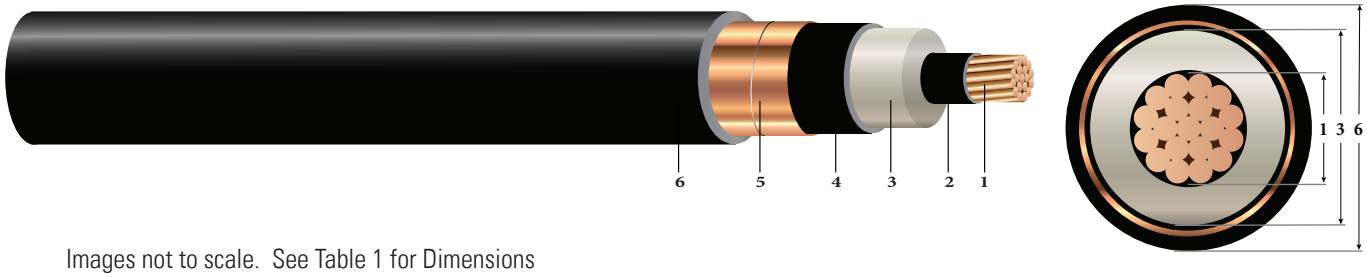
1/C CU 15KV 220 TRXLPE 133% TS PVC MV-105

Type MV-105 Single Conductor Copper, 220 Mils Tree Retardent Cross Linked Polyethylene (TRXLPE) 133% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Jacket



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

1. **Conductor**: Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Conductor Shield**: Semi-conducting cross-linked copolymer
3. **Insulation**: 220 Mils Tree Retardent Cross Linked Polyethylene (TRXLPE) 133% Insulation Level,
4. **Insulation Shield**: Stripable 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:

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. 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
- ASTM B8 Concentric-lay-standard copper
- UL 1072 - Medium Voltage Power Cables
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable & ICEA S-97-682 5-46 KV Utility
- UL 1685/FT4-ST1 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 AWG and Larger)
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test (1/0 AWG and Larger)
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# (UL) 1/C [#AWG or #kcmil] CU 220 MILS TRXLPE 15KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC) [SEQUENTIAL FEET MARKS]

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Table 1 – Weights & Measurements

Stock Code	Cond. Size	Diameter over			Jacket Thickness[1]	Approx. OD (6)	Approx. Weight	Max Pull Tension	Min Bend-ing Radius	Conduit Size*
		Cond. (1)	Insul. (3)	Insul. Shield						
	AWG	inches	inches	inches	mils	inches	lbs./MFT	lbs.	inches	inches
577076	2	0.283	0.760	0.820	80	1.000	603	531	12.0	3
TBA	1	0.322	0.799	0.859	80	1.039	677	670	12.5	3
550647	1/0	0.362	0.839	0.899	80	1.079	768	845	12.9	3
641179	2/0	0.405	0.882	0.942	80	1.122	878	1065	13.5	3.5
TBA	3/0	0.456	0.933	0.993	80	1.173	1016	1342	14.1	3.5
TBA	4/0	0.512	0.989	1.049	80	1.229	1185	1693	14.7	3.5
577078	250	0.558	1.044	1.104	80	1.284	1335	2000	15.4	4
TBA	350	0.661	1.147	1.207	80	1.387	1706	2800	16.6	4
TBA	500	0.789	1.275	1.335	80	1.515	2245	4000	18.2	5
TBA	750	0.968	1.463	1.523	80	1.703	3128	6000	20.4	5
TBA	1000	1.117	1.612	1.672	110	1.912	4092	8000	22.9	6
TBA	1250	1.250	1.767	1.827	110	2.067	4972	10000	24.8	6

All dimensions are nominal and subject to normal manufacturing tolerances
* Conduit size based on 3 phase 40% fill-factor without ground
[1] Comply with ICEA S-93-639 Appendix C for jacket thickness determination

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles	Allowable Ampacities 90°C/105°C	
		DC @ 25°C	AC @ 90°C	X_C @ 60Hz	X_L @ 60Hz				In Duct †	In Air ‡
	AWG	Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT	Ω/MFT	Ω/MFT	Amps	Amps	Amps
577076	2	0.162	0.203	0.067	0.051	0.203 + j0.051	0.573 + j0.418	2700	155 / 165	195 / 215
TBA	1	0.129	0.161	0.062	0.049	0.162 + j0.049	0.531 + j0.400	2827	175 / 185	225 / 250
550647	1/0	0.102	0.128	0.057	0.047	0.128 + j0.047	0.496 + j0.383	2957	200 / 215	260 / 290
641179	2/0	0.081	0.101	0.053	0.045	0.102 + j0.045	0.467 + j0.366	3097	230 / 245	300 / 335
TBA	3/0	0.064	0.080	0.049	0.043	0.081 + j0.043	0.443 + j0.346	3263	260 / 275	345 / 385
TBA	4/0	0.051	0.064	0.045	0.042	0.065 + j0.042	0.423 + j0.327	3445	295 / 315	400 / 445
577078	250	0.043	0.054	0.043	0.041	0.055 + j0.041	0.409 + j0.309	3624	325 / 345	445 / 495
TBA	350	0.031	0.039	0.038	0.039	0.040 + j0.039	0.384 + j0.279	3959	390 / 415	550 / 610
TBA	500	0.022	0.028	0.033	0.037	0.029 + j0.037	0.361 + j0.248	4376	465 / 500	685 / 765
TBA	750	0.014	0.019	0.028	0.035	0.020 + j0.035	0.334 + j0.210	4987	565 / 610	885 / 990
TBA	1000	0.011	0.015	0.025	0.034	0.016 + j0.034	0.315 + j0.185	5472	640 / 690	1060 / 1185
TBA	1250	0.009	0.013	0.024	0.033	0.014 + j0.033	0.298 + j0.165	5976	715 / 770	1210 / 1350

* Calculations are based on three cables triplexed / 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter
† Ampacities are based on TABLE 310.60(C)(77) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)
‡ Ampacities are based on TABLE 310.60(C)(69) of the 2014 National Electrical Code (40°C Ambient Air Temperature)

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