



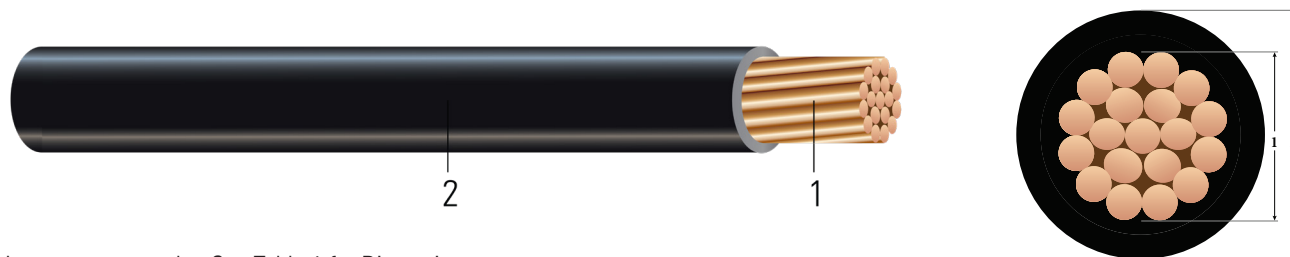
Southwire®

Industrial In-Stock



1/C CU 1000V XLPE XHHW-2 Power Cable

Power Cable 1000 Volt Single Conductor Copper, Cross Linked Polyethylene (XLPE) insulation XHHW-2



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. **Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2

APPLICATIONS AND FEATURES:

Southwire's 1000 Volt power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper
- ASTM B8 Concentric-lay-standard copper
- UL 44 Thermoset Insulated wires And cables
- UL 1685 - Flame Test
- UL 2556 Standard for Safety Wire and Cable Test Methods
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr)
- ICEA S-58-679 - Control Cable Conductor Identification Method 4
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU XHHW-2 XLPE 1000V For CT USE SUN. RES. FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Table 1 – Weights & Measurements

Stock Code	Cond. Size	Dia Over Cond. (1)	Insul. Thickness	Approx. OD (2)	Copper Weight	Approx. Weight
	AWG	inches	mils	inches	lbs./MFT	lbs./MFT
113001 [◊]	1/0	0.360	55	0.470	326	360
113019 [◊]	2/0	0.404	55	0.514	411	449
113027 [◊]	3/0	0.454	55	0.564	518	561
113035 [◊]	4/0	0.510	55	0.620	653	701
113043 [◊]	250	0.558	65	0.688	772	830
113050	300	0.611	65	0.741	926	991
113068 [◊]	350	0.661	65	0.791	1081	1150
113084 [◊]	500	0.789	65	0.919	1544	1625
113092 [◊]	600	0.866	80	1.026	1853	1958
113100 [◊]	750	0.968	80	1.128	2316	2432
113134 [◊]	1000	1.117	80	1.277	3088	3223

All dimensions are nominal and subject to normal manufacturing tolerances

Table 2 – Electrical and Engineering Data

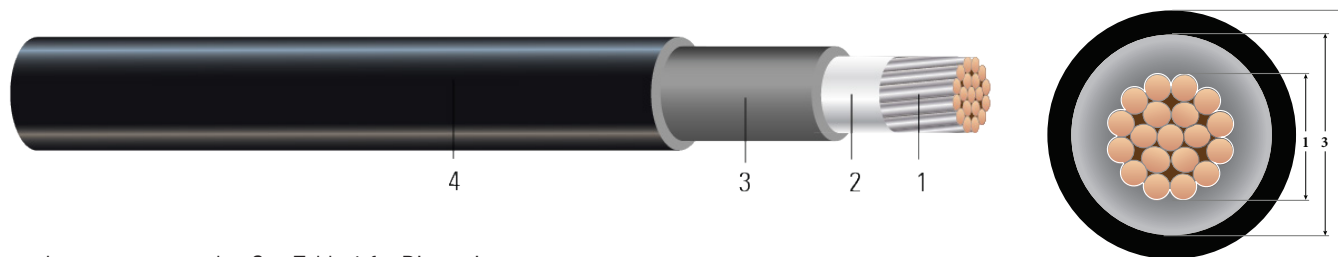
Stock Code	Cond. Size AWG	Min. Bending Radius Inches	Max. Pull Tension lbs.	Resistance		Reactance X_L @ 60Hz Ω/MFT	Ø Short Circuit Current 6 Cycles Amps	Allowable Ampacities †		
				DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT			60 °C Amps	75 °C Amps	90 °C Amps
				113001 [◊]	1/0			1.9	845	0.102
113019 [◊]	2/0	2.1	1065	0.081	0.102	0.027	30264	145	175	195
113027 [◊]	3/0	2.3	1342	0.064	0.081	0.027	38154	165	200	225
113035 [◊]	4/0	2.5	1693	0.051	0.064	0.026	48114	195	230	260
113043 [◊]	250	2.8	2000	0.043	0.055	0.027	56845	215	255	290
113050	300	3.0	2400	0.036	0.046	0.026	68214	240	285	320
113068 [◊]	350	3.2	2800	0.031	0.040	0.026	79583	260	310	350
113084 [◊]	500	3.7	4000	0.022	0.029	0.025	113690	320	380	430
113092 [◊]	600	5.1	4800	0.018	0.024	0.026	136428	350	420	475
113100 [◊]	750	5.6	6000	0.014	0.020	0.025	170535	400	475	535
113134 [◊]	1000	6.4	8000	0.011	0.017	0.025	227380	455	545	615

† Ampacities are based on Table 310.15 (B)(16) of the NEC, 2017 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)



1/C CU 600V EPR RHH/RHW-2 USE-2 CPE Power Cable

Power Cable 600Volt Single Conductor Copper, Ethylene Propylene Rubber (EPR) insulation RHH/RHW-2 USE-2 Chlorinated Polyethylene (CPE) Jacket



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded tinned copper per ASTM B33 and ASTM B8
2. **Binder Tape:** Mylar Tape
3. **Insulation:** Ethylene Propylene Rubber (EPR) Type RHH/RHW-2
4. **Overall Jacket:** Chlorinated Polyethylene (CPE) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Sunlight resistant.

SPECIFICATIONS:

- ASTM B33 Tinned Soft or Annealed Copper
- ASTM B8 Concentric-lay-standard copper
- UL 44 Thermoset Insulated wires And cables
- UL 1685 - Flame Test & VW-1
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr)
- ICEA S-58-679 - Control Cable Conductor Identification Method 4
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU RHH/RHW-2 USE-2 EPR/CPE 600V For CT USE SUN. RES. For DIRECT BURIAL FT4 VW-1YEAR (NESC) [SEQUENTIAL FEET MARKS]



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Table 1 – Weights & Measurements

Stock Code	Cond. Size	Dia Over Cond. (1)	Insul. Thickness	Dia Over Insul. (3)	Jacket Thickness	Approx. OD (4)	Copper Weight	Approx. Weight
	AWG	inches	inches	inches	mils	inches	lbs./MFT	lbs./MFT
592004	8	0.139	45	0.229	15	0.259	51	73
589493	6	0.174	45	0.264	30	0.324	81	116
589492	4	0.221	45	0.311	30	0.371	129	171
589491	2	0.277	45	0.367	30	0.427	205	257
589490	1	0.321	55	0.431	30	0.491	258	322
589495 ◊	1/0	0.360	55	0.470	45	0.560	326	412
589496 ◊	2/0	0.404	55	0.514	45	0.604	411	506
592011 ◊	3/0	0.454	55	0.564	45	0.654	518	623
589500 ◊	4/0	0.510	55	0.620	45	0.710	653	769
589497 ◊	250	0.558	65	0.688	45	0.778	772	906
589499 ◊	350	0.661	65	0.791	65	0.921	1081	1273
589501 ◊	500	0.789	90	0.919	75	1.049	1544	1767
595421	600	0.866	80	1.026	65	1.200	1853	2316
592017 ◊	750	0.968	80	1.128	65	1.258	2316	2608
589488	1000	1.117	80	1.277	65	1.407	3088	3418

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Standard stock item

Table 2 – Electrical and Engineering Data

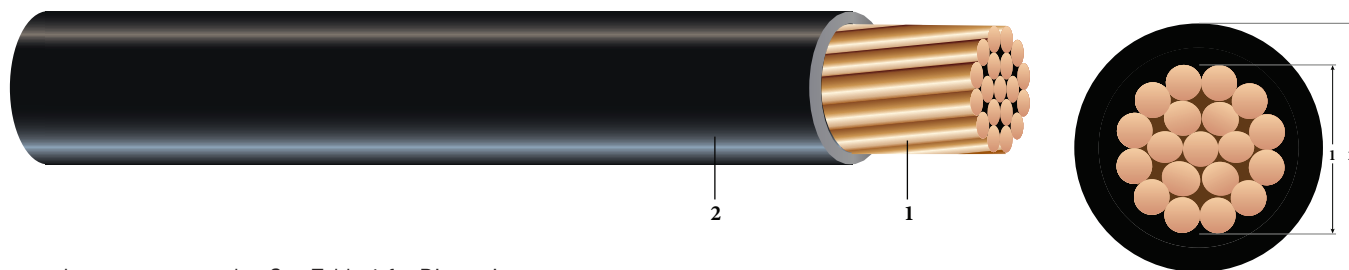
Stock Code	Cond. Size AWG	Min. Bending Radius Inches	Max. Pull Tension lbs.	Resistance		Reactance X _L @ 60Hz Ω/MFT	Ø Short Circuit Current 6 Cycles Amps	Allowable Ampacities †		
				DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT			60 °C Amps	75 °C Amps	90 °C Amps
				592004	8			1.0	132	0.652
589493	6	1.3	210	0.411	0.514	0.036	5966	55	65	75
589492	4	1.5	334	0.258	0.323	0.034	9491	70	85	95
589491	2	1.7	531	0.162	0.203	0.032	15089	95	115	130
589490	1	2.0	670	0.129	0.161	0.031	19029	110	130	145
589495 ◊	1/0	2.2	845	0.102	0.128	0.032	24011	125	150	170
589496 ◊	2/0	2.4	1065	0.081	0.102	0.031	30264	145	175	195
592011 ◊	3/0	2.6	1342	0.064	0.081	0.030	38154	165	200	225
589500 ◊	4/0	2.8	1693	0.051	0.064	0.029	48114	195	230	260
589497 ◊	250	3.1	2000	0.043	0.055	0.029	56845	215	255	290
589499 ◊	350	3.7	2800	0.031	0.039	0.029	79583	260	310	350
589501 ◊	500	5.2	4000	0.022	0.028	0.028	113690	320	380	430
595421	600	6.0	4800	0.018	0.024	0.028	136428	350	420	475
592017 ◊	750	6.3	6000	0.014	0.020	0.028	170535	400	475	535
589488	1000	7.0	8000	0.011	0.016	0.027	227380	455	545	615

† Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)



1/C CU 600V LSNH XHHW-2 Power Cable SOLONONplus®

SOLONONplus® 600Volt Single Conductor Copper Cross Linked Polyolefin Low Smoke Zero Halogen (XLPO LSZH) Insulation Type XHHW-2



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. **Insulation:** SOLONONplus® Cross Linked Polyolefin Low Smoke Zero Halogen (XLPO LSZH) Type XHHW-2

APPLICATIONS AND FEATURES:

Southwire's 600 Volt SOLONONplus® Type XHHW-2 cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial and aerially when supported by a messenger. These cables are ideal for use in establishments where low smoke and low acid emissions are desired for public safety and health and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions.

- a. The conductors are available in tinned and flexible copper stranding upon request.
- b. NEC compliant
- c. The halogen content is less than 0.2% and Acid gas less than 2.0%
- d. Passes UL VW-1 # 8 AWG and larger
- e. 70,000 BTU/Hr. Vertical Flame Test
- f. UL listed for CT use on 1/0 and Larger
- g. UL listed FT4 and ST-1 (limited smoke)
- h. -40°C Cold impact and cold bend
- i. Oil Resistant I and II
- j. UV/Sunlight resistant black color
- k. Color Available upon request

SPECIFICATIONS:

- ASTM B3 Soft or annealed copper
- ASTM B8 Concentric-lay-standard copper
- ASTM B33 Tin coated copper conductors
- ASTM B170 Oxygen Free Electrolytic Copper (available upon request)
- UL 44 Thermoset Insulated wires and cables
- UL 1685 - Vertical-Tray Fire Propagation and Smoke-Release Test.
- UL 2885 Acid Gas, Acidity and conductivity of combusted materials and assessment of halogens.



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SPECIFICATIONS Cont:

- ICEA T-33-655/MIL-C-24643 Low Smoke Halogen Free (LSHF) Polymeric Jackets
- IEEE 1202/FT4 - Vertical-Tray Fire Propagation and Smoke-Release Test (70,000 Btu/hr Vertical Tray Test)
- ISO 9001, ISO 14001 Environmental Standard, RoHS
- ICEA S-95-658 NEMA WC70 - Power Cables Rated 2000 Volts or Less for The Distribution of Electrical Energy
- NFPA 130 and 502

SAMPLE PRINT LEGEND:

SOUTHWIRE SOLONONplus (TM) E30117 #P# (UL) [#AWG Or #kcmil] CU LSZH XLPO Type XHHW-2 -40°C PRI PRII 600V
 SEQUENTIAL FOOTAGE MARKS

Table 1 – Weights & Measurements

Stock Code	Cond. Size	Strand Count	Dia Over Cond. (1)	Insul. Thickness	Approx. OD (2)	Copper Weight	Approx. Weight
	AWG	No. of Strands	inches	inches	inches	lbs./MFT	lbs./MFT
649593	14	Solid	0.064	30	0.124	13	18
599254 [◇]	12	Solid	0.081	30	0.141	20	27
599263 [◇]	10	Solid	0.102	30	0.162	32	40
647361	14	7	0.070	30	0.130	13	18
649601	12	7	0.087	30	0.147	20	27
599263	10	7	0.111	30	0.171	32	40
599328 [◇]	8	7	0.139	45	0.229	51	67
599337 [◇]	6	7	0.174	45	0.264	81	100
599346 [◇]	4	7	0.221	45	0.311	129	153
641691	3	7	0.248	45	0.342	162	182
599355 [◇]	2	7	0.277	45	0.367	205	235
643752	1	19	0.321	55	0.432	258	287
641693	1/0	19	0.360	55	0.472	326	370
599519	4/0	19	0.510	55	0.608	653	708
641699	250	37	0.611	65	0.672	772	837
641703	600	61	0.866	80	1.026	1853	1949

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

Stock Code	Cond. Size AWG	Min. Bending Radius Inches	Max. Pull Tension lbs.	Resistance		Reactance X_L @ 60Hz Ω/MFT	Ø Short Circuit Current 6 Cycles Amps	Allowable Ampacities †		
				DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT			60 °C Amps	75 °C Amps	90 °C Amps
649593	14	0.5	33	2.630	3.288	0.036	935	15	15	15
599254 [◇]	12	0.6	52	1.660	2.075	0.034	1485	20	20	20
599263 [◇]	10	0.7	83	1.040	1.300	0.032	2360	29	30	30
647361	14	0.5	33	2.630	3.288	0.036	935	15	15	15
649601	12	0.6	52	1.660	2.075	0.034	1485	20	20	20
599263	10	0.7	83	1.040	1.300	0.032	2360	29	30	30
599328 [◇]	8	0.9	132	0.652	0.815	0.033	3754	40	48	55
599337 [◇]	6	1.1	210	0.411	0.514	0.031	5966	55	66	75
599346 [◇]	4	1.2	334	0.258	0.323	0.030	9491	70	84	95
643752	3	1.4	420	0.214	0.285	0.029	12097	85	100	110
599355 [◇]	2	1.5	531	0.162	0.203	0.028	15089	96	115	130
643752	1	1.7	670	0.134	0.174	0.028	19029	110	130	145
641693	1/0	1.9	845	0.102	0.128	0.028	24011	125	150	170
599519	4/0	2.5	1693	0.051	0.064	0.027	48114	195	230	260
641699	250	2.8	2000	0.043	0.055	0.027	56845	215	255	290
641703	600	5.1	4800	0.018	0.024	0.026	136428	350	420	475

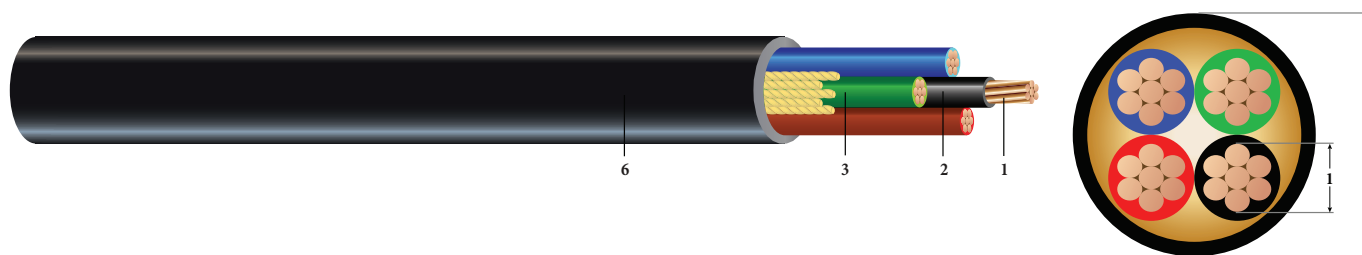
† Ampacities are based on Table 310.15 (B)(16) of the NEC, 2017 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

◇ Cable marked with this symbol is a standard stock item



CU 600V PVC THHN PVC Control Cable Type TC-ER

Type TC-ER Control Cable 600Volt Copper Conductors, Polyvinyl Chloride (PVC) with nylon layer Insulation THHN Polyvinyl Chloride (PVC) Jacket with 1 Insulated Green CU Ground, Control Cable Conductor Identification Method 1 Table 2



Images not to scale. See Table for Dimensions

CONSTRUCTION:

- Conductor:** 7 strands class B compressed bare copper per ASTM B3 and ASTM B8 for 14, 12, and 10 AWG cables. 26 strands class K bare copper per ASTM B3 and B174 for 16 AWG cables
- Insulation:** Polyvinyl Chloride (PVC) with nylon layer THHN, 19 Mils thick for 16, 14, 12 AWG cables and 24 Mils for 10 AWG cables, Type TFFH for 16 AWG cable and Type THHN or THWN for 14, 12, 10 AWG cables
- Grounding Conductor:** Class B compressed stranded copper with green insulation
- Filler:** Polypropylene filler on cables with 5 or less conductors
- Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
- Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER control cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 75°C in wet locations and 90°C in dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10.

SPECIFICATIONS:

- ASTM B3 - Soft or annealed copper
- ASTM B8 - Concentric-lay-standard copper
- UL 83 - Thermoplastic Insulated wires and cables
- UL 1277 - Electrical Power and Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)
- ICEA S-73-532 - Standard for Control, Thermocouple Extension and Instrumentation Cables
- ICEA S-58-679 - Control Cable Conductor Identification Method 1 Table 2
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU THHN PVC/PVC 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



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Measurements and Electrical Data

#16 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches									No.xAWG
TBA	3	0.056	1 x 16	45	0.318	32	69	1.3	4.180	5.226	10/10/10
TBA	4	0.056	1 x 16	45	0.345	40	82	1.4	4.180	5.226	10/10/10

Measurements and Electrical Data

#14 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches									No.xAWG
606806 [◇]	3	0.070	1 x 14	45	0.350	51	93	1.4	2.630	3.288	14/15/15
606814 [◇]	4	0.070	1 x 14	45	0.380	64	113	1.5	2.630	3.288	14/15/15

All dimensions are nominal and subject to normal manufacturing tolerance.

* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and assuming ground is also carrying current.

◇ Standard stock item



Measurements and Electrical Data

#12 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
606723 [◇]	3	0.087	1 x 12	45	0.392	81	131	1.6	1.660	2.075	16/20/20
606798 [◇]	4	0.087	1 x 12	45	0.428	102	160	1.7	1.660	2.075	16/20/20

Measurements and Electrical Data

#10 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
605543 [◇]	3	0.111	1 x 10	45	0.473	130	199	1.9	1.040	1.300	24/28/30
606863 [◇]	4	0.111	1 x 10	45	0.519	162	244	2.1	1.040	1.300	24/28/30

All dimensions are nominal and subject to normal manufacturing tolerance.

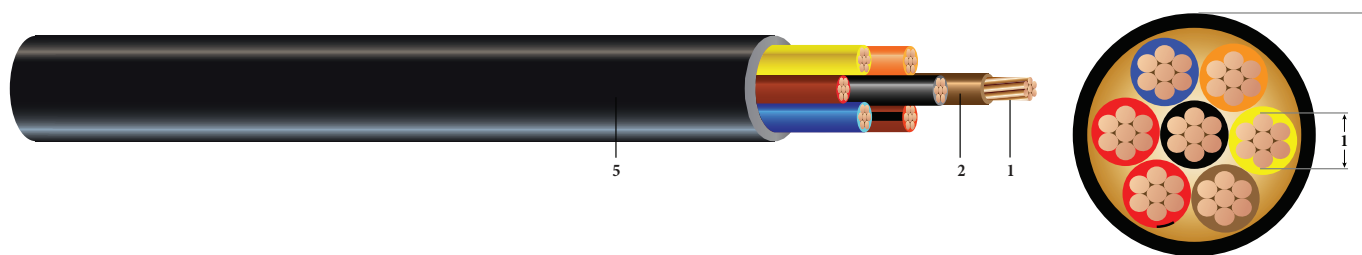
* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and assuming ground is also carrying current.

◇ Standard stock item



CU 600V PVC THHN PVC Control Cable Type TC-ER

Type TC-ER Control Cable 600Volt Copper Conductors, Polyvinyl Chloride (PVC) with nylon layer Insulation THHN Polyvinyl Chloride (PVC) Jacket, Control Cable Conductor Identification Method 1 Table 2



Images not to scale. See Table for Dimensions

CONSTRUCTION:

- Conductor:** 7 strands class B compressed bare copper per ASTM B3 and ASTM B8 for 14, 12, and 10 AWG cables. 26 strands class K bare copper per ASTM B3 and B174 for 16 AWG cables
- Insulation:** Polyvinyl Chloride (PVC) with nylon layer THHN, 19 Mils thick for 16, 14, 12 AWG cables and 24 Mils for 10 AWG cables, Type TFFH for 16 AWG cable and Type THHN or THWN for 14, 12, 10 AWG cables
- Filler:** Polypropylene filler on cables with 5 or less conductors
- Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
- Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER control cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 75°C in wet locations and 90°C in dry locations, 130°C for emergency overload, and 150°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10.

SPECIFICATIONS:

- ASTM B3 - Soft or annealed copper
- ASTM B8 - Concentric-lay-standard copper
- UL 83 - Thermoplastic Insulated wires and cables
- UL 1277 - Electrical Power and Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)
- ICEA S-73-532 - Standard for Control, Thermocouple Extension and Instrumentation Cables
- ICEA S-58-679 - Control Cable Conductor Identification Method 1 Table 2
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU THHN PVC/PVC 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire[®]

Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com

Measurements and Electrical Data

#16 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
604843 ◊	2	0.056	45	0.279	16	44	1.1	4.180	5.226	10/10/10
604850 ◊	3	0.056	45	0.294	24	56	1.2	4.180	5.226	10/10/10
604868 ◊	4	0.056	45	0.318	32	69	1.3	4.180	5.226	10/10/10
604876 ◊	5	0.056	45	0.345	40	82	1.4	4.180	5.226	10/10/10
TBA	6	0.056	45	0.373	48	97	1.5	4.180	5.226	10/10/10
604892 ◊	7	0.056	45	0.373	56	106	1.5	4.180	5.226	9/10/10
TBA	8	0.056	45	0.402	64	121	1.6	4.180	5.226	9/10/10
604918 ◊	9	0.056	45	0.430	72	135	1.7	4.180	5.226	9/10/10
TBA	10	0.056	45	0.467	81	152	1.9	4.180	5.226	6/7/9
604942 ◊	12	0.056	45	0.482	97	174	1.9	4.180	5.226	6/7/9
604975	15	0.056	60	0.564	121	229	2.3	4.180	5.226	6/7/9
605014 ◊	19	0.056	60	0.592	153	273	2.4	4.180	5.226	6/7/9
TBA	20	0.056	60	0.621	161	291	2.5	4.180	5.226	6/7/9
605071	25	0.056	60	0.686	201	356	2.7	4.180	5.226	6/7/8
605121	30	0.056	60	0.724	242	415	2.9	4.180	5.226	6/7/8
605196 ◊	37	0.056	60	0.780	298	498	3.1	4.180	5.226	5/6/7

Measurements and Electrical Data

#14 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
408484 ◊	2	0.070	45	0.305	26	58	1.2	2.630	3.288	15/15/15
408518 ◊	3	0.070	45	0.322	38	75	1.3	2.630	3.288	15/15/15
408542 ◊	4	0.070	45	0.350	51	93	1.4	2.630	3.288	14/15/15
408575 ◊	5	0.070	45	0.380	64	113	1.5	2.630	3.288	14/15/15
608836	6	0.070	45	0.413	77	133	1.7	2.630	3.288	14/15/15
408633 ◊	7	0.070	45	0.413	90	147	1.7	2.630	3.288	12/15/15
608703	8	0.070	45	0.446	102	168	1.8	2.630	3.288	12/15/15
408740 ◊	9	0.070	45	0.478	115	189	1.9	2.630	3.288	12/15/15
605477	10	0.070	45	0.520	128	212	2.1	2.630	3.288	9/11/12
408807 ◊	12	0.070	60	0.568	154	260	2.3	2.630	3.288	9/11/12
412874	15	0.070	60	0.627	192	318	2.5	2.630	3.288	9/11/12
412908 ◊	19	0.070	60	0.658	243	383	2.6	2.630	3.288	9/11/12
608729	20	0.070	60	0.691	256	408	2.8	2.630	3.288	9/11/12
552133 ◊	25	0.070	60	0.765	320	502	3.1	2.630	3.288	8/9/11
557553	30	0.070	60	0.810	384	587	3.2	2.630	3.288	8/9/11
552190 ◊	37	0.070	80	0.913	474	741	3.7	2.630	3.288	7/8/10

All dimensions are nominal and subject to normal manufacturing tolerance.

* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

◊ Standard stock item



Measurements and Electrical Data

#12 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
408468 ◊	2	0.087	45	0.340	41	79	1.4	1.660	2.075	20/20/20
408526 ◊	3	0.087	45	0.360	61	104	1.4	1.660	2.075	20/20/20
408559 ◊	4	0.087	45	0.392	81	131	1.6	1.660	2.075	16/20/20
408583 ◊	5	0.087	45	0.428	102	160	1.7	1.660	2.075	16/20/20
608737	6	0.087	45	0.466	122	189	1.9	1.660	2.075	16/20/20
408641 ◊	7	0.087	45	0.466	143	211	1.9	1.660	2.075	14/17/20
608745	8	0.087	45	0.504	163	241	2.0	1.660	2.075	14/17/20
408757 ◊	9	0.087	60	0.572	183	287	2.3	1.660	2.075	14/17/20
608752	10	0.087	60	0.621	204	322	2.5	1.660	2.075	10/12/15
408815 ◊	12	0.087	60	0.641	244	371	2.6	1.660	2.075	10/12/15
412882	15	0.087	60	0.710	305	457	2.8	1.660	2.075	10/12/15
412916	19	0.087	60	0.746	387	555	3.0	1.660	2.075	10/12/15
TBA	20	0.087	60	0.785	407	590	3.1	1.660	2.075	10/12/15
552166	25	0.087	80	0.911	509	761	3.6	1.660	2.075	9/11/13
609180	30	0.087	80	0.963	611	891	3.9	1.660	2.075	9/11/13
552224	37	0.087	80	1.037	753	1075	5.2	1.660	2.075	8/10/12

Measurements and Electrical Data

#10 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
408492 ◊	2	0.111	45	0.407	65	117	1.6	1.040	1.300	30/30/30
408534 ◊	3	0.111	45	0.433	97	156	1.7	1.040	1.300	30/30/30
408567 ◊	4	0.111	45	0.473	130	199	1.9	1.040	1.300	24/28/30
408591 ◊	5	0.111	45	0.519	162	244	2.1	1.040	1.300	24/28/30
608778	6	0.111	60	0.596	194	306	2.4	1.040	1.300	24/28/30
408658 ◊	7	0.111	60	0.596	227	340	2.4	1.040	1.300	21/24/28
608786	8	0.111	60	0.645	259	389	2.6	1.040	1.300	21/24/28
408765 ◊	9	0.111	60	0.693	291	438	2.8	1.040	1.300	21/24/28
608794	10	0.111	60	0.755	324	492	3.0	1.040	1.300	15/17/20
408823 ◊	12	0.111	60	0.780	389	570	3.1	1.040	1.300	15/17/20
601658	15	0.111	80	0.908	486	737	3.6	1.040	1.300	15/17/20
601666	19	0.111	80	0.954	615	894	3.8	1.040	1.300	15/17/20
608802	20	0.111	80	1.003	648	950	5.0	1.040	1.300	15/17/20
608810	25	0.111	80	1.112	810	1173	5.6	1.040	1.300	13/15/18
608828	30	0.111	80	1.178	971	1377	5.9	1.040	1.300	13/15/18
TBA	37	0.111	80	1.271	1198	1667	6.4	1.040	1.300	12/14/16

All dimensions are nominal and subject to normal manufacturing tolerance.

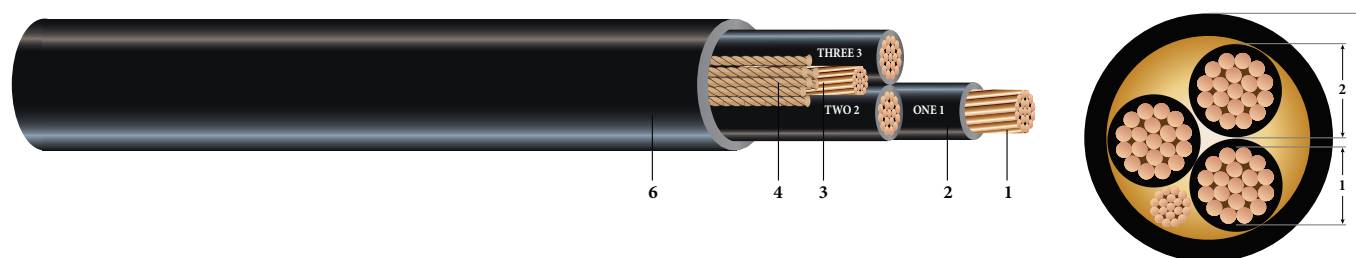
* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

◊ Standard stock item



3/C CU 600V PVC THHN PVC Power Cable Type TC-ER

Type TC-ER Power Cable 600Volt Three Conductor Copper, Polyvinyl Chloride (PVC) with nylon layer insulation THHN Polyvinyl Chloride (PVC) Jacket with 1 Bare CU Ground



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Insulation:** Polyvinyl Chloride (PVC) with nylon layer Type THHN/THWN
- Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (cable size 8 & 6 has insulated green ground)
- Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
- Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
- Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 75°C in wet locations and 90°C in dry locations, 130°C for emergency overload, and 150°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper
- ASTM B8 Concentric-lay-standard copper
- UL 83 Thermoplastic Insulated wires And cables
- UL 1277 Electrical Power And Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr) And ICEA T-29-520 - (210,000 Btu/hr)
- ICEA S-58-679 - Control Cable Conductor Identification Method 4
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU THHN PVC/PVC 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



Southwire[®]

Table 1 – Weights & Measurements

Stock Code	Cond. Size	Dia Over Cond. (1)	Insul. Thickness	Dia Over Insul. (2)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight
	AWG	inches	inches	inches	No. x AWG	mils	inches	lbs./MFT	lbs./MFT
443390 [◇]	8	0.139	35	0.209	1 x 10	45	0.542	187	283
443408 [◇]	6	0.174	35	0.244	1 x 8	60	0.648	297	436
443416 [◇]	4	0.221	46	0.313	1 x 8	60	0.795	442	626
443424 [◇]	2	0.277	46	0.369	1 x 6	80	0.958	703	964
443432 [◇]	1	0.321	57	0.435	1 x 6	80	1.100	865	1192
443440 [◇]	1/0	0.360	57	0.474	1 x 6	80	1.184	1069	1432
443457 [◇]	2/0	0.404	57	0.518	1 x 6	80	1.279	1327	1732
443465 [◇]	3/0	0.454	57	0.568	1 x 4	80	1.387	1700	2156
443473 [◇]	4/0	0.510	57	0.624	1 x 4	80	1.508	2110	2624
443481 [◇]	250	0.558	68	0.694	1 x 4	80	1.659	2469	3076
443507 [◇]	350	0.661	68	0.797	1 x 3	110	1.942	3440	4272
443523 [◇]	500	0.789	68	0.925	1 x 2	110	2.218	4885	5888
604777	600	0.866	79	1.024	1 x 2	110	2.432	5822	6994
602094 [◇]	750	0.968	79	1.126	1 x 1	110	2.652	7278	8602

All dimensions are nominal and subject to normal manufacturing tolerances
[◇] Standard stock item

Table 2 – Electrical and Engineering Data

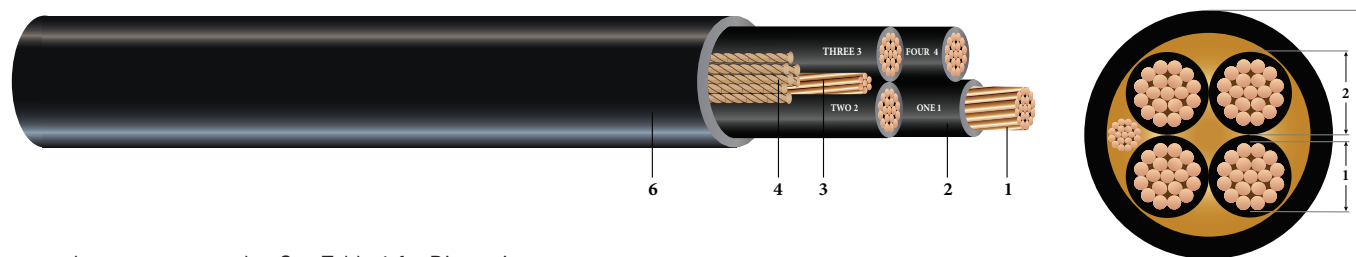
Stock Code	Cond. Size	Min. Bending Radius	Max. Pull Tension	Resistance		Reactance X _L	Allowable Ampacities [†]		
				DC @ 25°C	AC @ 90°C		60 °C	75 °C	90 °C
				AWG	Inches	lbs.	Ω/MFT	Ω/MFT	Ω/MFT
443390 [◇]	8	2.2	396	0.652	0.815	0.030	40	50	55
443408 [◇]	6	2.6	630	0.411	0.514	0.028	55	65	75
443416 [◇]	4	3.2	1002	0.258	0.323	0.029	70	85	95
443424 [◇]	2	3.8	1593	0.162	0.203	0.028	95	115	130
443432 [◇]	1	5.5	2009	0.129	0.162	0.028	110	130	145
443440 [◇]	1/0	5.9	2534	0.102	0.128	0.027	125	150	170
443457 [◇]	2/0	6.4	3194	0.081	0.102	0.027	145	175	195
443465 [◇]	3/0	6.9	4027	0.064	0.081	0.026	165	200	225
443473 [◇]	4/0	7.5	5078	0.051	0.064	0.026	195	230	260
443481 [◇]	250	8.3	6000	0.043	0.055	0.026	215	255	290
443507 [◇]	350	9.7	8400	0.031	0.040	0.026	260	310	350
443523 [◇]	500	13.3	12000	0.022	0.029	0.025	320	380	430
604777	600	14.6	14400	0.018	0.025	0.025	350	420	475
602094 [◇]	750	15.9	18000	0.014	0.020	0.025	400	475	535

[†] Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)



4/C CU 600V PVC THHN PVC Jacket Power Cable Type TC-ER

Type TC-ER Power Cable 600Volt Four Conductor Copper, Polyvinyl Chloride (PVC) with nylon layer insulation THHN Polyvinyl Chloride (PVC) Jacket with 1 Bare CU Ground



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Insulation:** Polyvinyl Chloride (PVC) with nylon layer Type THHN/THWN
- Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (cable size 8 & 6 has insulated green ground)
- Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
- Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
- Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 75°C in wet locations and 90°C in dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper
- ASTM B8 Concentric-lay-standard copper
- UL 83 Thermoplastic Insulated wires And cables
- UL 1277 Electrical Power And Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr) And ICEA T-29-520 - (210,000 Btu/hr)
- ICEA S-58-679 - Control Cable Conductor Identification Method 4
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU THHN PVC/PVC 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



Southwire[®]

Table 1 – Weights & Measurements

Stock Code	Cond. Size	Dia Over Cond. (1)	Insul. Thickness	Dia Over Insul. (2)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight
	AWG	inches	inches	inches	No. x AWG	mils	inches	lbs./MFT	lbs./MFT
557694 [◇]	8	0.139	35	0.209	1 x 10	60	0.625	238	369
553438 [◇]	6	0.174	35	0.244	1 x 8	60	0.710	379	541
601989 [◇]	4	0.221	46	0.313	1 x 8	80	0.914	572	824
601997 [◇]	2	0.277	46	0.369	1 x 6	80	1.052	910	1219
602003	1	0.321	57	0.435	1 x 6	80	1.210	1126	1515
554568 [◇]	1/0	0.360	57	0.474	1 x 6	80	1.304	1398	1831
556720 [◇]	2/0	0.404	57	0.518	1 x 6	80	1.410	1742	2225
602029 [◇]	3/0	0.454	57	0.568	1 x 4	80	1.531	2223	2766
444745 [◇]	4/0	0.510	57	0.624	1 x 4	80	1.666	2770	3382
602045 [◇]	250	0.558	68	0.694	1 x 4	110	1.895	3249	4077
602060 [◇]	350	0.661	68	0.797	1 x 3	110	2.144	4531	5515
552513 [◇]	500	0.789	68	0.925	1 x 2	110	2.453	6445	7628
604819	600	0.866	79	1.024	1 x 2	110	2.692	7693	9078
604827	750	0.968	79	1.126	1 x 1	140	2.998	9618	11342

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Standard stock item

Table 2 – Electrical and Engineering Data

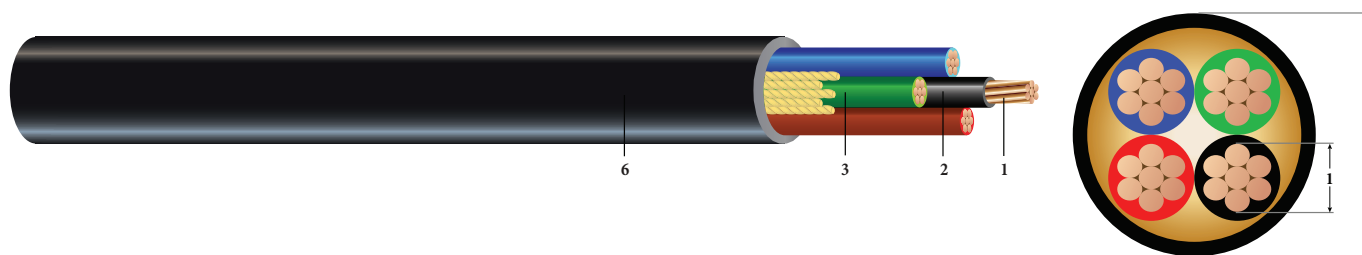
Stock Code	Cond. Size AWG	Min. Bending Radius Inches	Max. Pull Tension lbs.	Resistance		Reactance X _L @ 60Hz Ω/MFT	Ø Short Circuit Current 6 Cycles Amps	Allowable Ampacities [†]		
				DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT			60 °C Amps	75 °C Amps	90 °C Amps
				557694 [◇]	8			2.5	528	0.652
553438 [◇]	6	2.8	840	0.411	0.514	0.032	5966	44	52	60
601989 [◇]	4	3.7	1336	0.258	0.323	0.032	9491	56	68	76
601997 [◇]	2	5.3	2124	0.162	0.203	0.031	15089	76	92	104
602003	1	6.1	2678	0.129	0.161	0.031	19029	88	104	116
554568 [◇]	1/0	6.5	3379	0.102	0.128	0.031	24011	100	120	136
556720 [◇]	2/0	7.1	4259	0.081	0.101	0.030	30264	116	140	156
602029 [◇]	3/0	7.7	5370	0.064	0.080	0.029	38154	132	160	180
444745 [◇]	4/0	8.3	6771	0.051	0.064	0.029	48114	156	184	208
602045 [◇]	250	9.5	8000	0.043	0.054	0.029	56845	172	204	232
602060 [◇]	350	12.9	11200	0.031	0.039	0.029	79583	208	248	280
552513 [◇]	500	14.7	16000	0.022	0.027	0.028	113690	256	304	344
604819	600	16.2	19200	0.018	0.023	0.028	136428	280	336	380
604827	750	18.0	24000	0.014	0.019	0.028	170535	320	380	428

[†] Ampacities are based on Table 310.15 (B)(16) of the NEC, 2017 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)



CU 600V XLPE XHHW-2 PVC Control Cable Type TC-ER

Type TC-ER Control Cable 600Volt Copper Conductors, Cross Linked Polyethylene (XLPE) Insulation XHHW-2 Polyvinyl Chloride (PVC) Jacket with 1 Insulated Green CU Ground, Control Cable Conductor Identification Method 1 Table 2



Images not to scale. See Table for Dimensions

CONSTRUCTION:

1. **Conductor:** 7 strands class B compressed bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) XHHW-2, 30 Mils thick for all cable sizes
3. **Grounding Conductor:** Class B compressed stranded copper with green insulation
4. **Filler:** Polypropylene filler on cables with 5 or less conductors
5. **Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
6. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER control cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10.

SPECIFICATIONS:

- ASTM B3 - Soft or annealed copper
- ASTM B8 - Concentric-lay-standard copper
- UL 44 - Thermoset Insulated wires and cables
- UL 1277 - Electrical Power and Control Cable, VW-1
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)
- ICEA S-73-532 - Standard for Control, Thermocouple Extension and Instrumentation Cables
- ICEA S-58-679 - Control Cable Conductor Identification Method 1 Table 2
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU XHHW-2 XLPE/PVC 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 VW-1 YEAR (NEC) [SEQUENTIAL FEET MARKS]



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Measurements and Electrical Data

#16 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
TBA	3	0.056	1 x 16	45	0.371	32	83	1.5	4.180	5.226	10/10/10
TBA	4	0.056	1 x 16	45	0.404	40	100	1.6	4.180	5.226	10/10/10

Measurements and Electrical Data

#14 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
955831 [◇]	3	0.070	1 x 14	45	0.403	51	109	1.6	2.630	3.288	14/15/15
955823 [◇]	4	0.070	1 x 14	45	0.440	64	132	1.8	2.630	3.288	14/15/15

All dimensions are nominal and subject to normal manufacturing tolerance.

* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and assuming ground is also carrying current.

◇ Standard stock item



Measurements and Electrical Data

#12 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
955930 [◇]	3	0.087	1 x 12	45	0.445	81	148	1.8	1.660	2.075	16/20/20
955948 [◇]	4	0.087	1 x 12	45	0.487	102	181	1.9	1.660	2.075	16/20/20

Measurements and Electrical Data

#10 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
955955 [◇]	3	0.111	1 x 10	45	0.502	130	210	2.0	1.040	1.300	24/28/30
955963 [◇]	4	0.111	1 x 10	60	0.581	162	273	2.3	1.040	1.300	24/28/30

All dimensions are nominal and subject to normal manufacturing tolerance.

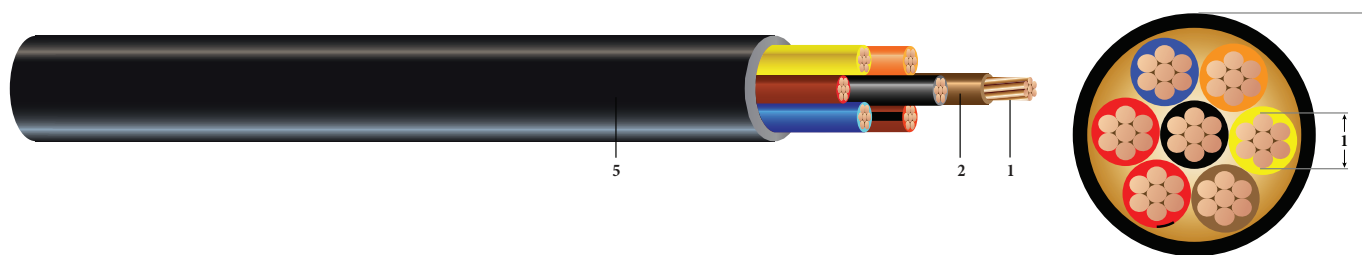
* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and assuming ground is also carrying current.

◇ Standard stock item



CU 600V XLPE XHHW-2 PVC Control Cable Type TC-ER

Type TC-ER Control Cable 600Volt Copper Conductors, Cross Linked Polyethylene (XLPE) Insulation XHHW-2 Polyvinyl Chloride (PVC) Jacket, Control Cable Conductor Identification Method 1 Table 2



Images not to scale. See Table for Dimensions

CONSTRUCTION:

1. **Conductor:** 7 strands class B compressed bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) XHHW-2, 30 Mils thick for all cable sizes
3. **Filler:** Polypropylene filler on cables with 5 or less conductors
4. **Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
5. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER control cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10.

SPECIFICATIONS:

- ASTM B3 - Soft or annealed copper
- ASTM B8 - Concentric-lay-strandard copper
- UL 44 - Thermoset Insulated wires and cables
- UL 1277 - Electrical Power and Control Cable, VW-1
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)
- ICEA S-73-532 - Standard for Control, Thermocouple Extension and Instrumentation Cables
- ICEA S-58-679 - Control Cable Conductor Identification Method 1 Table 2
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU XHHW-2 XLPE/PVC 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 VW-1 YEAR (NEC) [SEQUENTIAL FEET MARKS]



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



Southwire[®]

Measurements and Electrical Data

#16 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
TBA	2	0.056	45	0.323	16	53	1.3	4.180	5.226	10/10/10
TBA	3	0.056	45	0.341	24	67	1.4	4.180	5.226	10/10/10
TBA	4	0.056	45	0.371	32	83	1.5	4.180	5.226	10/10/10
TBA	5	0.056	45	0.404	40	100	1.6	4.180	5.226	10/10/10
TBA	6	0.056	45	0.439	48	117	1.8	4.180	5.226	10/10/10
TBA	7	0.056	45	0.439	56	128	1.8	4.180	5.226	9/10/10
TBA	8	0.056	45	0.475	64	146	1.9	4.180	5.226	9/10/10
TBA	9	0.056	45	0.510	72	164	2.0	4.180	5.226	9/10/10
TBA	10	0.056	60	0.585	81	201	2.3	4.180	5.226	6/7/9
TBA	12	0.056	60	0.604	97	227	2.4	4.180	5.226	6/7/9
TBA	15	0.056	60	0.668	121	278	2.7	4.180	5.226	6/7/9
TBA	19	0.056	60	0.702	153	330	2.8	4.180	5.226	6/7/9
TBA	20	0.056	60	0.738	161	352	3.0	4.180	5.226	6/7/9
TBA	25	0.056	60	0.818	201	432	3.3	4.180	5.226	6/7/8
TBA	30	0.056	80	0.905	242	535	3.6	4.180	5.226	6/7/8
TBA	37	0.056	80	0.974	298	638	3.9	4.180	5.226	5/6/7

Measurements and Electrical Data

#14 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
952459 ◊	2	0.070	45	0.349	26	68	1.4	2.630	3.288	15/15/15
952465 ◊	3	0.070	45	0.370	38	87	1.5	2.630	3.288	15/15/15
952473 ◊	4	0.070	45	0.403	51	109	1.6	2.630	3.288	14/15/15
952481 ◊	5	0.070	45	0.440	64	132	1.8	2.630	3.288	14/15/15
952499	6	0.070	45	0.479	77	155	1.9	2.630	3.288	14/15/15
952440 ◊	7	0.070	45	0.479	90	171	1.9	2.630	3.288	12/15/15
952507	8	0.070	45	0.519	102	195	2.1	2.630	3.288	12/15/15
952572 ◊	9	0.070	60	0.588	115	236	2.4	2.630	3.288	12/15/15
952580	10	0.070	60	0.638	128	266	2.6	2.630	3.288	9/11/12
952598 ◊	12	0.070	60	0.659	154	303	2.6	2.630	3.288	9/11/12
952606 ◊	15	0.070	60	0.730	192	371	2.9	2.630	3.288	9/11/12
952614 ◊	19	0.070	60	0.768	243	446	3.1	2.630	3.288	9/11/12
952622	20	0.070	60	0.808	256	475	3.2	2.630	3.288	9/11/12
952630 ◊	25	0.070	80	0.937	320	619	3.7	2.630	3.288	8/9/11
952648	30	0.070	80	0.991	384	719	4.0	2.630	3.288	8/9/11
952655 ◊	37	0.070	80	1.067	474	862	5.3	2.630	3.288	7/8/10

All dimensions are nominal and subject to normal manufacturing tolerance.

* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

◊ Standard stock item



Measurements and Electrical Data

#12 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
953042 [◇]	2	0.087	45	0.384	41	90	1.5	1.660	2.075	20/20/20
953059 [◇]	3	0.087	45	0.408	61	118	1.6	1.660	2.075	20/20/20
953067 [◇]	4	0.087	45	0.445	81	148	1.8	1.660	2.075	16/20/20
953075 [◇]	5	0.087	45	0.487	102	181	1.9	1.660	2.075	16/20/20
953083	6	0.087	45	0.532	122	214	2.1	1.660	2.075	16/20/20
953091 [◇]	7	0.087	45	0.532	143	237	2.1	1.660	2.075	14/17/20
953109	8	0.087	60	0.607	163	288	2.4	1.660	2.075	14/17/20
953117 [◇]	9	0.087	60	0.651	183	324	2.6	1.660	2.075	14/17/20
953125	10	0.087	60	0.709	204	365	2.8	1.660	2.075	10/12/15
953133 [◇]	12	0.087	60	0.732	244	419	2.9	1.660	2.075	10/12/15
953141	15	0.087	60	0.813	305	516	3.3	1.660	2.075	10/12/15
953158 [◇]	19	0.087	80	0.896	387	657	3.6	1.660	2.075	10/12/15
953166	20	0.087	80	0.942	407	699	3.8	1.660	2.075	10/12/15
953174 [◇]	25	0.087	80	1.043	509	860	5.2	1.660	2.075	9/11/13
953182	30	0.087	80	1.104	611	1005	5.5	1.660	2.075	9/11/13
953190 [◇]	37	0.087	80	1.191	753	1211	6.0	1.660	2.075	8/10/12

Measurements and Electrical Data

#10 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
952861 [◇]	2	0.111	45	0.431	65	124	1.7	1.040	1.300	30/30/30
952879 [◇]	3	0.111	45	0.459	97	165	1.8	1.040	1.300	30/30/30
952895 [◇]	4	0.111	45	0.502	130	210	2.0	1.040	1.300	24/28/30
952887 [◇]	5	0.111	60	0.581	162	273	2.3	1.040	1.300	24/28/30
952903	6	0.111	60	0.632	194	323	2.5	1.040	1.300	24/28/30
952911 [◇]	7	0.111	60	0.632	227	358	2.5	1.040	1.300	21/24/28
952929	8	0.111	60	0.685	259	410	2.7	1.040	1.300	21/24/28
952937 [◇]	9	0.111	60	0.736	291	461	2.9	1.040	1.300	21/24/28
952945	10	0.111	60	0.803	324	519	3.2	1.040	1.300	15/17/20
952952 [◇]	12	0.111	60	0.830	389	600	3.3	1.040	1.300	15/17/20
952960	15	0.111	80	0.964	486	777	3.9	1.040	1.300	15/17/20
952978	19	0.111	80	1.014	615	941	5.1	1.040	1.300	15/17/20
952986	20	0.111	80	1.067	648	1001	5.3	1.040	1.300	15/17/20
952994	25	0.111	80	1.184	810	1236	5.9	1.040	1.300	13/15/18
953000	30	0.111	80	1.254	971	1450	6.3	1.040	1.300	13/15/18
953018	37	0.111	80	1.355	1198	1755	6.8	1.040	1.300	12/14/16

All dimensions are nominal and subject to normal manufacturing tolerance.

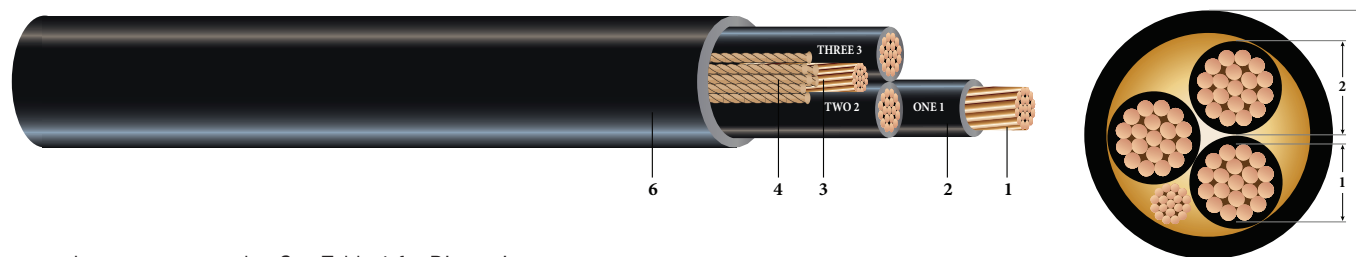
* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

◇ Standard stock item



3/C CU 600 or 1000 V XLPE XHHW-2 PVC Power Cable Type TC-ER

Type TC-ER Power Cable 600 or 1000 Volt Three Conductor Copper, Cross Linked Polyethylene (XLPE) insulation XHHW-2 Polyvinyl Chloride (PVC) Jacket with 1 Bare CU Ground. Silicone Free



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2
- Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (cable size 8 & 6 has insulated green ground)
- Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
- Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
- Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 or 1000 Volt Type TC-ER power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10. Silicone free cable

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper
- ASTM B8 Concentric-lay-standard copper
- UL 44 Thermoset Insulated wires And cables
- UL 1277 Electrical Power And Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr) And ICEA T-29-520 - (210,000 Btu/hr)
- ICEA S-58-679 - Control Cable Conductor Identification Method 4
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE SIMpull{R} {UL} XXX AWG CU 3 CDRS TYPE TC-ER XHHW-2 CDRS GW 1 X XX AWG 90{D}C JACKET SUN-LIGHT RESISTANT DIRECT BURIAL 600V or 1000V {YYYY} PAT www.patentSW.com {SEQUENTIAL FOOTAGE MARKS} SEQ FEET



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SPEC 45252_PSS DIVISION DATE: 08/11/2019 Rev:2.2.18C

Table 1 – Weights & Measurements

Stock Code	Cond. Size	Dia Over Cond. (1)	Insul. Thickness	Dia Over Insul. (2)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight
	AWG	inches	inches	inches	No. x AWG	mils	inches	lbs./MFT	lbs./MFT
480590 [◇]	8	0.139	45	0.229	1 x 10	60	0.615	187	318
480608 [◇]	6	0.174	45	0.264	1 x 8	60	0.691	297	457
480616 [◇]	4	0.221	45	0.311	1 x 8	60	0.791	442	623
480624 [◇]	2	0.277	45	0.367	1 x 6	80	0.953	703	961
480632 [◇]	1	0.321	55	0.431	1 x 6	80	1.091	865	1186
480640 [◇]	1/0	0.360	55	0.470	1 x 6	80	1.175	1069	1425
480657 [◇]	2/0	0.404	55	0.514	1 x 6	80	1.270	1327	1725
480665 [◇]	3/0	0.454	55	0.564	1 x 4	80	1.378	1700	2148
480673 [◇]	4/0	0.510	55	0.620	1 x 4	80	1.499	2110	2615
480681 [◇]	250	0.558	65	0.688	1 x 4	80	1.646	2469	3061
480707 [◇]	350	0.661	65	0.791	1 x 3	110	1.929	3440	4254
480723 [◇]	500	0.789	65	0.919	1 x 2	110	2.205	4885	5867
583697	500	0.789	65	0.919	1 x 2/0	110	2.262	4885	6065
593173 [◇]	600	0.866	80	1.026	1 x 3/0	110	2.436	6131	7303
890388 [◇]	600	0.866	80	1.026	1 x 2	110	2.436	5822	7002
554410	750	0.968	80	1.128	1 x 1	110	2.656	7278	8610

All dimensions are nominal and subject to normal manufacturing tolerances

[◇] Standard stock item

Table 2 – Electrical and Engineering Data

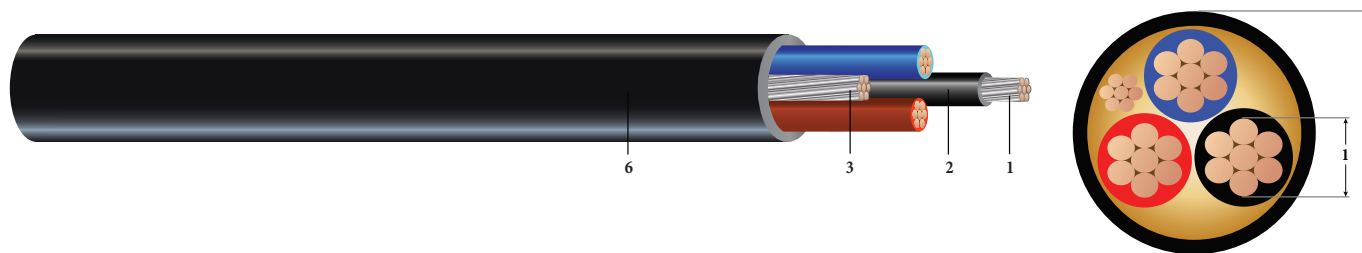
Stock Code	Cond. Size AWG	Min. Bending Radius Inches	Max. Pull Tension lbs.	Resistance		Reactance X _L @ 60Hz Ω/MFT	Ø Short Circuit Current 6 Cycles Amps	Allowable Ampacities [†]		
				DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT			60 °C Amps	75 °C Amps	90 °C Amps
480590 [◇]	8	2.5	396	0.652	0.815	0.033	3754	40	50	55
480608 [◇]	6	2.8	630	0.411	0.514	0.031	5966	55	65	75
480616 [◇]	4	3.2	1002	0.258	0.323	0.030	9491	70	85	95
480624 [◇]	2	3.8	1593	0.162	0.203	0.028	15089	95	115	130
480632 [◇]	1	5.5	2009	0.129	0.162	0.028	19029	110	130	145
480640 [◇]	1/0	5.9	2534	0.102	0.128	0.028	24011	125	150	170
480657 [◇]	2/0	6.4	3194	0.081	0.102	0.027	30264	145	175	195
480665 [◇]	3/0	6.9	4027	0.064	0.081	0.027	38154	165	200	225
480673 [◇]	4/0	7.5	5078	0.051	0.064	0.026	48114	195	230	260
480681 [◇]	250	8.2	6000	0.043	0.055	0.027	56845	215	255	290
480707 [◇]	350	9.6	8400	0.031	0.040	0.026	79583	260	310	350
480723 [◇]	500	13.2	12000	0.022	0.029	0.025	113690	320	380	430
583697	500	13.5	12000	0.022	0.029	0.025	113690	320	380	430
593173 [◇]	600	13.6	14400	0.018	0.024	0.026	136428	350	420	475
890388 [◇]	600	14.6	14400	0.018	0.024	0.026	136428	350	420	475
554410	750	15.9	18000	0.014	0.020	0.025	170535	400	475	535

[†] Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)



CU 600V EPR XHHW-2 CPE Control Cable Type TC-ER

Type TC-ER Control Cable 600Volt Copper Conductors, Ethylene Propylene Rubber (EPR) Insulation XHHW-2 Chlorinated Polyethylene (CPE) Jacket with 1 Tinned CU Ground, Control Cable Conductor Identification Method 1 Table 2



Images not to scale. See Table for Dimensions

CONSTRUCTION:

1. **Conductor:** 7 strands class B compressed tinned copper per ASTM B33 and ASTM B8
2. **Insulation:** Ethylene Propylene Rubber (EPR) XHHW-2, 30 Mils thick for all cable sizes
3. **Grounding Conductor:** Class B compressed stranded tinned copper per ASTM B33 and ASTM B8
4. **Filler:** Polypropylene filler on cables with 5 or less conductors
5. **Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
6. **Overall Jacket:** Chlorinated Polyethylene (CPE) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER control cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10. Sunlight resistant.

SPECIFICATIONS:

- ASTM B33 - Tinned Soft or annealed copper
- ASTM B8 - Concentric-lay-standard copper
- UL 44 - Thermoset Insulated wires and cables
- UL 1277 - Electrical Power and Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr)
- ICEA S-73-532 - Standard for Control, Thermocouple Extension and Instrumentation Cables
- ICEA S-58-679 - Control Cable Conductor Identification Method 1 Table 2
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU XHHW-2 EPR/CPE 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NEC) [SEQUENTIAL FEET MARKS]



Southwire®

Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com

Measurements and Electrical Data

#16 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
TBA	3	0.056	1 x 16	45	0.341	32	76	1.4	4.180	5.226	10/10/10
TBA	4	0.056	1 x 16	45	0.371	40	92	1.5	4.180	5.226	10/10/10

Measurements and Electrical Data

#14 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
591946	3	0.070	1 x 14	45	0.370	51	101	1.5	2.630	3.288	15/15/15
TBA	4	0.070	1 x 14	45	0.403	64	122	1.6	2.630	3.288	14/15/15

All dimensions are nominal and subject to normal manufacturing tolerance.

* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and assuming ground is not carrying current.



Measurements and Electrical Data

#12 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
591961 [◇]	3	0.087	1 x 12	45	0.408	81	139	1.6	1.660	2.075	20/20/20
TBA	4	0.087	1 x 12	45	0.445	102	169	1.8	1.660	2.075	16/20/20

Measurements and Electrical Data

#10 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches	No.xAWG	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
591975 [◇]	3	0.111	1 x 10	45	0.459	130	198	1.8	1.040	1.300	30/30/30
TBA	4	0.111	1 x 10	45	0.502	162	243	2.0	1.040	1.300	24/28/30

All dimensions are nominal and subject to normal manufacturing tolerance.

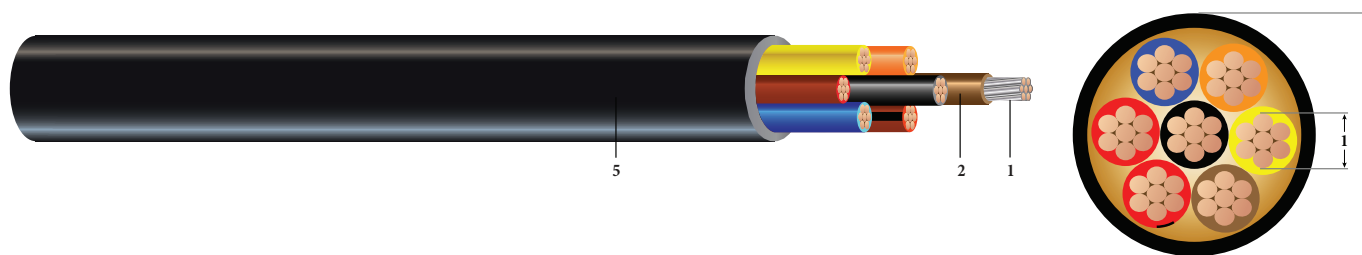
* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and assuming ground is not carrying current.

◇ Standard stock item



CU 600V EPR XHHW-2 CPE Control Cable Type TC-ER

Type TC-ER Control Cable 600Volt Copper Conductors, Ethylene Propylene Rubber (EPR) Insulation XHHW-2 Chlorinated Polyethylene (CPE) Jacket, Control Cable Conductor Identification Method 1 Table 2



Images not to scale. See Table for Dimensions

CONSTRUCTION:

1. **Conductor:** 7 strands class B compressed tinned copper per ASTM B33 and ASTM B8
2. **Insulation:** Ethylene Propylene Rubber (EPR) XHHW-2, 30 Mils thick for all cable sizes
3. **Filler:** Polypropylene filler on cables with 5 or less conductors
4. **Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
5. **Overall Jacket:** Chlorinated Polyethylene (CPE) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER control cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10. Sunlight resistant.

SPECIFICATIONS:

- ASTM B33 - Tinned Soft or annealed copper
- ASTM B8 - Concentric-lay-standard copper
- UL 44 - Thermoset Insulated wires and cables
- UL 1277 - Electrical Power and Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr)
- ICEA S-73-532 - Standard for Control, Thermocouple Extension and Instrumentation Cables
- ICEA S-58-679 - Control Cable Conductor Identification Method 1 Table 2
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU XHHW-2 EPR/CPE 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NEC) [SEQUENTIAL FEET MARKS]



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



Southwire[®]

Measurements and Electrical Data

#16 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
591931 ◊	2	0.056	45	0.323	16	55	1.3	4.180	5.226	10/10/10
591932	3	0.056	45	0.341	24	68	1.4	4.180	5.226	10/10/10
591933	4	0.056	45	0.371	32	84	1.5	4.180	5.226	10/10/10
591934	5	0.056	45	0.404	40	100	1.6	4.180	5.226	10/10/10
TBA	6	0.056	45	0.439	48	118	1.8	4.180	5.226	10/10/10
591935	7	0.056	45	0.439	56	128	1.8	4.180	5.226	9/10/10
TBA	8	0.056	45	0.475	64	146	1.9	4.180	5.226	9/10/10
591936	9	0.056	45	0.510	72	164	2.0	4.180	5.226	9/10/10
TBA	10	0.056	60	0.585	81	202	2.3	4.180	5.226	6/7/9
591937	12	0.056	60	0.604	97	228	2.4	4.180	5.226	6/7/9
591938	15	0.056	60	0.668	121	278	2.7	4.180	5.226	6/7/9
591939	19	0.056	60	0.702	153	329	2.8	4.180	5.226	6/7/9
TBA	20	0.056	60	0.738	161	351	3.0	4.180	5.226	6/7/9
TBA	25	0.056	60	0.818	201	430	3.3	4.180	5.226	6/7/8
TBA	30	0.056	80	0.905	242	534	3.6	4.180	5.226	6/7/8
TBA	37	0.056	80	0.974	298	635	3.9	4.180	5.226	5/6/7

Measurements and Electrical Data

#14 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
591944 ◊	2	0.070	45	0.349	26	69	1.4	2.630	3.288	15/15/15
591947 ◊	3	0.070	45	0.370	38	88	1.5	2.630	3.288	15/15/15
591948 ◊	4	0.070	45	0.403	51	109	1.6	2.630	3.288	14/15/15
591949 ◊	5	0.070	45	0.440	64	132	1.8	2.630	3.288	14/15/15
TBA	6	0.070	45	0.479	77	156	1.9	2.630	3.288	14/15/15
591950 ◊	7	0.070	45	0.479	90	171	1.9	2.630	3.288	12/15/15
TBA	8	0.070	45	0.519	102	195	2.1	2.630	3.288	12/15/15
591951 ◊	9	0.070	60	0.588	115	237	2.4	2.630	3.288	12/15/15
TBA	10	0.070	60	0.638	128	266	2.6	2.630	3.288	9/11/12
591952 ◊	12	0.070	60	0.659	154	303	2.6	2.630	3.288	9/11/12
591953 ◊	15	0.070	60	0.730	192	371	2.9	2.630	3.288	9/11/12
591954 ◊	19	0.070	60	0.768	243	444	3.1	2.630	3.288	9/11/12
TBA	20	0.070	60	0.808	256	473	3.2	2.630	3.288	9/11/12
591955	25	0.070	80	0.937	320	619	3.7	2.630	3.288	8/9/11
591956	30	0.070	80	0.991	384	718	4.0	2.630	3.288	8/9/11
591957	37	0.070	80	1.067	474	859	5.3	2.630	3.288	7/8/10

All dimensions are nominal and subject to normal manufacturing tolerance.

* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

◊ Standard stock item



Measurements and Electrical Data

#12 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
591959 [◇]	2	0.087	45	0.384	41	91	1.5	1.660	2.075	20/20/20
591960 [◇]	3	0.087	45	0.408	61	118	1.6	1.660	2.075	20/20/20
591962 [◇]	4	0.087	45	0.445	81	149	1.8	1.660	2.075	16/20/20
591963	5	0.087	45	0.487	102	181	1.9	1.660	2.075	16/20/20
TBA	6	0.087	45	0.532	122	214	2.1	1.660	2.075	16/20/20
591964 [◇]	7	0.087	45	0.532	143	237	2.1	1.660	2.075	14/17/20
TBA	8	0.087	60	0.607	163	289	2.4	1.660	2.075	14/17/20
591965 [◇]	9	0.087	60	0.651	183	325	2.6	1.660	2.075	14/17/20
TBA	10	0.087	60	0.709	204	366	2.8	1.660	2.075	10/12/15
591966 [◇]	12	0.087	60	0.732	244	419	2.9	1.660	2.075	10/12/15
591967	15	0.087	60	0.813	305	516	3.3	1.660	2.075	10/12/15
591968	19	0.087	80	0.896	387	657	3.6	1.660	2.075	10/12/15
TBA	20	0.087	80	0.942	407	699	3.8	1.660	2.075	10/12/15
591969	25	0.087	80	1.043	509	859	5.2	1.660	2.075	9/11/13
591970	30	0.087	80	1.104	611	1002	5.5	1.660	2.075	9/11/13
591971	37	0.087	80	1.191	753	1205	6.0	1.660	2.075	8/10/12

Measurements and Electrical Data

#10 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Jacket Thickness	Approx. OD (5)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities* 60/75/90°C
		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
591973 [◇]	2	0.111	45	0.431	65	125	1.7	1.040	1.300	30/30/30
591974 [◇]	3	0.111	45	0.459	97	166	1.8	1.040	1.300	30/30/30
591976 [◇]	4	0.111	45	0.502	130	210	2.0	1.040	1.300	24/28/30
591977 [◇]	5	0.111	60	0.581	162	274	2.3	1.040	1.300	24/28/30
TBA	6	0.111	60	0.632	194	324	2.5	1.040	1.300	24/28/30
591978	7	0.111	60	0.632	227	359	2.5	1.040	1.300	21/24/28
TBA	8	0.111	60	0.685	259	410	2.7	1.040	1.300	21/24/28
591979	9	0.111	60	0.736	291	462	2.9	1.040	1.300	21/24/28
TBA	10	0.111	60	0.803	324	520	3.2	1.040	1.300	15/17/20
591980	12	0.111	60	0.830	389	600	3.3	1.040	1.300	15/17/20
TBA	15	0.111	80	0.964	486	778	3.9	1.040	1.300	15/17/20
TBA	19	0.111	80	1.014	615	940	5.1	1.040	1.300	15/17/20
TBA	20	0.111	80	1.067	648	1000	5.3	1.040	1.300	15/17/20
TBA	25	0.111	80	1.184	810	1233	5.9	1.040	1.300	13/15/18
TBA	30	0.111	80	1.254	971	1446	6.3	1.040	1.300	13/15/18
TBA	37	0.111	80	1.355	1198	1747	6.8	1.040	1.300	12/14/16

All dimensions are nominal and subject to normal manufacturing tolerance.

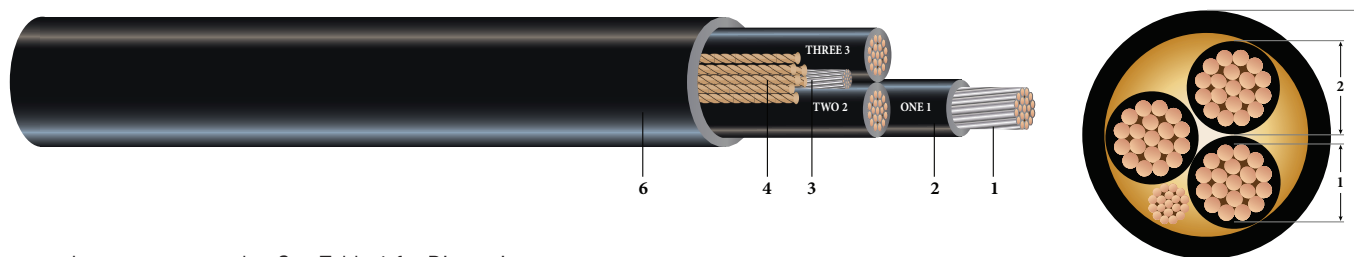
* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

◇ Standard stock item



3/C CU 600V EPR XHHW-2 CPE Power Cable Type TC-ER

Type TC-ER Power Cable 600Volt Three Conductor Copper, Ethylene Propylene Rubber (EPR) insulation XHHW-2 Chlorinated Polyethylene (CPE) Jacket with 1 Tinned CU Ground



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded tinned copper per ASTM B33 and ASTM B8
2. **Insulation:** Ethylene Propylene Rubber (EPR) Type XHHW-2
3. **Grounding Conductor:** Class B compressed stranded tinned copper per ASTM B33 and ASTM B8
4. **Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
5. **Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
6. **Overall Jacket:** Chlorinated Polyethylene (CPE) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10. Sun light resistant.

SPECIFICATIONS:

- ASTM B33 Tinned Soft or Annealed Copper
- ASTM B8 Concentric-lay-standard copper
- UL 44 Thermoset Insulated wires And cables
- UL 1277 Electrical Power And Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr)
- ICEA S-58-679 - Control Cable Conductor Identification Method 4
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU XHHW-2 EPR/CPE 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



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Table 1 – Weights & Measurements

Stock Code	Cond. Size	Dia Over Cond. (1)	Insul. Thickness	Dia Over Insul. (2)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight
	AWG	inches	inches	inches	No. x AWG	mils	inches	lbs./MFT	lbs./MFT
591981 [◇]	8	0.139	45	0.229	1 x 10	60	0.615	187	319
591983 [◇]	6	0.174	45	0.264	1 x 8	60	0.691	297	458
591985 [◇]	4	0.221	45	0.311	1 x 8	60	0.791	442	624
591987 [◇]	2	0.277	45	0.367	1 x 6	80	0.953	703	965
591989 [◇]	1	0.321	55	0.431	1 x 6	80	1.091	865	1188
591991 [◇]	1/0	0.360	55	0.470	1 x 6	80	1.175	1069	1428
591993 [◇]	2/0	0.404	55	0.514	1 x 6	80	1.270	1327	1728
591995	3/0	0.454	55	0.564	1 x 4	80	1.378	1700	2150
591996 [◇]	4/0	0.510	55	0.620	1 x 4	80	1.499	2110	2617
591998 [◇]	250	0.558	65	0.688	1 x 4	80	1.646	2469	3063
592000 [◇]	350	0.661	65	0.791	1 x 3	110	1.929	3440	4263
592002	500	0.789	65	0.919	1 x 2	110	2.205	4885	5877
TBA	750	0.968	80	1.128	1 x 1	110	2.656	7278	8617

All dimensions are nominal and subject to normal manufacturing tolerances

[◇] Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Min. Bending Radius Inches	Max. Pull Tension lbs.	Resistance		Reactance X _L @ 60Hz Ω/MFT	Ø Short Circuit Current 6 Cycles Amps	Allowable Ampacities [†]		
				DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT			60 °C Amps	75 °C Amps	90 °C Amps
591981 [◇]	8	2.5	396	0.652	0.815	0.033	3754	40	50	55
591983 [◇]	6	2.8	630	0.411	0.514	0.031	5966	55	65	75
591985 [◇]	4	3.2	1002	0.258	0.323	0.030	9491	70	85	95
591987 [◇]	2	3.8	1593	0.162	0.203	0.028	15089	95	115	130
591989 [◇]	1	5.5	2009	0.129	0.162	0.028	19029	110	130	145
591991 [◇]	1/0	5.9	2534	0.102	0.128	0.028	24011	125	150	170
591993 [◇]	2/0	6.4	3194	0.081	0.102	0.027	30264	145	175	195
591995	3/0	6.9	4027	0.064	0.081	0.027	38154	165	200	225
591996 [◇]	4/0	7.5	5078	0.051	0.064	0.026	48114	195	230	260
591998 [◇]	250	8.2	6000	0.043	0.055	0.027	56845	215	255	290
592000 [◇]	350	9.6	8400	0.031	0.040	0.026	79583	260	310	350
592002	500	13.2	12000	0.022	0.029	0.025	113690	320	380	430
TBA	750	15.9	18000	0.014	0.020	0.025	170535	400	475	535

[†] Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)



MACHINE TRAY CONTROL CABLE CU 600/1000V PVC THHN TPE JACKET

Type TC-ER Machine Tray Control Cable 600/1000 Volt Copper Conductors, Polyvinyl Chloride (PVC) with nylon layer Insulation Thermoplastic Elastomer Jacket, 90°C Dry 75°C Wet -40°C Cold Impact Identification Method 4



CONSTRUCTION:

- 1. Conductors:** Class K, Flexible stranded bare annealed copper per ASTM B3, B172, and B174
- 2. Insulation:** Polyvinyl Chloride (PVC) with nylon layer THHN
- 3. Ground:** One Green Ground with Yellow Stripe THHN
- 4. Jacket:** Gray Thermoplastic Elastomer TPE: Other jacket colors available upon request

APPLICATIONS AND FEATURES:

Southwire's machine control tray cables 600/1000 Volt conform to NFPA 79 and 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 75°C in wet locations and 90°C in dry locations, 130°C for emergency overload, and 150°C for short circuit conditions. For uses in Class I, II, Division 2 hazardous locations per NEC® Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC® 336.10. Southwire's machine tray cable is ideal for use in CNC machines, grinding, cutting, metal forming, buffing, bottling equipment, conveyors, processing & packaging equipment, assembly lines, control panels, food and beverage, oil sands, plant expansion, wind energy and data centers. Multiple approvals for multiple applications. Cable is rated for -40°C cold impact.

SPECIFICATIONS:

- ASTM B172, B174 Rope-Lay-Stranded, Bunch-Stranded Copper Conductors
- UL 83 - Thermoplastic Insulated Wires and Cables Type THHN
- UL 1063 - Machine Tool Wiring (MTW)
- UL 1277 - Type TC-ER
- UL 2277 - Type WTTC
- UL 1690 - Data Processing Cable (DP-1)
- UL 758 - AWM Style 20886
- NFPA 79 - Electrical Standard for Industrial Machinery
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr)
- ICEA S-95-658 NEMA WC 70 - Power Cables Rated 2000 Volts or Less
- CSA22.2 Listing: No. 230 - c(UL) Type TC, No. 239 - c(UL) Type CIC, No. 210 - CSA AWM I/II A/B
- **CE/RoHS-2 – The CE Marking has been applied solely to express the conformance to the material restrictions identified in the RoHS-2 (2011/65/EU) Directive.**

SAMPLE PRINT LEGEND:

Southwire XXAWG (XXmm2) XX/C PVC/Nylon Type TC-ER EXXXXX (UL) 600V 90°C Dry 75C Wet Sun Res Oil Res I/II DIR BUR - 40°C OR MTW Flexing OR DP-1 OR WTTC 1000V OR AWM 20886 105°C 1000V OR c(UL) CIC/TC FT4 -- LLXXXXX CSA AWM I/II A/B 105°C 1000V -40°C FT4 -- CE RoHS -2 Made in USA



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



Table 1 – Measurements and Electrical

Stock Code	Conductor Size	Cond. OD	Number of Conductors (Include Full Size Grd)	Insulation Thickness	Outer Jacket Thickness	Nominal OD (4)	Nominal Weight	*Ampacity NEC 310.15 (B) (16) amps			Min Bend Radius
	AWG (strds)	inches		mils	mils	inches	Lbs/MFT	60°C	75°C	90°C	Inches
677071	18 (16)	0.044	2*	20	45	0.266	35	7	7	7	1.10
581511 [◇]	18 (16)	0.044	3	20	45	0.281	47	7	7	7	1.12
582642 [◇]	18 (16)	0.044	4	20	45	0.306	59	7	7	7	1.22
582644 [◇]	18 (16)	0.044	5	20	45	0.332	68	7	7	7	1.33
581513 [◇]	18 (16)	0.044	7	20	45	0.358	85	7	7	7	1.43
582645 [◇]	18 (16)	0.044	9	20	45	0.411	107	7	7	7	1.64
582646 [◇]	18 (16)	0.044	12	20	45	0.456	135	7	7	7	1.82
582647 [◇]	18 (16)	0.044	18	20	45	0.554	207	7	7	7	2.22
646262 [◇]	18 (16)	0.044	19	20	45	0.563	212	7	7	7	2.25
581514 [◇]	18 (16)	0.044	25	20	60	0.635	245	7	7	7	2.54
677072	16 (26)	0.058	2*	20	50	0.294	45	10	10	10	1.18
581515 [◇]	16 (26)	0.058	3	20	50	0.311	60	10	10	10	1.24
582648 [◇]	16 (26)	0.058	4	20	50	0.339	76	10	10	10	1.36
582649 [◇]	16 (26)	0.058	5	20	50	0.370	89	10	10	10	1.48
581516 [◇]	16 (26)	0.058	7	20	50	0.400	113	10	10	10	1.60
582651 [◇]	16 (26)	0.058	9	20	50	0.462	144	10	10	10	1.85
582652 [◇]	16 (26)	0.058	12	20	50	0.509	199	9	9	9	2.04
582653 [◇]	16 (26)	0.058	18	20	65	0.623	280	9	9	9	2.49
646263 [◇]	16 (26)	0.058	19	20	65	0.663	310	9	9	9	2.65
581517 [◇]	16 (26)	0.058	25	20	65	0.717	348	8	8	8	2.87
677073	14 (41)	0.074	2*	20	50	0.324	59	15	15	15	1.29
581519 [◇]	14 (41)	0.074	3	20	50	0.342	82	15	15	15	1.37
582654 [◇]	14 (41)	0.074	4	20	50	0.375	106	15	15	15	1.50
582655 [◇]	14 (41)	0.074	5	20	50	0.411	125	15	15	15	1.64
581521 [◇]	14 (41)	0.074	7	20	50	0.445	160	14	14	14	1.78
582656 [◇]	14 (41)	0.074	9	20	50	0.516	205	14	14	14	2.06
582657	14 (41)	0.074	12	20	65	0.600	282	10	10	10	2.40
582658 [◇]	14 (41)	0.074	18	20	65	0.697	402	10	10	10	2.79
581522 [◇]	14 (41)	0.074	25	20	65	0.806	565	9	9	9	3.22
677074	12 (65)	0.092	2*	20	50	0.362	80	20	20	20	1.45
677188 [◇]	12 (65)	0.092	3	20	50	0.389	108	20	20	20	1.56
582659 [◇]	12 (65)	0.092	4	20	50	0.420	147	20	20	20	1.68
582660	12 (65)	0.092	5	20	50	0.462	176	20	20	20	1.85
582661 [◇]	12 (65)	0.092	7	20	50	0.502	227	17	17	17	2.01
677075	10 (105)	0.116	2*	25	50	0.430	119	28	28	28	1.72
677189 [◇]	10 (105)	0.116	3	25	50	0.462	160	28	28	28	1.85
581523 [◇]	10 (105)	0.116	4	25	50	0.502	206	28	28	28	2.01
582662	10 (105)	0.116	5	25	50	0.530	255	28	28	28	2.12
582663	10 (105)	0.116	7	25	60	0.628	364	24	24	24	2.51

* 2 conductor cables contain no green/yellow ground

* 2 conductor cables are Type TC only. Not TC-ER rated



Table 1 – Measurements and Electrical

Stock Code	Conductor Size	Cond. OD	Number of Conductors (Include Full Size Grd)	Insulation Thickness	Outer Jacket Thickness	Nominal OD (4)	Nominal Weight Lbs/MFT	*Ampacity NEC 310.15 (B) (16) amps			Min Bend Radius Inches
	AWG (strds)	inches		mils	mils	inches		60°C	75°C	90°C	
677190	8 (168)	0.153	3	36	68	0.626	296	40	40	40	2.50
643367 [◇]	8 (168)	0.153	4	36	68	0.680	372	40	40	40	2.72
677191	6 (273)	0.202	3	36	70	0.725	441	55	55	55	3.04
643369 [◇]	6 (273)	0.202	4	36	70	0.760	555	55	55	55	3.04
677192	4 (427)	0.254	3	46	80	0.898	649	68	68	68	3.59
643371 [◇]	4 (427)	0.254	4	46	80	0.969	826	68	68	68	3.88
677193	2 (651)	0.302	3	46	100	1.070	988	92	92	92	5.35
643373 [◇]	2 (651)	0.302	4	46	100	1.162	1255	92	92	92	5.81

*Ampacity based on 310.15 (B) (16) up to and including 2000 volts, not more than 3 current-carrying conductors, ambient 30°C (86°F)

All dimensions are nominal and subject to normal manufacturing tolerances

◇Standard stock item



MACHINE TRAY CONTROL CABLE CU 600/1000V PVC THHN SHIELDED

Type TC-ER Shielded Machine Tray Control Cable 600/1000 Volt Copper Conductors, Polyvinyl Chloride (PVC) with nylon layer Insulation Thermoplastic Elastomer Jacket, 90°C Dry 75°C Wet -40°C Cold Impact Identification Method 4

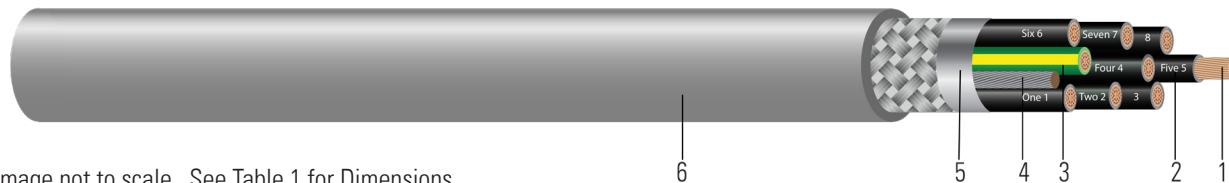


Image not to scale. See Table 1 for Dimensions

CONSTRUCTION:

- 1. Conductors:** Class K, Flexible stranded bare annealed copper per ASTM B3, B172, and B174
- 2. Insulation:** Polyvinyl Chloride (PVC) with nylon layer THHN
- 3. Ground:** One Green Ground with Yellow Stripe THHN
- 4. Drain Wire:** Tinned copper
- 5. Shielding:** 100% coverage Alum/Mylar/Alum Foil, overall 85% coverage tinned copper braid
- 6. Jacket:** Gray Thermoplastic Elastomer TPE: Other jacket colors available upon request.

APPLICATIONS AND FEATURES:

Southwire's shielded flexible machine tray control cables 600/1000 Volt conform to NFPA 79 and 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 75°C in wet locations and 90°C in dry locations, 130°C for emergency overload, and 150°C for short circuit conditions. For uses in Class I, II, Division 2 hazardous locations per NEC® Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC® 336.10. Southwire's shielded flexible machine tray cable is ideal for use in for use in CNC machines, grinding, cutting, metal forming, buffing, bottling equipment, conveyors, processing & packaging equipment, assembly lines, control panels, food and beverage, oil sands, plant expansion, wind energy and data centers. Multiple approvals for multiple applications. Cable is rated for -40°C cold impact.

SPECIFICATIONS:

- ASTM B172, B174 Rope-Lay-Stranded, Bunch-Stranded Copper Conductors
- UL 83 - Thermoplastic Insulated Wires and Cables Type THHN
- UL 1063 - Machine Tool Wiring (MTW)
- UL 1277 - Type TC-ER
- UL 2277 - Type WTTC
- UL 1690 - Data Processing Cable (DP-1)
- UL 758 - AWM Style 20886
- NFPA 79 - Electrical Standard for Industrial Machinery
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr)
- ICEA S-95-658 NEMA WC 70 - Power Cables Rated 2000 Volts or Less
- CSA22.2 Listing: No. 230 - c(UL) Type TC, No. 239 - c(UL) Type CIC, No. 210 - CSA AWM I/II A/B
- **CE/RoHS-2 – The CE Marking has been applied solely to express the conformance to the material restrictions identified in the RoHS-2 (2011/65/EU) Directive.**



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



SAMPLE PRINT LEGEND:

Southwire XXAWG (XXmm2) XX/C PVC/Nylon SHLD Type TC-ER EXXXXX (UL) 600V 90°C Dry 75°C Wet Sun Res Oil Res I/II DIR BUR - 40°C OR MTW Flexing OR DP-1 OR WTTC 1000V OR AWM 20886 105°C 1000V OR c(UL) CIC/TC FT4 -- LLXXXXXX CSA AWM I/II A/B 105°C 1000V -40°C FT4 -- CE RoHS -2 Made in USA

Table 1 – Measurements and Electrical

Stock Code	Conductor Size	Cond. OD	Number of Conductors (Include Full Size Grd)	Insulation Thickness	Drain Wire Size	Outer Jacket Thickness	Nominal OD (6)	Nominal Weight	*Ampacity NEC 310.15 (B) (16) amps			Min Bend Radius
	AWG (strds)	inches		mils	AWG	mils	inches	Lbs/MFT	60°C	75°C	90°C	Inches
677081	18 (16)	0.044	2*	20	20	47	0.239	53	7	7	7	3.52
588460 ^o	18 (16)	0.044	3	20	20	47	0.301	62	7	7	7	3.61
588461 ^o	18 (16)	0.044	4	20	20	47	0.326	73	7	7	7	3.91
588462 ^o	18 (16)	0.044	5	20	20	47	0.353	84	7	7	7	4.24
588463 ^o	18 (16)	0.044	7	20	20	47	0.378	102	7	7	7	4.54
630837 ^o	18 (16)	0.044	9	20	20	47	0.436	135	7	7	7	5.23
588464 ^o	18 (16)	0.044	12	20	29	47	0.472	162	7	7	7	5.66
598625	18 (16)	0.044	18	20	20	62	0.576	239	7	7	7	6.91
598626 ^o	18 (16)	0.044	25	20	20	62	0.658	306	7	7	7	7.90
677082	16 (26)	0.058	2*	20	18	47	0.331	80	10	10	10	3.97
588465 ^o	16 (26)	0.058	3	20	18	47	0.331	80	10	10	10	3.97
588466 ^o	16 (26)	0.058	4	20	18	47	0.360	95	10	10	10	4.32
588467 ^o	16 (26)	0.058	5	20	18	47	0.391	113	10	10	10	4.69
588468 ^o	16 (26)	0.058	7	20	18	47	0.421	137	10	10	10	5.05
630836 ^o	16 (26)	0.058	9	20	18	47	0.485	179	10	10	10	5.82
588469 ^o	16 (26)	0.058	12	20	18	73	0.562	280	9	9	9	6.74
598627	16 (26)	0.058	18	20	18	62	0.646	313	9	9	9	7.75
598628 ^o	16 (26)	0.058	25	20	18	76	0.746	407	8	8	8	8.95
677083	14 (41)	0.074	2*	20	16	47	0.349	84	15	15	15	4.19
588470 ^o	14 (41)	0.074	3	20	16	47	0.363	103	15	15	15	4.36
588471 ^o	14 (41)	0.074	4	20	16	47	0.396	126	15	15	15	4.75
588472	14 (41)	0.074	5	20	16	47	0.431	147	15	15	15	5.17
588473 ^o	14 (41)	0.074	7	20	16	47	0.466	199	14	14	14	5.59
598629 ^o	14 (41)	0.074	12	20	16	62	0.623	310	10	10	10	7.48
598630	14 (41)	0.074	18	20	16	62	0.720	422	10	10	10	8.64
598631	14 (41)	0.074	25	20	16	82	0.875	670	9	9	9	10.50
677084	12 (65)	0.092	2*	25	14	47	0.387	112	20	20	20	4.64
677194 ^o	12 (65)	0.092	3	25	14	47	0.416	143	20	20	20	4.99
588474 ^o	12 (65)	0.092	4	25	14	47	0.442	176	20	20	20	5.30
588476	12 (65)	0.092	5	25	14	47	0.483	210	20	20	20	5.80
588477	12 (65)	0.092	7	25	14	62	0.555	323	17	17	17	6.66

* 2 conductor cables contain no green/yellow ground

* 2 conductor cables are Type TC only. Not TC-ER rated



Table 1 – Measurements and Electrical

Stock Code	Conductor Size	Cond. OD	Number of Conductors (Include Full Size Grd)	Insulation Thickness	Drain Wire Size	Outer Jacket Thickness	Nominal OD (6)	Nominal Weight Lbs/MFT	*Ampacity NEC 310.15 (B) (16) amps			Min Bend Radius
	AWG (strds)	inches		mils	AWG	mils	inches		60°C	75°C	90°C	Inches
677085	10 (105)	0.116	2*	25	12	62	0.455	159	28	28	28	5.46
677196 [◇]	10 (105)	0.116	3	25	12	62	0.556	223	28	28	28	6.67
588478 [◇]	10 (105)	0.116	4	25	12	62	0.556	265	28	28	28	6.67
588479	10 (105)	0.116	5	25	12	62	0.608	372	28	28	28	7.30
588480	10 (105)	0.116	7	25	12	62	0.658	447	24	24	24	7.90
643354 [◇]	8 (168)	0.153	4	36	10	60	0.717	413	40	40	40	8.60
643356 [◇]	6 (273)	0.202	4	36	8	60	0.817	578	55	55	55	9.80
643358 [◇]	4 (427)	0.254	4	46	6	80	1.017	888	68	68	68	12.20
643360 [◇]	2 (651)	0.302	4	46	4	80	1.237	1349	92	92	92	14.84

*Ampacity based on 310.15 (B) (16) up to and including 2000 volts, not more than 3 current-carrying conductors, ambient 30°C (86°F)

All dimensions are nominal and subject to normal manufacturing tolerances

◇Standard stock item

* 2 conductor cables contain no green/yellow ground

* 2 conductor cables are Type TC only. Not TC-ER rated



VARIABLE FREQUENCY DRIVE 600/1000 VOLT FLEXIBLE CABLE

Type TC-ER Variable Frequency Drive Cable 600 Volt Tinned Copper Conductors, Cross Linked Insulation Type RHH/RHW-2 Thermoplastic Elastomer Jacket, 90°C Dry or Wet -40°C Cold Impact Identification Method 4. 1000 Volt Flexible Motor Supply



Image not to scale. See Table 1 for Dimensions

CONSTRUCTION:

- 1. Conductors:** Class K, Flexible stranded tinned annealed copper per ASTM B3, B172, and B174
- 2. Insulation:** Cross Linked insulation on all conductors. Type RHH/RHW-2 on 14 awg and larger.
- 3. Ground:** One green ground with yellow stripe cross linked insulation. Size equal to phase conductor
- 4. Drain Wire:** Tinned copper
- 5. Shielding:** 100% coverage Alum/Mylar/Alum Foil, overall 85% coverage tinned copper braid
- 6. Jacket:** Black Thermoplastic Elastomer TPE

APPLICATIONS AND FEATURES:

Power supply cable for VFDs and motors, suitable for cable tray, conduit, raceways, exposed run (TC-ER) and machine tool wiring conforming to NFPA 79 2018. Suitable for free air and direct burial. For use on operation processes including fans, pumps, conveyors, compressors, elevators and lifts, extruders, crushers and presses. Can be used in accordance with NEC® Articles 336, 501 and 502.

SPECIFICATIONS:

- ASTM B172 - Rope-Lay-Stranded Copper Conductors
- ASTM B174 - Bunch-Stranded Copper Conductors
- ASTM B33 - Tinned soft or annealed Copper
- UL 44 - Thermoset Insulation
- UL 1277 - Type TC-ER Standard Power and Control Cables
- UL 2277 - Type WTTC Flexible Motor Supply
- UL 758 - AWM Style 20886 Standard for Appliance Wiring Material.
- C22.2 No. 230 Type TC
- CSA 22.2 No. 239 TYPE CIC
- CSA C22.2 No. 210 - CSA AWM I/II A/B
- NFPA 79 - Electrical Standard for Industrial Machinery
- **CE/RoHS-2 – The CE Marking has been applied solely to express the conformance to the material restrictions identified in the RoHS-2 (2011/65/EU) Directive.**

SAMPLE PRINT LEGEND

Southwire XXAWG (XXmm²) XX/C VFD RHH/RHW-2 CDRS TYPE TC-ER EXXXXX (UL) 600V 90°C DRY 90°C WET SUN RES OIL RES I/II DIR BUR -40°C OR WTTC 1000V OR AWM 20886 105°C 1000V OR Flexible Motor Supply Cable 1000V -- LLXXXXXX CSA CIC/TC FT4 OR AWM I/II A/B 1000V 105C FT4 -40°C -- CE RoHS-2 Made in USA



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com

Table 1 – Measurements and Electrical

Stock Code	Conductor Size	Cond. OD	Num. of ϕ Conds.	Ground Size	Drain Wire	Insulation Thickness	Jacket Thickness	Nominal OD (6)	Nominal Weight	+Ampacity NEC 310.15 (B) (16) amps		Min Bend Radius
	AWG (Strds)	inches		AWG		mils	mils	inches	Lbs/MFT	75°C	90°C	Inches
585342 [◇]	16 (26)	0.054	3	1 x 16	1 x 16	46	62	0.523	171	10	10	6.23
585343 [◇]	14 (41)	0.074	3	1 x 14	1 x 14	46	62	0.565	212	15	15	6.78
585344 [◇]	12 (65)	0.090	3	1 x 12	1 x 12	46	62	0.635	269	20	20	7.62
585416 [◇]	10 (105)	0.112	3	1 x 10	1 x 10	46	62	0.698	352	30	30	8.38
643451 [◇]	8 (168)	0.163	3	1 x 8	4 x 14	60	80	0.870	533	50	55	10.44
643459 [◇]	6 (266)	0.202	3	1 x 6	4 x 12	60	80	0.942	699	65	75	11.30
643467 [◇]	4 (420)	0.254	3	1 x 4	4 x 10	60	80	1.071	1039	85	95	12.85
643474 [◇]	2 (651)	0.300	3	1 x 2	4 x 8	60	80	1.230	1486	115	130	14.76

+Ampacity based on 310.15 (B) (16) up to and including 2000 volts, not more than 3 current-carrying conductors, ambient 30°C (86°F)

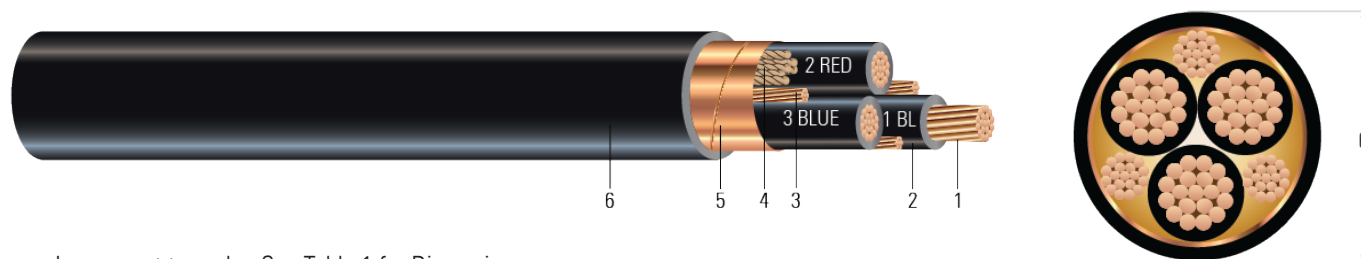
All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item



3/C CU 2000V XLPE RHH/RHW-2 PVC VFD Power Cable Type TC-ER

Type TC-ER VFD Power Cable 2000 Volt Three Conductor Copper, Cross Linked Polyethylene (XLPE) insulation RHH/RHW-2 Polyvinyl Chloride (PVC) Jacket with 3 Symmetrical Bare CU Ground 50% Minimum Tape Shield Overlap



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. **Insulation:** Cross Linked Polyethylene (XLPE) Type RHH/RHW-2
3. **Grounding Conductor:** 3 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8 (ground size is 50% of the phase conductor)
4. **Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
5. **Tape Shield:** 5 mil copper tape shield with a minimum of 50% overlap
6. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 2000 Volt Type TC-ER VFD power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper
- ASTM B8 Concentric-lay-standard copper
- UL 44 Thermoset Insulated wires And cables
- UL 1277 Electrical Power And Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr)
- ICEA S-58-679 - Control Cable Conductor Identification Method 3 (1-BLACK, 2-RED, 3-BLUE)
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU RHH/RHW-2 XLPE/PVC 2000V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



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Southwire[®]

Table 1 – Weights & Measurements

Stock Code	Cond. Size	Dia Over Cond. (1)	Insul. Thickness	Dia Over Insul. (2)	Ground	Jacket Thickness	Approx. OD (6)	Copper Weight	Approx. Weight
	AWG	inches	inches	inches	No. x AWG	mils	inches	lbs./MFT	lbs./MFT
580672 [◇]	14	0.070	60	0.190	3 x 18	45	0.519	54	175
580685 [◇]	12	0.087	60	0.207	3 x 16	45	0.558	85	220
580693 [◇]	10	0.111	60	0.231	3 x 14	60	0.638	136	307
569388 [◇]	8	0.139	70	0.279	3 x 14	60	0.743	193	427
580701 [◇]	6	0.174	70	0.314	3 x 12	60	0.819	307	586
569389 [◇]	4	0.221	70	0.361	3 x 12	80	0.959	452	789
569387 [◇]	2	0.277	70	0.417	3 x 10	80	1.081	718	1120
TBA	1	0.321	90	0.501	3 x 8	80	1.262	937	1460
644333 [◇]	1/0	0.360	90	0.540	3 x 6	80	1.346	1233	1805
644334 [◇]	2/0	0.404	90	0.584	3 x 6	80	1.441	1491	2121
644337	3/0	0.454	90	0.634	3 x 5	80	1.549	1880	2577
644338 [◇]	4/0	0.510	90	0.690	3 x 4	80	1.67	2370	3146
644339 [◇]	250	0.558	105	0.768	3 x 2	110	1.899	2960	3978
644340 [◇]	350	0.661	105	0.871	3 x 2	110	2.121	3896	5084
644341 [◇]	500	0.789	105	0.999	3 x 1	110	2.398	5461	6867

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Standard stock item

Table 2 – Electrical and Engineering Data

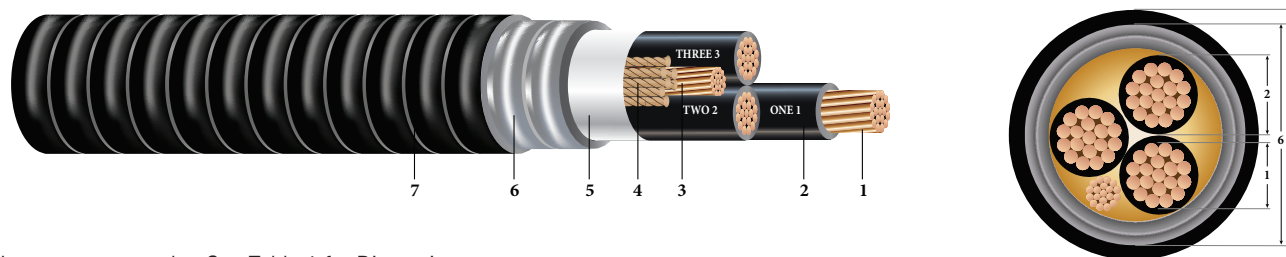
Stock Code	Cond. Size AWG	Min. Bending Radius Inches	Max. Pull Tension lbs.	Resistance		Reactance X _L @ 60Hz Ω/MFT	Ø Short Circuit Current 6 Cycles Amps	Allowable Ampacities †		
				DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT			60 °C Amps	75 °C Amps	90 °C Amps
580672	14	6.2	99	2.630	3.288	0.045	935	15	15	15
580685	12	6.7	157	1.660	2.075	0.042	1485	20	20	20
580693	10	7.7	249	1.040	1.300	0.039	2360	30	30	30
569388	8	8.9	396	0.652	0.815	0.038	3754	40	50	55
580701	6	9.8	630	0.411	0.514	0.035	5966	55	65	75
569389	4	11.5	1002	0.258	0.323	0.033	9491	70	85	95
569387	2	13.0	1593	0.162	0.203	0.031	15089	95	115	130
TBA	1	15.1	2009	0.129	0.161	0.032	19029	110	130	145
644333	1/0	16.2	2534	0.102	0.128	0.031	24011	125	150	170
644334	2/0	17.3	3194	0.081	0.102	0.030	30264	145	175	195
644337	3/0	18.6	4027	0.064	0.081	0.029	38154	165	200	225
644338	4/0	20.0	5078	0.051	0.064	0.029	48114	195	230	260
644339	250	22.8	6000	0.043	0.055	0.029	56845	215	255	290
644340	350	25.5	8400	0.031	0.040	0.028	79583	260	310	350
644341	500	28.8	12000	0.022	0.028	0.027	113690	320	380	430

† Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)



3/C CU 600V XLPE XHHW-2 AIA PVC Power Cable Type MC

Type MC Power Cable 600Volt Three Conductor Copper, Cross Linked Polyethylene (XLPE) insulation XHHW-2 Aluminum Interlocked Armor (AIA), Polyvinyl Chloride (PVC) Jacket with 1 Bare CU Ground



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. **Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2
3. **Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
4. **Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
5. **Binder:** Polypropylene tape
6. **Armor:** Aluminum Interlocked Armor (AIA)
7. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type MC power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper
- ASTM B8 Concentric-lay-standard copper
- UL 44 Thermoset Insulated wires And cables
- UL 1569 Metal-Clad Cables
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- UL 1309 – Listed as Marine Shipboard Cable
- ABS Listed as CWCMC
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr) And ICEA T-29-520 - (210,000 Btu/hr)
- ICEA S-58-679 - Control Cable Conductor Identification Method 4
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU XHHW-2 XLPE/PVC AIA 600V Type MC For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NEC) [SEQUENTIAL FEET MARKS]



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Table 1 – Weights & Measurements

Stock Code	Cond. Size	Dia Over Cond. (1)	Insul. Thickness	Dia Over Insul. (2)	Dia. Over Armor (6)	Ground No. x AWG	Jacket Thickness mils	Approx. OD (7) inches	Copper Weight lbs./MFT	Approx. Weight lbs./MFT
	AWG	inches	inches	inches	inches					
606939	8	0.139	45	0.229	0.705	1 x 10	50	0.805	187	404
606947	6	0.174	45	0.264	0.781	1 x 8	50	0.881	297	547
606954 [◇]	4	0.221	45	0.311	0.881	1 x 8	50	0.981	442	736
560466 [◇]	2	0.277	45	0.367	1.003	1 x 6	50	1.103	703	1054
TBA	1	0.321	55	0.431	1.141	1 x 6	50	1.241	865	1288
560474 [◇]	1/0	0.360	55	0.470	1.225	1 x 6	50	1.325	1069	1534
560482 [◇]	2/0	0.404	55	0.514	1.320	1 x 6	50	1.420	1327	1841
890339 [◇]	3/0	0.454	55	0.564	1.428	1 x 4	50	1.528	1700	2272
383679 [◇]	4/0	0.510	55	0.620	1.549	1 x 4	60	1.669	2110	2779
601377	250	0.558	65	0.688	1.696	1 x 4	60	1.816	2469	3240
383646 [◇]	350	0.661	65	0.791	2.019	1 x 3	60	2.139	3440	4442
380618 [◇]	500	0.789	65	0.919	2.295	1 x 2	75	2.445	4885	6144
890391	600	0.866	80	1.026	2.526	1 x 4/0	75	2.676	6222	7573
890405	750	0.968	80	1.128	2.746	1 x 1	75	2.896	7278	8933

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Min. Bending Radius Inches	Max. Pull Tension lbs.	Resistance		Reactance X _L @ 60Hz Ω/MFT	Ø Short Circuit Current 6 Cycles Amps	Allowable Ampacities †		
				DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT			60 °C Amps	75 °C Amps	90 °C Amps
606939	8	5.6	396	0.652	0.815	0.033	3754	40	50	55
606947	6	6.2	630	0.411	0.514	0.031	5966	55	65	75
606954 [◇]	4	6.9	1002	0.258	0.323	0.030	9491	70	85	95
560466 [◇]	2	7.7	1593	0.162	0.203	0.028	15089	95	115	130
TBA	1	8.7	2009	0.129	0.162	0.028	19029	110	130	145
560474 [◇]	1/0	9.3	2534	0.102	0.128	0.028	24011	125	150	170
560482 [◇]	2/0	9.9	3194	0.081	0.102	0.027	30264	145	175	195
890339 [◇]	3/0	10.7	4027	0.064	0.081	0.027	38154	165	200	225
383679 [◇]	4/0	11.7	5078	0.051	0.064	0.026	48114	195	230	260
601377	250	12.7	6000	0.043	0.055	0.027	56845	215	255	290
383646 [◇]	350	15.0	8400	0.031	0.040	0.026	79583	260	310	350
380618 [◇]	500	17.1	12000	0.022	0.029	0.025	113690	320	380	430
890391	600	18.7	14400	0.018	0.024	0.026	136428	350	420	475
890405	750	20.3	18000	0.014	0.020	0.025	170535	400	475	535

† Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)



Instrumentation ARMOR-X STOS TYPE MC-HL

Type MC-HL Instrumentation Cable 600 Volt PVC/Nylon Insulated Singles Shielded Triads with Overall Shield Continuous Corrugated Armor-x -50°C to 90°C

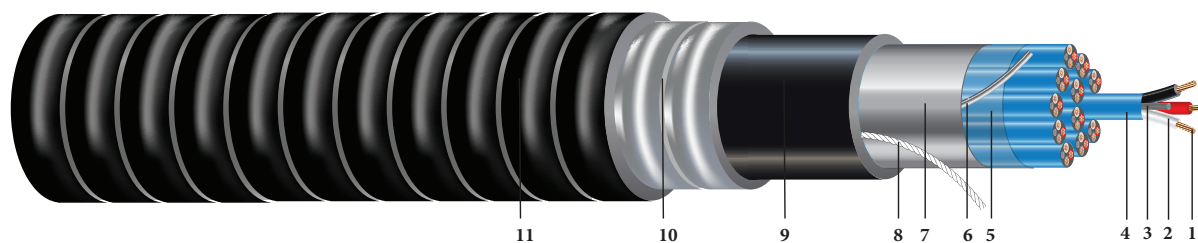


Image not to scale. See Table 1 Dimensions

CONSTRUCTION:

1. **Conductors:** Class B stranded bare copper per ASTM B-3 and B-8
2. **Insulation:** Premium Grade Polyvinyl Chloride (PVC) plus nylon. Color code: Black, White, Red with alpha-numeric print on each pair. 1-ONE, 2-TWO
3. **Drain Wire:** Tinned copper
4. **Shielded Twisted Triad:** 100% coverage aluminum/polyester foil shield with an individual drain wire shown in step 3
5. **Binder:** Mylar binder
6. **Overall Shielded:** 100% coverage aluminum/polyester foil shield with an individual drain wire as shown in step 8
7. **Rip Cord:** Rip cord under jacket for ease of removal
8. **Overall Drain Wire:** Tinned Copper
9. **Inner Jacket:** Black PVC
10. **Armor:** Armor-x continuous impervious weld corrugated aluminum armor
11. **Jacket:** Black sunlight and moisture resistant Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's Instrumentation Cables Type MC-HL per UL 1569 are suitable for installations as outlined in NEC Article 330 for process control and instrumentation, control circuits for operation and interconnection of protective and signaling devices and for general use in manufacturing, industrial and commercial distribution systems. Cables are constructed with 7-strand copper conductors insulated with nylon covered PVC. The triad conductors are colored black, white, red and alpha-numeric printed. Each triad has an aluminum polyester foil with 100% coverage and a tinned drain wire. The overall assembly is covered with an aluminum polyester foil with 100% coverage and a tinned drain wire. The cable is suited for use in cable trays, raceways, conduit, aerial (when supported with a messenger) and direct burial. The cable is rated for -50°C to 90°C and rated for Class I Div I hazardous locations. The inner jacket is black PVC with a nylon rip cord for easy removal. The outer jacket is black PVC

SPECIFICATIONS:

- ASTM B8 - Concentric Lay-Standard Copper
- ASTM B33 - Tinned soft or Annealed Copper
- UL 83 Thermoplastic-Insulated Wires and Cables
- UL 1569 Metal-Clad Cables
- UL 1309 Marine Shipboard Cable
- UL 2225 Cables and Cable-Fittings For Use In Hazardous (Classified) Locations



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SPECIFICATIONS:

- UL 66 - Fixture Wire Type TFFN (18 and 16 AWG)
- UL 1685 - Vertical-Tray Fire Propagation and Smoke-Release Test.
- IEEE 1202/FT4 - Flame Test 70,000 Btu/hr Vertical Tray
- EPA 40CFR.Part 261, Subpart C, Heavy Metals Per Table 1, TCLP Method

SAMPLE PRINT LEGEND:

SOUTHWIRE® #P# ARMOR-XTRA TYPE MC-HL (UL) SHLD TR XXAWG OVERALL SHIELDED PVC-N CDRS 90°C JKT SUN RES. DIR BUR FOR CT USE IEEE 1202/FT4 -50°C 600V (YR) USA SEQUENTIAL MARKING

Table 1 – Weights & Measurements for Shielded Triads Overall Shield STOS

Stock Code	Cond. Size AWG	No. of Triads	Insulation Thickness	Inner Jacket Thickness	Nominal Core OD	Outer Jacket Thickness	Nominal Overall OD (11)	Min Bending Radius	DC Resistance @ 25°C	Nominal Weight
			mils	mils	Inches	mils	Inches	Inches	Ω/MFT	(Lbs/Mft)
890567 [◇]	16	1	20	45	0.317	60	0.630	4.41	4.18	177
890569	16	4	20	45	0.636	60	0.970	6.79	4.18	444
890570	16	8	20	45	0.838	60	1.150	8.05	4.18	690
890571	16	12	20	45	1.023	60	1.450	10.15	4.18	1,012

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Standard stock item

Typical Electrical Specifications for Each Triad		
Size	Capacitance	Inductance
18 AWG	40.66 pF/ft.	0.0957 μ Henry/ft.
16 AWG	48.51 pF/ft.	0.0895 μ Henry/ft.



Instrumentation ARMOR-X SPOS TYPE MC-HL

Type MC-HL Instrumentation Cable 600 Volt PVC/Nylon Insulated Singles Shielded Pairs with Overall Shield Continuous Corrugated Armor-x -50°C to 90°C

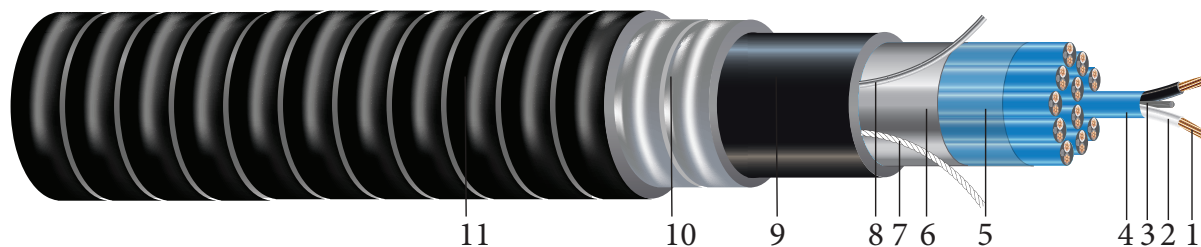


Image not to scale. See Table 1 Dimensions

CONSTRUCTION:

1. **Conductors:** Class B stranded bare copper per ASTM B-3 and B-8
2. **Insulation:** Premium Grade Polyvinyl Chloride (PVC) plus nylon. Color code: Black/White with alpha-numeric print on each pair. 1-ONE, 2-TWO.
3. **Drain Wire:** Tinned copper
4. **Shielded Twisted Pair:** 100% coverage aluminum/polyester foil shield with an individual drain wire shown in step 3
5. **Binder:** Mylar binder
6. **Overall Shielded:** 100% coverage aluminum/polyester foil shield with an individual drain wire as shown in step 8
7. **Rip Cord:** Rip cord under jacket for ease of removal
8. **Overall Drain Wire:** Tinned Copper
9. **Inner Jacket:** Black PVC
10. **Armor:** Armor-x continuous impervious weld corrugated aluminum armor
11. **Jacket:** Black sunlight and moisture resistant Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's Instrumentation Cables Type MC-HL per UL 1569 are suitable for installations as outlined in NEC Article 330 for process control and instrumentation, control circuits for operation and interconnection of protective and signaling devices and for general use in manufacturing, industrial and commercial distribution systems. Cables are constructed with 7-strand copper conductors insulated with nylon covered PVC. The paired conductors are colored black, white and alpha-numeric printed. Each pair has an aluminum polyester foil with 100% coverage and a tinned drain wire. The overall assembly is covered with an aluminum polyester foil with 100% coverage and a tinned drain wire. The cable is suited for use in cable trays, raceways, conduit, aerial (when supported with a messenger) and direct burial. The cable is rated for -50°C to 90°C and rated for Class I Div I hazardous locations. The inner jacket is black PVC with a nylon rip cord for easy removal. The outer jacket is black PVC

SPECIFICATIONS:

- ASTM B8 - Concentric Lay-Standard Copper
- ASTM B33 - Tinned soft or Annealed Copper
- UL 83 Thermoplastic-Insulated Wires and Cables
- UL 1569 Metal-Clad Cables
- UL 1309 Marine Shipboard Cable
- UL 2225 Cables and Cable-Fittings For Use In Hazardous (Classified) Locations



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SPECIFICATIONS:

- UL 66 - Fixture Wire Type TFFN (18 and 16 AWG)
- UL 1685 - Vertical-Tray Fire Propagation and Smoke-Release Test.
- IEEE 1202/FT4 - Flame Test 70,000 Btu/hr Vertical Tray
- EPA 40CFR.Part 261, Subpart C, Heavy Metals Per Table 1, TCLP Method
- IEEE 1580 - Incidental Motion "IM" Compliance
- ABS - Listed as CWCMC

SAMPLE PRINT LEGEND:

SOUTHWIRE® #P# ARMOR-XTRA TYPE MC-HL (UL) SHLD PR XXAWG OVERALL SHIELDED PVC-N CDRS 90°C JKT SUN RES. DIR BUR FOR CT USE IEEE 1202/FT4 -50°C 600V (YR) USA SEQUENTIAL MARKING

Table 1 – Weights & Measurements for Shielded Pairs Overall Shield SPOS

Stock Code	Cond. Size AWG	No. of Pairs	Insulation Thickness	Inner Jacket Thickness	Nominal Core OD	Outer Jacket Thickness	Nominal Overall OD	Min Bending Radius	DC Resistance @ 25°C	Nominal Weight
			mils	mils	Inches	mils	Inches	Inches	Ω/MFT	(Lbs/Mft)
890572	18	2	20	45	0.506	50	0.710	4.97	6.66	207
890573	18	4	20	45	0.516	60	0.860	6.02	6.66	260
890574	18	8	20	45	0.676	60	1.010	7.07	6.66	455
890575	18	12	20	45	0.814	60	1.110	7.77	6.66	593
890577	18	16	20	45	0.944	60	1.320	9.24	6.66	766
890559 [◇]	16	1	20	45	0.302	60	0.630	4.41	4.18	166
890560 [◇]	16	2	20	45	0.416	60	0.750	5.25	4.18	237
890561 [◇]	16	4	20	45	0.552	60	0.940	6.58	4.18	366
890562 [◇]	16	8	20	45	0.720	60	1.110	7.77	4.18	541
890563 [◇]	16	12	20	45	0.868	60	1.340	9.20	4.18	798
890564	16	16	20	45	1.023	60	1.470	9.80	4.18	964
890565 [◇]	16	24	20	45	1.218	60	1.660	11.62	4.18	1,436
890566	16	36	20	45	1.302	60	1.880	13.16	4.18	1,901

All dimensions are nominal and subject to normal manufacturing tolerances

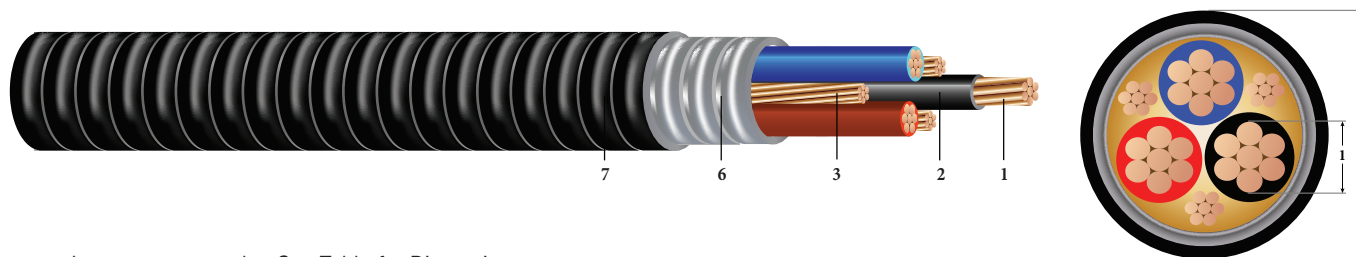
◇ Standard stock item

Typical Electrical Specifications for Each Pair		
Size	Capacitance	Inductance
18 AWG	40.66 pF/ft.	0.0957 μ Henry/ft.
16 AWG	48.51 pF/ft.	0.0895 μ Henry/ft.



CU 600V XLPE XHHW-2 ARMOR-X PVC Control Cable Type MC-HL

Type MC-HL Control Cable 600Volt Copper Conductors, Cross Linked Polyethylene (XLPE) Insulation XHHW-2 Continuous Corrugated Welded Armor (Armor-X), Polyvinyl Chloride (PVC) Jacket with 3 Bare CU Ground



Images not to scale. See Table for Dimensions

CONSTRUCTION:

1. **Conductor:** 7 strands class B compressed bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) XHHW-2, 30 Mils thick for all cable sizes
3. **Grounding Conductor:** 3 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
4. **Filler:** Polypropylene filler on cables with 5 or less conductors
5. **Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
6. **Armor:** Continuous Corrugated Welded Armor (Armor-X)
7. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type MC-HL Armor-X® control cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, 250°C for short circuit conditions, and -50°C for cold bend. For uses in Class I, II, and III, Division 1 and 2 hazardous locations per NEC Article 501, 502, and 503.

SPECIFICATIONS:

- ASTM B3 - Soft or annealed copper
- ASTM B8 - Concentric-lay-standard copper
- UL 44 - Thermoset Insulated wires and cables
- UL 1569 - Metal-Clad Cables
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- UL 1309 - Listed as Marine Shipboard Cable
- ABS Listed as CWCMC
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)
- ICEA S-73-532 - Standard for Control, Thermocouple Extension and Instrumentation Cables
- ICEA S-58-679 - Control Cable Conductor Identification Method 1 Table 2
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# ARMOR-X (UL) [#AWG Or #kcmil] CU XHHW-2 XLPE/PVC 600V Type MC-HL For CT USE SUN. RES. For DIRECT BURIAL FT4 [-50°C] YEAR (NESC) [SEQUENTIAL FEET MARKS]



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Measurements and Electrical Data

#16 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Dia. Over Armor	Jacket Thickness	Approx. OD (7)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis. @ 90°C	Allowable Ampacities* 60/75/90°C
		inches		No.xAWG	inches	mils						
TBA	3	0.056	3 x 20	0.480	50	0.580	34	152	4.1	4.180	5.226	10/10/10
TBA	4	0.056	3 x 20	0.480	50	0.580	42	165	4.1	4.180	5.226	10/10/10

Measurements and Electrical Data

#14 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground	Dia. Over Armor	Jacket Thickness	Approx. OD (7)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis. @ 90°C	Allowable Ampacities* 60/75/90°C
		inches		No.xAWG	inches	mils						
550586 [◇]	3	0.070	3 x 18	0.480	50	0.580	54	175	4.1	2.630	3.288	15/15/15
550587	4	0.070	3 x 18	0.530	50	0.630	66	204	4.4	2.630	3.288	14/15/15

All dimensions are nominal and subject to normal manufacturing tolerance.

* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and assuming ground is not carrying current.

◇ Standard stock item



Measurements and Electrical Data

#12 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground No.xAWG	Dia. Over Armor	Jacket Thick-ness	Approx. OD (7)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
550588 [◇]	3	0.087	3 x 16	0.530	50	0.630	85	221	4.4	1.660	2.075	20/20/20
550589	4	0.087	3 x 16	0.570	50	0.670	106	257	4.7	1.660	2.075	16/20/20

Measurements and Electrical Data

#10 AWG

Stock Code	Cond. Number	Dia. Over Cond. (1)	Ground No.xAWG	Dia. Over Armor	Jacket Thick-ness	Approx. OD (7)	Copper Weight	Approx. Weight	Min Bending Radius	DC Resis. @ 25°C	AC Resis @ 90°C	Allowable Ampacities*
		inches		inches	mils	inches	lbs./MFT	lbs./MFT	inches	Ω/MFT	Ω/MFT	Amps
550591 [◇]	3	0.111	3 x 14	0.610	50	0.710	136	294	5.0	1.040	1.300	30/30/30
550592	4	0.111	3 x 14	0.650	50	0.750	168	344	5.3	1.040	1.300	24/28/30

All dimensions are nominal and subject to normal manufacturing tolerance.

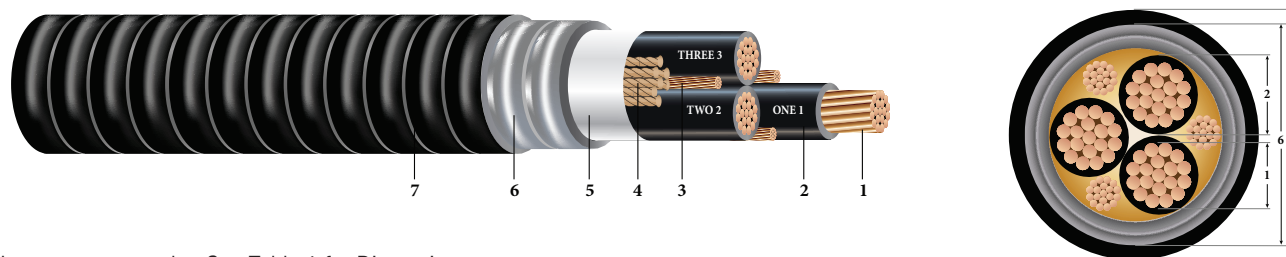
* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F) and assuming ground is not carrying current.

◇ Standard stock item



3/C CU 600V XLPE XHHW-2 ARMOR-X PVC Power Cable Type MC-HL

Type MC-HL Power Cable 600Volt Three Conductor Copper, Cross Linked Polyethylene (XLPE) insulation XHHW-2 Continuous Corrugated Welded Armor (Armor-X), Polyvinyl Chloride (PVC) Jacket with 3 Bare CU Ground



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. **Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2
3. **Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
4. **Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
5. **Binder:** Polypropylene tape
6. **Armor:** Continuous Corrugated Welded Armor (Armor-X)
7. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type MC-HL Armor-X® power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, 250°C for short circuit conditions, and -50°C for cold bend. For uses in Class I, II, and III, Division 1 and 2 hazardous locations per NEC Article 501, 502, and 503. Suitable for VFD application.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper
- ASTM B8 Concentric-lay-standard copper
- UL 44 Thermoset Insulated wires And cables
- UL 1569 Metal-Clad Cables
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- UL 1309 – Listed as Marine Shipboard Cable
- ABS Listed as CWCMC
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr) And ICEA T-29-520 - (210,000 Btu/hr)
- ICEA S-58-679 - Control Cable Conductor Identification Method 4
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# ARMOR-X (UL) [#AWG Or #kcmil] CU XHHW-2 XLPE/PVC 600V Type MC-HL For CT USE SUN. RES. For DIRECT BURIAL FT4 [-50°C] YEAR (NEC) [SEQUENTIAL FEET MARKS]



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



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Table 1 – Weights & Measurements

Stock Code	Cond. Size	Dia Over Cond. (1)	Insul. Thickness	Dia Over Insul. (2)	Dia. Over Armor (6)	Ground No. x AWG	Jacket Thickness	Approx. OD (7)	Copper Weight	Approx. Weight
	AWG	inches	inches	inches	inches		mils	inches	lbs./MFT	lbs./MFT
550593 [◇]	8	0.139	45	0.229	0.700	3 x 14	50	0.800	193	399
890513 [◇]	6	0.174	45	0.264	0.790	3 x 12	50	0.890	307	547
890514 [◇]	4	0.221	45	0.311	0.920	3 x 12	50	1.020	452	740
890515 [◇]	2	0.277	45	0.367	1.020	3 x 10	50	1.120	718	1062
TBA	1	0.321	55	0.431	1.220	3 x 10	50	1.320	880	1329
890516 [◇]	1/0	0.360	55	0.470	1.350	3 x 10	50	1.450	1084	1638
890517 [◇]	2/0	0.404	55	0.514	1.470	3 x 10	50	1.570	1342	1955
890518	3/0	0.454	55	0.564	1.540	3 x 8	60	1.660	1724	2424
890519 [◇]	4/0	0.510	55	0.620	1.670	3 x 8	60	1.790	2134	2910
890520 [◇]	250	0.558	65	0.688	1.845	3 x 8	60	1.965	2493	3390
890521 [◇]	350	0.661	65	0.791	2.200	3 x 6	60	2.320	3521	4600
890522 [◇]	500	0.789	65	0.919	2.430	3 x 6	75	2.580	4924	6259
646751	600	0.866	80	1.026	2.670	3 x 6	75	2.820	5860	7423
890523 [◇]	750	0.968	80	1.128	2.880	3 x 4	75	3.030	7408	9145

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Standard stock item

Table 2 – Electrical and Engineering Data

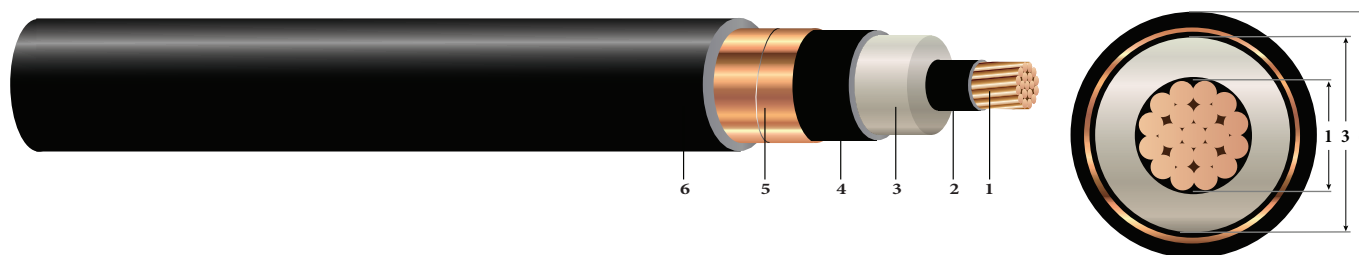
Stock Code	Cond. Size AWG	Min. Bending Radius Inches	Max. Pull Tension lbs.	Resistance		Reactance X _L @ 60Hz Ω/MFT	Ø Short Circuit Current 6 Cycles Amps	Allowable Ampacities [†]		
				DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT			60 °C Amps	75 °C Amps	90 °C Amps
550593 [◇]	8	5.6	396	0.652	0.815	0.033	3754	40	50	55
890513 [◇]	6	6.2	630	0.411	0.514	0.031	5966	55	65	75
890514 [◇]	4	7.1	1002	0.258	0.323	0.030	9491	70	85	95
890515 [◇]	2	7.8	1593	0.162	0.203	0.028	15089	95	115	130
TBA	1	9.2	2009	0.129	0.162	0.028	19029	110	130	145
890516 [◇]	1/0	10.2	2534	0.102	0.128	0.028	24011	125	150	170
890517 [◇]	2/0	11.0	3194	0.081	0.102	0.027	30264	145	175	195
890518	3/0	11.6	4027	0.064	0.081	0.027	38154	165	200	225
890519 [◇]	4/0	12.5	5078	0.051	0.064	0.026	48114	195	230	260
890520 [◇]	250	13.8	6000	0.043	0.055	0.027	56845	215	255	290
890521 [◇]	350	16.2	8400	0.031	0.040	0.026	79583	260	310	350
890522 [◇]	500	18.1	12000	0.022	0.029	0.025	113690	320	380	430
646751	600	19.7	14400	0.018	0.024	0.026	136428	350	420	475
890523 [◇]	750	21.2	18000	0.014	0.020	0.025	170535	400	475	535

[†] Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)



1/C CU 5KV 115 NL-EPR 133% TS SIMpull® PVC MV-105

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



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:** 115 Mills No Lead Ethylene Propylene Rubber (NL-EPR) 133%/100% Insulation Level for 5/8kV
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 5KV 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. 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 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
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- 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

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] ## (UL/CSA) 1/C [#AWG or #kcmil] CU 115 MILS NL-EPR 5KV 133%/ 8KV 100%
INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA 1/0 LARGER) FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC)
[SEQUENTIAL FEET MARKS]



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Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Jacket Thickness ¹ mils	Approx. OD (6) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches	Conduit Size* inches
		Cond. (1)	Insul. (3)	Insul. Shield						
		inches	inches	inches						
954636 [◇]	2	0.283	0.550	0.610	65	0.760	454	531	9.1	2.5
954644	1	0.322	0.589	0.649	65	0.799	522	670	9.6	2.5
955005 [◇]	1/0	0.362	0.629	0.689	65	0.839	609	845	10.1	2.5
955013 [◇]	2/0	0.405	0.672	0.732	65	0.882	714	1065	10.6	2.5
955021	3/0	0.456	0.723	0.783	80	0.963	871	1342	11.6	3
955088 [◇]	4/0	0.512	0.779	0.839	80	1.019	1034	1693	12.2	3
955039 [◇]	250	0.558	0.834	0.894	80	1.074	1180	2000	12.9	3
955047 [◇]	350	0.661	0.937	0.997	80	1.177	1540	2800	14.1	3.5
955054 [◇]	500	0.789	1.065	1.125	80	1.305	2067	4000	15.7	4
679638 [◇]	600	0.866	1.151	1.211	80	1.391	2419	4800	16.7	4
955096 [◇]	750	0.968	1.253	1.313	80	1.493	2932	6000	17.9	5
955070	1000	1.117	1.402	1.462	80	1.642	3777	8000	19.7	5

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
[◇] Standard stock item

Table 2 – Electrical and Engineering Data

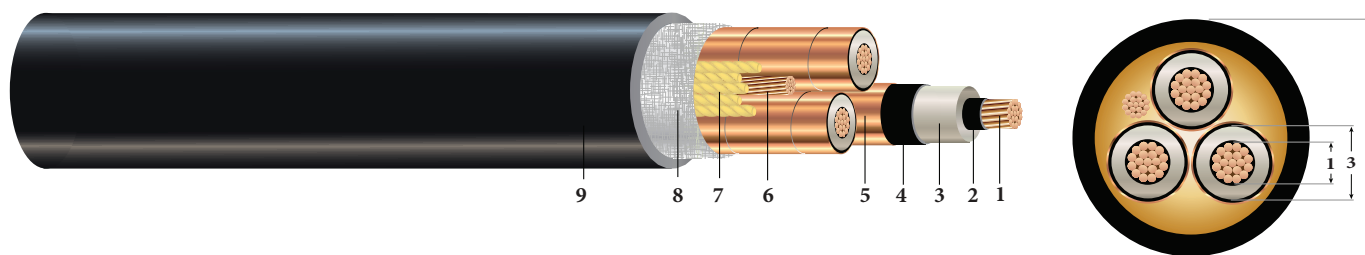
Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance* Ω/MFT	Zero Sequence Impedance* Ω/MFT	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT	X _C @ 60Hz MΩ*MFT	X _L @ 60Hz Ω/MFT				In Duct † Amps	In Air ‡ Amps
		954636 [◇]	2	0.162	0.203				0.036	0.044
954644	1	0.129	0.161	0.033	0.043	0.162 + j0.043	0.530 + j0.490	2144	170 / 180	225 / 250
955005 [◇]	1/0	0.102	0.128	0.030	0.041	0.128 + j0.041	0.498 + j0.468	2274	195 / 210	260 / 290
955013 [◇]	2/0	0.081	0.101	0.027	0.040	0.102 + j0.040	0.473 + j0.446	2414	220 / 235	300 / 330
955021	3/0	0.064	0.081	0.025	0.039	0.081 + j0.039	0.452 + j0.422	2580	250 / 270	345 / 385
955088 [◇]	4/0	0.051	0.064	0.023	0.038	0.065 + j0.037	0.434 + j0.397	2762	290 / 310	400 / 445
955039 [◇]	250	0.043	0.054	0.022	0.037	0.055 + j0.037	0.423 + j0.375	2941	320 / 345	445 / 495
955047 [◇]	350	0.031	0.039	0.019	0.035	0.040 + j0.035	0.402 + j0.336	3276	385 / 415	550 / 615
955054 [◇]	500	0.022	0.028	0.016	0.033	0.029 + j0.033	0.381 + j0.296	3693	470 / 505	695 / 775
679638 [◇]	600	0.018	0.024	0.015	0.033	0.024 + j0.033	0.369 + j0.272	3972	516 / 555	777 / 865
955096 [◇]	750	0.014	0.020	0.014	0.032	0.020 + j0.032	0.355 + j0.247	4304	585 / 630	900 / 1000
955070	1000	0.011	0.016	0.012	0.031	0.016 + j0.030	0.336 + j0.216	4789	670 / 720	1075 / 1200

* 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)



3/C CU 5KV 115 NL-EPR 133% TS PVC MV-105

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



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:** 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 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. **Grounding Conductor:** 1 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
7. **Filler:** Wax paper filler
8. **Binder:** Poly glass tape
9. **Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 5KV 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. 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
- 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 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- CSA C22.2 No.230 - Tray Cables - Rated TC-ER
- CSA C22.2 No. 2556 / UL 2556 - Cable Test Methods

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# (UL/CSA) 3/C [#AWG or #kcmil] CU 115 MILS NL-EPR 5KV 133%/ 8KV 100%
INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA) FOR DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET



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Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Ground No. x AWG	Jacket Thickness ¹ mils	Approx. OD (9) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches						
956292 [◇]	2	0.283	0.550	0.610	1 x 6	80	1.549	1564	1593	10.8
558148	1	0.322	0.589	0.649	1 x 4	80	1.633	1834	2009	11.4
956300 [◇]	1/0	0.362	0.629	0.689	1 x 4	80	1.719	2112	2534	12.0
958371 [◇]	2/0	0.405	0.672	0.732	1 x 4	110	1.872	2550	3194	13.1
558171	3/0	0.456	0.723	0.783	1 x 3	110	1.982	3012	4027	13.9
957456 [◇]	4/0	0.512	0.779	0.839	1 x 3	110	2.103	3536	5078	14.7
958386	250	0.558	0.834	0.894	1 x 3	110	2.222	4007	6000	15.6
955179 [◇]	350	0.661	0.937	0.997	1 x 2	110	2.445	5204	8400	17.1
958397 [◇]	500	0.789	1.065	1.125	1 x 1	110	2.721	6940	12000	19.0
557496	750	0.968	1.253	1.313	1 x 0	135	3.177	9920	18000	22.2

All dimensions are nominal and subject to normal manufacturing tolerances

¹ Comply with ICEA S-93-639 Appendix C for jacket thickness determination

[◇] Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT	X _C @ 60Hz MΩ*MFT	X _L @ 60Hz Ω/MFT				In Duct † Amps	In Air ‡ Amps
956292 [◇]	2	0.162	0.203	0.036	0.040	0.203 + j0.040	0.573 + j0.514	2017	135 / 145	140 / 154
558148	1	0.129	0.161	0.033	0.039	0.162 + j0.038	0.534 + j0.492	2144	155 / 165	160 / 180
956300 [◇]	1/0	0.102	0.128	0.030	0.037	0.128 + j0.037	0.503 + j0.470	2274	175 / 190	185 / 205
958371 [◇]	2/0	0.081	0.102	0.027	0.036	0.102 + j0.036	0.477 + j0.448	2414	200 / 220	215 / 240
558171	3/0	0.064	0.081	0.025	0.035	0.081 + j0.035	0.456 + j0.423	2580	230 / 250	250 / 280
957456 [◇]	4/0	0.051	0.064	0.023	0.034	0.065 + j0.034	0.438 + j0.398	2762	265 / 285	285 / 320
958386	250	0.043	0.054	0.022	0.033	0.055 + j0.033	0.426 + j0.375	2941	290 / 315	320 / 355
955179 [◇]	350	0.031	0.039	0.019	0.032	0.040 + j0.032	0.405 + j0.337	3276	355 / 380	395 / 440
958397 [◇]	500	0.022	0.028	0.016	0.030	0.029 + j0.030	0.383 + j0.296	3693	430 / 460	485 / 545
557496	750	0.014	0.020	0.014	0.029	0.020 + j0.029	0.357 + j0.247	4304	530 / 570	615 / 685

* Calculations are based on 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

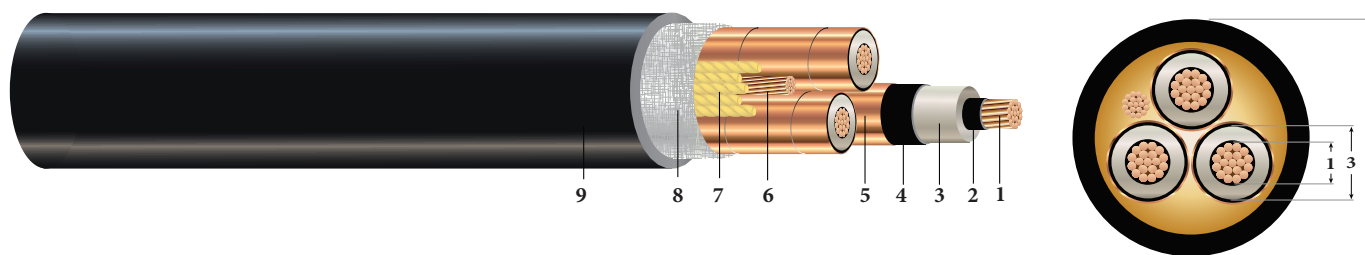
† Ampacities are based on TABLE 310.60(C)(79) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(71) of the 2014 National Electrical Code (40°C Ambient Air Temperature)



3/C CU 5KV 115 TRXLPE 133% TS PVC MV-105

Type MV-105 Three Conductor Copper, 115 Mils Tree Retardant 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:** 115 Mils Tree Retardant 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. **Grounding Conductor:** 1 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
7. **Filler:** Wax paper filler
8. **Binder:** Poly glass tape
9. **Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 5KV 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. 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
- 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 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] #P# (UL) 3/C [#AWG or #kcmil] CU 115 MILS TRXLPE 5KV 133%/ 8KV 100% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES.FOR DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



Southwire[®]

Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Ground No. x AWG	Jacket Thickness ¹ mils	Approx. OD (9) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches						
TBA	2	0.283	0.550	0.610	1 x 6	80	1.549	1517	1593	10.8
TBA	1	0.322	0.589	0.649	1 x 4	80	1.633	1783	2009	11.4
TBA	1/0	0.362	0.629	0.689	1 x 4	80	1.719	2056	2534	12.0
TBA	2/0	0.405	0.672	0.732	1 x 4	110	1.872	2490	3194	13.1
TBA	3/0	0.456	0.723	0.783	1 x 3	110	1.982	2947	4027	13.9
TBA	4/0	0.512	0.779	0.839	1 x 3	110	2.103	3464	5078	14.7
TBA	250	0.558	0.834	0.894	1 x 3	110	2.222	3929	6000	15.6
TBA	350	0.661	0.937	0.997	1 x 2	110	2.445	5116	8400	17.1
TBA	500	0.789	1.065	1.125	1 x 1	110	2.721	6838	12000	19.0
TBA	750	0.968	1.253	1.313	1 x 0	135	3.177	9798	18000	22.2

All dimensions are nominal and subject to normal manufacturing tolerances

¹ Comply with ICEA S-93-639 Appendix C for jacket thickness determination

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT	X _C @ 60Hz MΩ*MFT	X _L @ 60Hz Ω/MFT				In Duct † Amps	In Air ‡ Amps
TBA	2	0.162	0.203	0.045	0.040	0.203 + j0.040	0.573 + j0.514	2017	135 / 145	140 / 154
TBA	1	0.129	0.161	0.041	0.039	0.162 + j0.038	0.534 + j0.492	2144	155 / 165	160 / 180
TBA	1/0	0.102	0.128	0.038	0.037	0.128 + j0.037	0.503 + j0.470	2274	175 / 190	185 / 205
TBA	2/0	0.081	0.102	0.034	0.036	0.102 + j0.036	0.477 + j0.448	2414	200 / 220	215 / 240
TBA	3/0	0.064	0.081	0.031	0.035	0.081 + j0.035	0.456 + j0.423	2580	230 / 250	250 / 280
TBA	4/0	0.051	0.064	0.029	0.034	0.065 + j0.034	0.438 + j0.398	2762	265 / 285	285 / 320
TBA	250	0.043	0.054	0.027	0.033	0.055 + j0.033	0.426 + j0.375	2941	290 / 315	320 / 355
TBA	350	0.031	0.039	0.024	0.032	0.040 + j0.032	0.405 + j0.337	3276	355 / 380	395 / 440
TBA	500	0.022	0.028	0.020	0.030	0.029 + j0.030	0.383 + j0.296	3693	430 / 460	485 / 545
TBA	750	0.014	0.020	0.018	0.029	0.020 + j0.029	0.357 + j0.247	4304	530 / 570	615 / 685

* Calculations are based on 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

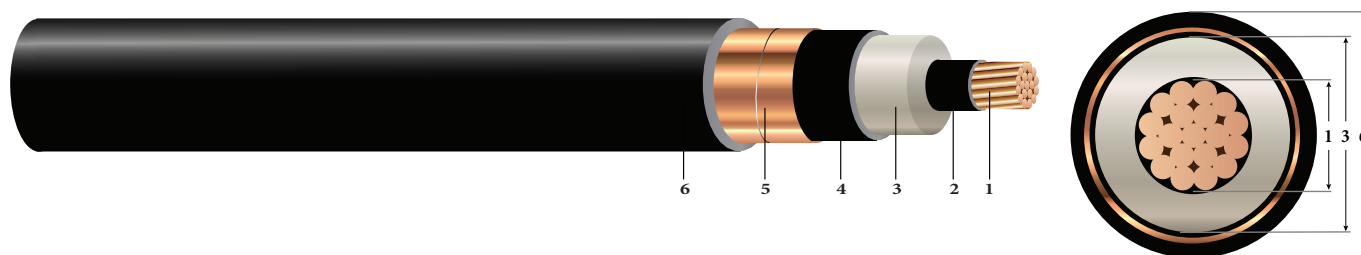
† Ampacities are based on TABLE 310.60(C)(79) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(71) of the 2014 National Electrical Code (40°C Ambient Air Temperature)



1/C CU 15KV 220 NL-EPR 133% TS SIMpull® PVC MV-105

Type MV-105 Single Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, SIMpull® Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA



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 No Lead Ethylene Propylene Rubber (NL-EPR) 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. 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 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
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- 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

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] #P# (UL/CSA) 1/C [#AWG or #kcmil] CU 220 MILS NL-EPR 15KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA 1/0 LARGER) FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire®

Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com

Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Jacket Thickness ¹ mils	Approx. OD (6) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bend- ing Radius inches	Conduit Size* inches
		Cond. (1)	Insul. (3)	Insul. Shield						
		inches	inches	inches						
953638 [◊]	2	0.283	0.760	0.820	80	1.000	639	531	12.0	3
955104	1	0.322	0.799	0.859	80	1.039	715	670	12.5	3
955989 [◊]	1/0	0.362	0.839	0.899	80	1.079	809	845	12.9	3
955997 [◊]	2/0	0.405	0.882	0.942	80	1.122	922	1065	13.5	3.5
956003	3/0	0.456	0.933	0.993	80	1.173	1063	1342	14.1	3.5
956011 [◊]	4/0	0.512	0.989	1.049	80	1.229	1235	1693	14.7	3.5
956029 [◊]	250	0.558	1.044	1.104	80	1.284	1390	2000	15.4	4
956037 [◊]	350	0.661	1.147	1.207	80	1.387	1767	2800	16.6	4
956045 [◊]	500	0.789	1.275	1.335	80	1.515	2314	4000	18.2	5
643755 [◊]	600	0.866	1.361	1.421	80	1.601	2680	4800	19.2	5
956052 [◊]	750	0.968	1.463	1.523	80	1.703	3210	6000	20.4	5
956060 [◊]	1000	1.117	1.612	1.672	110	1.912	4183	8000	22.9	6
581886	1250	1.250	1.767	1.827	110	2.067	5074	10000	24.8	6
567443	1500	1.370	1.930	1.990	110	2.164	5853	12000	26.2	
550811	2000	1.583	2.138	2.198	110	2.438	7682	16000	29.3	

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

◊ Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C	AC @ 90°C	X _c @ 60Hz	X _L @ 60Hz				In Duct †	In Air ‡
		Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT				Amps	Amps
953638 [◊]	2	0.162	0.203	0.053	0.051	0.203 + j0.051	0.573 + j0.418	2700	155 / 165	195 / 215
955104	1	0.129	0.161	0.049	0.049	0.162 + j0.049	0.531 + j0.400	2827	175 / 185	225 / 250
955989 [◊]	1/0	0.102	0.128	0.045	0.047	0.128 + j0.047	0.496 + j0.383	2957	200 / 215	260 / 290
955997 [◊]	2/0	0.081	0.101	0.042	0.045	0.102 + j0.045	0.467 + j0.366	3097	230 / 245	300 / 335
956003	3/0	0.064	0.080	0.039	0.043	0.081 + j0.043	0.443 + j0.346	3263	260 / 275	345 / 385
956011 [◊]	4/0	0.051	0.064	0.036	0.042	0.065 + j0.042	0.423 + j0.327	3445	295 / 315	400 / 445
956029 [◊]	250	0.043	0.054	0.034	0.041	0.055 + j0.041	0.409 + j0.309	3624	325 / 345	445 / 495
956037 [◊]	350	0.031	0.039	0.030	0.039	0.040 + j0.039	0.384 + j0.279	3959	390 / 415	550 / 610
956045 [◊]	500	0.022	0.028	0.026	0.037	0.029 + j0.037	0.361 + j0.248	4376	465 / 500	685 / 765
643755 [◊]	600	0.018	0.024	0.024	0.036	0.348 + j0.229	0.024 + j0.036	4655	505 / 544	765 / 855
956052 [◊]	750	0.014	0.019	0.022	0.035	0.020 + j0.035	0.334 + j0.210	4987	565 / 610	885 / 990
956060 [◊]	1000	0.011	0.015	0.020	0.034	0.016 + j0.034	0.315 + j0.185	5472	640 / 690	1060 / 1185
581886	1250	0.009	0.013	0.019	0.033	0.014 + j0.033	0.298 + j0.165	5976	715 / 770	1210 / 1350
567443	1500	0.007	0.011	0.017	0.032	0.012 + j0.032	0.286 + j0.151	6363	790 / 850	1331 / 1485
550811	2000	0.005	0.010	0.016	0.032	0.011 + j0.032	0.263 + j0.127	7183	940 / 1010	1575 / 1755

* 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)

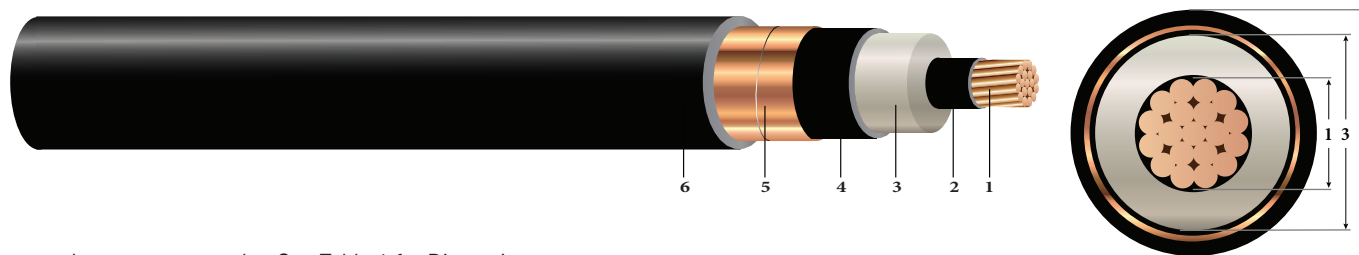
‡ Ampacities are based on TABLE 310.60(C)(69) of the 2014 National Electrical Code (40°C Ambient Air Temperature)

◊ Standard stock item



1/C CU 15KV 220 NL-EPR 133% TS PVC MV-105 - Silicone Free

Type MV-105 Single Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA. Silicone Free



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 No Lead Ethylene Propylene Rubber (NL-EPR) 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). Silicone free

APPLICATIONS AND FEATURES:

Southwire's 15KV cables are silicone free 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. 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 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
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- 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

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] #P# (UL/CSA) 1/C [#AWG or #kcmil] CU 220 MILS NL-EPR 15KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA 1/0 LARGER) FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire®

Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com

Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Jacket Thickness ¹ mils	Approx. OD (6) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bend- ing Radius inches	Conduit Size* inches
		Cond. (1)	Insul. (3)	Insul. Shield						
		inches	inches	inches						
TBA	2	0.283	0.760	0.820	80	1.000	639	531	12.0	3
TBA	1	0.322	0.799	0.859	80	1.039	715	670	12.5	3
TBA	1/0	0.362	0.839	0.899	80	1.079	809	845	12.9	3
TBA	2/0	0.405	0.882	0.942	80	1.122	922	1065	13.5	3.5
TBA	3/0	0.456	0.933	0.993	80	1.173	1063	1342	14.1	3.5
TBA	4/0	0.512	0.989	1.049	80	1.229	1235	1693	14.7	3.5
TBA	250	0.558	1.044	1.104	80	1.284	1390	2000	15.4	4
TBA	350	0.661	1.147	1.207	80	1.387	1767	2800	16.6	4
TBA	500	0.789	1.275	1.335	80	1.515	2314	4000	18.2	5
TBA	600	0.866	1.361	1.421	80	1.601	2680	4800	19.2	5
TBA	750	0.968	1.463	1.523	80	1.703	3210	6000	20.4	5
TBA	1000	1.117	1.612	1.672	110	1.912	4183	8000	22.9	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

◇ Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C	AC @ 90°C	X _c @ 60Hz	X _L @ 60Hz				In Duct †	In Air ‡
		Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT				Amps	Amps
TBA	2	0.162	0.203	0.053	0.051	0.203 + j0.051	0.573 + j0.418	2700	155 / 165	195 / 215
TBA	1	0.129	0.161	0.049	0.049	0.162 + j0.049	0.531 + j0.400	2827	175 / 185	225 / 250
TBA	1/0	0.102	0.128	0.045	0.047	0.128 + j0.047	0.496 + j0.383	2957	200 / 215	260 / 290
TBA	2/0	0.081	0.101	0.042	0.045	0.102 + j0.045	0.467 + j0.366	3097	230 / 245	300 / 335
TBA	3/0	0.064	0.080	0.039	0.043	0.081 + j0.043	0.443 + j0.346	3263	260 / 275	345 / 385
TBA	4/0	0.051	0.064	0.036	0.042	0.065 + j0.042	0.423 + j0.327	3445	295 / 315	400 / 445
TBA	250	0.043	0.054	0.034	0.041	0.055 + j0.041	0.409 + j0.309	3624	325 / 345	445 / 495
TBA	350	0.031	0.039	0.030	0.039	0.040 + j0.039	0.384 + j0.279	3959	390 / 415	550 / 610
TBA	500	0.022	0.028	0.026	0.037	0.029 + j0.037	0.361 + j0.248	4376	465 / 500	685 / 765
TBA	600	0.018	0.024	0.024	0.036	0.348 + j0.229	0.024 + j0.036	4655	505 / 544	765 / 855
TBA	750	0.014	0.019	0.022	0.035	0.020 + j0.035	0.334 + j0.210	4987	565 / 610	885 / 990
TBA	1000	0.011	0.015	0.020	0.034	0.016 + j0.034	0.315 + j0.185	5472	640 / 690	1060 / 1185

* 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)

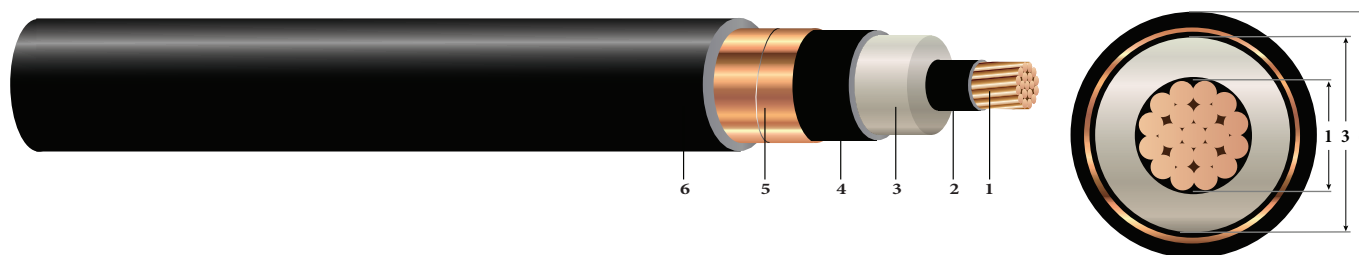
‡ Ampacities are based on TABLE 310.60(C)(69) of the 2014 National Electrical Code (40°C Ambient Air Temperature)

◇ Standard stock item



1/C CU 15KV 220 NL-EPR 133% TS CPE MV-105 - Silicone Free

Type MV-105 Single Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Thermoplastic Chlorinated Polyethylene (CPE) Jacket, Dual Rated UL/CSA. Silicone Free



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 No Lead Ethylene Propylene Rubber (NL-EPR) 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:** Thermoplastic Chlorinated Polyethylene (CPE)

APPLICATIONS AND FEATURES:

Southwire's 15KV cables silicone free 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
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- 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

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# (UL/CSA) 1/C [#AWG or #kcmil] CU 220 MILS NL-EPR 15KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA 1/0 LARGER) FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire[®]

Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com

Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Jacket Thickness ¹ mils	Approx. OD (6) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches	Conduit Size* inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches						
550502 ^o	2	0.283	0.760	0.820	80	1.000	650	531	12.0	3
TBA	1	0.322	0.799	0.859	80	1.039	726	670	12.5	3
550503 ^o	1/0	0.362	0.839	0.899	80	1.079	820	845	12.9	3
550504 ^o	2/0	0.405	0.882	0.942	80	1.122	934	1065	13.5	3.5
570935	3/0	0.456	0.933	0.993	80	1.173	1076	1342	14.1	3.5
550505 ^o	4/0	0.512	0.989	1.049	80	1.229	1249	1693	14.7	3.5
550506	250	0.558	1.044	1.104	80	1.284	1404	2000	15.4	4
550507 ^o	350	0.661	1.147	1.207	80	1.387	1782	2800	16.6	4
550508 ^o	500	0.789	1.275	1.335	80	1.515	2331	4000	18.2	5
550510 ^o	750	0.968	1.463	1.523	80	1.703	3229	6000	20.4	5
550511	1000	1.117	1.612	1.672	110	1.912	4212	8000	22.9	6
TBA	1250	1.250	1.767	1.827	110	2.067	5105	10000	24.8	6
593519	2000	1.583	2.143	2.203	140	2.503	7910	16000	30.0	

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 AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT	X _C @ 60Hz MΩ*MFT	X _L @ 60Hz Ω/MFT				In Duct † Amps	In Air ‡ Amps
550502 ^o	2	0.162	0.203	0.053	0.051	0.203 + j0.051	0.573 + j0.418	2700	155 / 165	195 / 215
TBA	1	0.129	0.161	0.049	0.049	0.162 + j0.049	0.531 + j0.400	2827	175 / 185	225 / 250
550503 ^o	1/0	0.102	0.128	0.045	0.047	0.128 + j0.047	0.496 + j0.383	2957	200 / 215	260 / 290
550504 ^o	2/0	0.081	0.101	0.042	0.045	0.102 + j0.045	0.467 + j0.366	3097	230 / 245	300 / 335
570935	3/0	0.064	0.080	0.039	0.043	0.081 + j0.043	0.443 + j0.346	3263	260 / 275	345 / 385
550505 ^o	4/0	0.051	0.064	0.036	0.042	0.065 + j0.042	0.423 + j0.327	3445	295 / 315	400 / 445
550506	250	0.043	0.054	0.034	0.041	0.055 + j0.041	0.409 + j0.309	3624	325 / 345	445 / 495
550507 ^o	350	0.031	0.039	0.030	0.039	0.040 + j0.039	0.384 + j0.279	3959	390 / 415	550 / 610
550508 ^o	500	0.022	0.028	0.026	0.037	0.029 + j0.037	0.361 + j0.248	4376	465 / 500	685 / 765
550510 ^o	750	0.014	0.019	0.022	0.035	0.020 + j0.035	0.334 + j0.210	4987	565 / 610	885 / 990
550511	1000	0.011	0.015	0.020	0.034	0.016 + j0.034	0.315 + j0.185	5472	640 / 690	1060 / 1185
TBA	1250	0.009	0.013	0.019	0.033	0.014 + j0.033	0.298 + j0.165	5976	715 / 770	1210 / 1350
593519	2000	0.005	0.010	0.015	0.032	0.011 + j0.032	0.268 + j0.131	6991		1575 / 1755

* 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

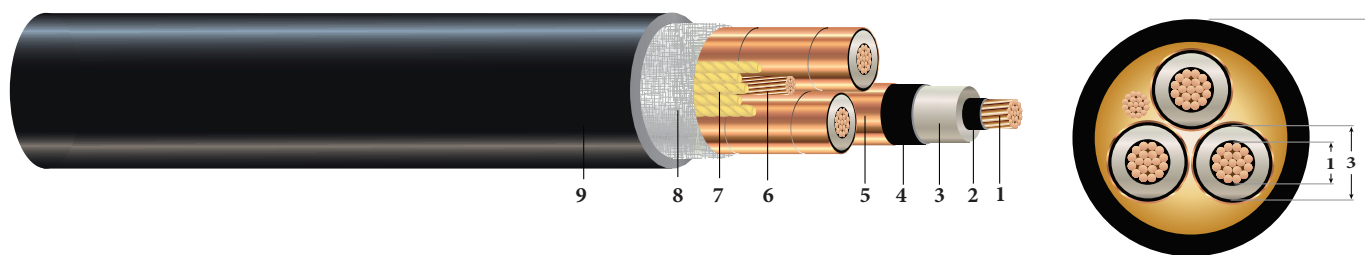
† Ampacities are based on TABLE 310.60(C)(77) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(69) of the 2014 National Electrical Code (40°C Ambient Air Temperature)



3/C CU 15KV 220 NL-EPR 133% TS PVC MV-105

Type MV-105 Three Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Conductor Shield:** Semi-conducting cross-linked copolymer
- Insulation:** 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level,
- Insulation Shield:** Stripable semi-conducting cross-linked copolymer
- Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
- Grounding Conductor:** 1 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
- Filler:** Wax paper filler
- Binder:** Poly glass tape
- 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. 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
- 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 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- CSA C22.2 No.230 - Tray Cables - Rated TC-ER
- CSA C22.2 No. 2556 / UL 2556 - Cable Test Methods

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# (UL/CSA) 3/C [#AWG or #kcmil] CU 220 MILS NL-EPR 15KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA) FOR DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire[®]

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Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Ground No. x AWG	Jacket Thickness ¹ mils	Approx. OD (9) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches						
956490	2	0.283	0.760	0.820	1 x 6	110	2.062	2246	1593	14.4
958298	1	0.322	0.799	0.859	1 x 4	110	2.147	2545	2009	15.0
958306	1/0	0.362	0.839	0.899	1 x 4	110	2.233	2852	2534	15.6
558254	2/0	0.405	0.882	0.942	1 x 4	110	2.326	3220	3194	16.3
TBA	3/0	0.456	0.933	0.993	1 x 3	110	2.436	3714	4027	17.1
956284	4/0	0.512	0.989	1.049	1 x 3	110	2.557	4272	5078	17.9
558288	250	0.558	1.044	1.104	1 x 3	110	2.676	4777	6000	18.7
958322	350	0.661	1.147	1.207	1 x 2	110	2.898	6039	8400	20.3
958330 [◇]	500	0.789	1.275	1.335	1 x 1	135	3.225	8001	12000	22.6
558312	750	0.968	1.463	1.523	1 x 0	135	3.631	10971	18000	25.4
TBA	1000	1.117	1.612	1.672	1 x 0	135	3.953	13769	24000	27.7

All dimensions are nominal and subject to normal manufacturing tolerances

¹ Comply with ICEA S-93-639 Appendix C for jacket thickness determination

[◇] Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT	X _C @ 60Hz MΩ*MFT	X _L @ 60Hz Ω/MFT				In Duct † Amps	In Air ‡ Amps
956490	2	0.162	0.203	0.053	0.047	0.203 + j0.047	0.577 + j0.419	2700	150 / 160	165 / 185
958298	1	0.129	0.161	0.049	0.045	0.162 + j0.045	0.535 + j0.401	2827	170 / 185	185 / 210
958306	1/0	0.102	0.128	0.045	0.043	0.128 + j0.043	0.499 + j0.383	2957	195 / 210	215 / 240
558254	2/0	0.081	0.101	0.042	0.042	0.102 + j0.042	0.471 + j0.366	3097	220 / 235	245 / 275
TBA	3/0	0.064	0.081	0.039	0.040	0.081 + j0.040	0.446 + j0.346	3263	250 / 270	285 / 315
956284	4/0	0.051	0.064	0.036	0.039	0.065 + j0.039	0.426 + j0.327	3445	285 / 305	325 / 360
558288	250	0.043	0.054	0.034	0.038	0.055 + j0.038	0.411 + j0.309	3624	310 / 335	360 / 400
958322	350	0.031	0.039	0.030	0.036	0.040 + j0.036	0.386 + j0.279	3959	375 / 400	435 / 490
958330 [◇]	500	0.022	0.028	0.026	0.034	0.028 + j0.034	0.362 + j0.247	4376	450 / 485	535 / 600
558312	750	0.014	0.020	0.022	0.032	0.020 + j0.032	0.335 + j0.209	4987	545 / 585	670 / 745
TBA	1000	0.011	0.016	0.020	0.031	0.016 + j0.031	0.316 + j0.185	5472	615 / 660	770 / 860

* Calculations are based on 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

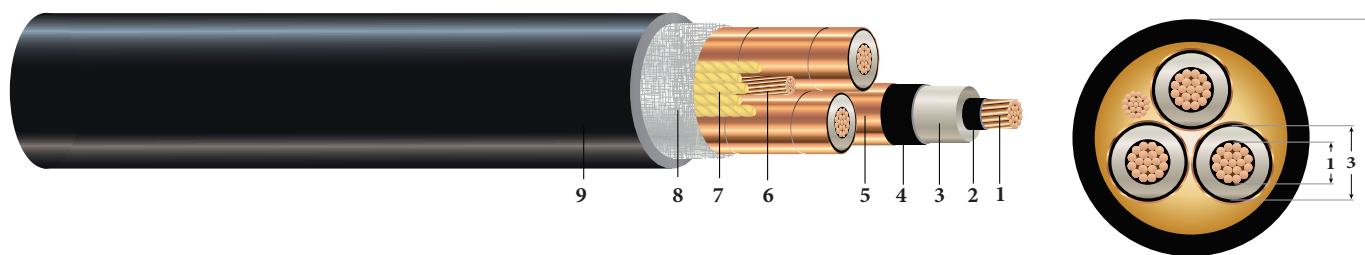
† Ampacities are based on TABLE 310.60(C)(79) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(71) of the 2014 National Electrical Code (40°C Ambient Air Temperature)



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

Type MV-105 Three Conductor Copper, 220 Mils Tree Retardant 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 Retardant 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. **Grounding Conductor:** 1 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
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, 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. 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
- 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 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] #P# (UL) 3/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 YEAR (NESC) [SEQUENTIAL FEET MARKS]



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Southwire[®]

Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Ground No. x AWG	Jacket Thickness ¹ mils	Approx. OD (9) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches						
TBA	2	0.283	0.760	0.820	1 x 6	110	2.062	2136	1593	14.4
TBA	1	0.322	0.799	0.859	1 x 4	110	2.147	2427	2009	15.0
TBA	1/0	0.362	0.839	0.899	1 x 4	110	2.233	2726	2534	15.6
TBA	2/0	0.405	0.882	0.942	1 x 4	110	2.326	3085	3194	16.3
TBA	3/0	0.456	0.933	0.993	1 x 3	110	2.436	3569	4027	17.1
TBA	4/0	0.512	0.989	1.049	1 x 3	110	2.557	4116	5078	17.9
TBA	250	0.558	1.044	1.104	1 x 3	110	2.676	4610	6000	18.7
TBA	350	0.661	1.147	1.207	1 x 2	110	2.898	5851	8400	20.3
TBA	500	0.789	1.275	1.335	1 x 1	135	3.225	7787	12000	22.6
TBA	750	0.968	1.463	1.523	1 x 0	135	3.631	10719	18000	25.4

All dimensions are nominal and subject to normal manufacturing tolerances

¹ Comply with ICEA S-93-639 Appendix C for jacket thickness determination

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT	X _C @ 60Hz MΩ*MFT	X _L @ 60Hz Ω/MFT				In Duct † Amps	In Air ‡ Amps
TBA	2	0.162	0.203	0.067	0.047	0.203 + j0.047	0.577 + j0.419	2700	150 / 160	165 / 185
TBA	1	0.129	0.161	0.062	0.045	0.162 + j0.045	0.535 + j0.401	2827	170 / 185	185 / 210
TBA	1/0	0.102	0.128	0.057	0.043	0.128 + j0.043	0.499 + j0.383	2957	195 / 210	215 / 240
TBA	2/0	0.081	0.101	0.053	0.042	0.102 + j0.042	0.471 + j0.366	3097	220 / 235	245 / 275
TBA	3/0	0.064	0.081	0.049	0.040	0.081 + j0.040	0.446 + j0.346	3263	250 / 270	285 / 315
TBA	4/0	0.051	0.064	0.045	0.039	0.065 + j0.039	0.426 + j0.327	3445	285 / 305	325 / 360
TBA	250	0.043	0.054	0.043	0.038	0.055 + j0.038	0.411 + j0.309	3624	310 / 335	360 / 400
TBA	350	0.031	0.039	0.038	0.036	0.040 + j0.036	0.386 + j0.279	3959	375 / 400	435 / 490
TBA	500	0.022	0.028	0.033	0.034	0.028 + j0.034	0.362 + j0.247	4376	450 / 485	535 / 600
TBA	750	0.014	0.020	0.028	0.032	0.020 + j0.032	0.335 + j0.209	4987	545 / 585	670 / 745

* Calculations are based on 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

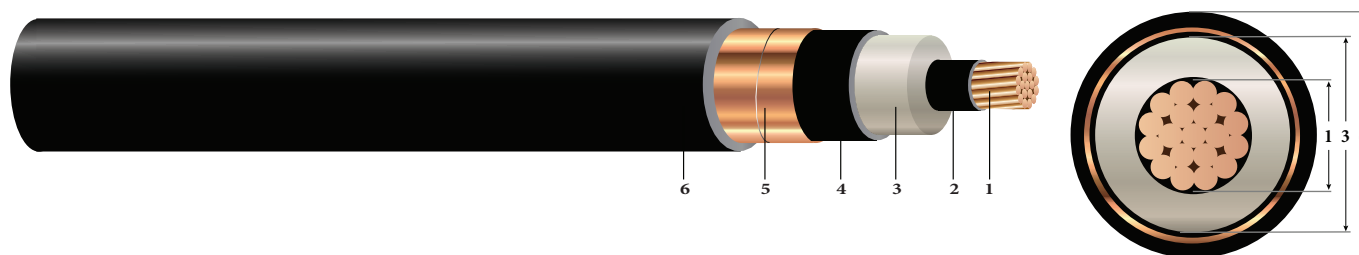
† Ampacities are based on TABLE 310.60(C)(79) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(71) of the 2014 National Electrical Code (40°C Ambient Air Temperature)



1/C CU 25KV 320 NL-EPR 133% TS SIMpull® PVC MV-105

Type MV-105 Single Conductor Copper, 320 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, SIMpull® Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA



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:** 320 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 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 25KV 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. 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 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
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- 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

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] #P# (UL/CSA) 1/C [#AWG or #kcmil] CU 320 MILS NL-EPR 25KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA 1/0 LARGER) FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire®

Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com

Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Jacket Thickness ¹ mils	Approx. OD (6) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches	Conduit Size* inches
		Cond. (1)	Insul. (3)	Insul. Shield						
		inches	inches	inches						
TBA	1	0.322	0.999	1.059	80	1.239	909	670	14.9	3.5
644614 [◇]	1/0	0.362	1.039	1.099	80	1.279	1009	845	15.3	4
644615	2/0	0.405	1.082	1.142	80	1.322	1129	1065	15.9	4
644616	3/0	0.456	1.133	1.193	80	1.373	1278	1342	16.5	4
644618	4/0	0.512	1.189	1.249	80	1.429	1459	1693	17.1	4
644619	250	0.558	1.244	1.304	80	1.484	1622	2000	17.8	5
644621	350	0.661	1.347	1.407	80	1.587	2015	2800	19.0	5
644623 [◇]	500	0.789	1.475	1.535	80	1.715	2582	4000	20.6	5
644626 [◇]	750	0.968	1.663	1.723	110	1.963	3614	6000	23.6	6
644627	1000	1.117	1.812	1.872	110	2.112	4514	8000	25.3	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

[◇] Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C	AC @ 90°C	X _C @ 60Hz	X _L @ 60Hz				In Duct †	In Air ‡
		Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT				Amps	Amps
TBA	1	0.129	0.161	0.061	0.053	0.162 + j0.053	0.519 + j0.334	3478	175 / 185	225 / 250
644614 [◇]	1/0	0.102	0.128	0.057	0.051	0.128 + j0.051	0.482 + j0.321	3608	200 / 215	260 / 290
644615	2/0	0.081	0.101	0.053	0.049	0.102 + j0.049	0.452 + j0.307	3748	230 / 245	300 / 330
644616	3/0	0.064	0.080	0.049	0.047	0.081 + j0.047	0.427 + j0.291	3914	260 / 275	345 / 380
644618	4/0	0.051	0.064	0.045	0.045	0.065 + j0.045	0.405 + j0.276	4096	295 / 315	395 / 445
644619	250	0.043	0.054	0.043	0.044	0.055 + j0.044	0.390 + j0.262	4275	325 / 345	440 / 490
644621	350	0.031	0.039	0.038	0.042	0.040 + j0.042	0.365 + j0.238	4610	390 / 415	545 / 605
644623 [◇]	500	0.022	0.028	0.034	0.040	0.029 + j0.039	0.341 + j0.213	5026	465 / 500	680 / 755
644626 [◇]	750	0.014	0.019	0.029	0.038	0.020 + j0.038	0.314 + j0.182	5638	565 / 610	870 / 970
644627	1000	0.011	0.015	0.026	0.036	0.016 + j0.036	0.296 + j0.163	6123	640 / 690	1040 / 1160

* 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

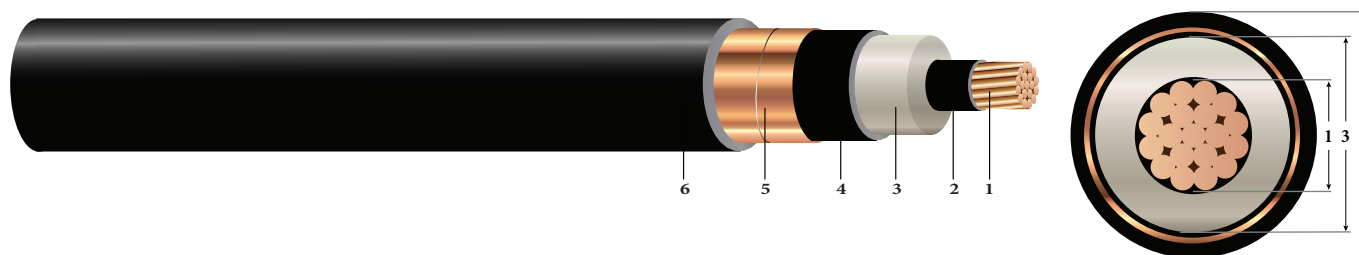
† Ampacities are based on TABLE 310.60(C)(77) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(69) of the 2014 National Electrical Code (40°C Ambient Air Temperature)



1/C CU 35KV 420 NL-EPR 133% TS SIMpull® PVC MV-105

Type MV-105 Single Conductor Copper, 420 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, SIMpull® Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA



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:** 420 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 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 35KV 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. 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 B3 Soft or annealed copper
- ASTM B8 Concentric-lay-standard copper
- UL 1072 - Medium Voltage Power Cables
- ICEA S-97-682 5-46 KV Utility & ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- 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
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- 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

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] #P# (UL/CSA) 1/C [#AWG or #kcmil] CU 420 MILS NL-EPR 35KV 133% INS LEVEL 25% TS MV-105 For CT USE SUN. RES. TC-ER(CSA 1/0 LARGER) FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire®

Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com

Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Jacket Thickness ¹ mils	Approx. OD (6) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches	Conduit Size* inches
		Cond. (1)	Insul. (3)	Insul. Shield						
		inches	inches	inches						
890065 [◇]	1/0	0.362	1.239	1.299	80	1.479	1240	845	17.7	5
890082	2/0	0.405	1.282	1.342	80	1.522	1366	1065	18.3	5
TBA	3/0	0.456	1.333	1.393	80	1.573	1524	1342	18.9	5
890066 [◇]	4/0	0.512	1.389	1.449	80	1.629	1713	1693	19.5	5
890083	250	0.558	1.444	1.504	80	1.684	1885	2000	20.2	5
890067 [◇]	350	0.661	1.547	1.607	110	1.847	2394	2800	22.2	6
890068 [◇]	500	0.789	1.675	1.735	110	1.975	2988	4000	23.7	6
890084	750	0.968	1.863	1.923	110	2.163	3953	6000	26.0	6
890085	1000	1.117	2.012	2.072	110	2.312	4877	8000	27.7	

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

[◇] Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance* Ω/MFT	Zero Sequence Impedance* Ω/MFT	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C	AC @ 90°C	X _C @ 60Hz	X _L @ 60Hz				In Duct †	In Air ‡
		Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT				Amps	Amps
890065 [◇]	1/0	0.102	0.128	0.066	0.054	0.128 + j0.054	0.464 + j0.273	4259	200 / 215	260 / 290
890082	2/0	0.081	0.101	0.062	0.052	0.102 + j0.052	0.434 + j0.262	4398	230 / 245	300 / 330
TBA	3/0	0.064	0.080	0.058	0.050	0.081 + j0.050	0.408 + j0.249	4564	260 / 275	345 / 380
890066 [◇]	4/0	0.051	0.064	0.054	0.048	0.065 + j0.048	0.386 + j0.236	4747	295 / 315	395 / 445
890083	250	0.043	0.054	0.051	0.047	0.055 + j0.047	0.370 + j0.225	4926	325 / 345	440 / 490
890067 [◇]	350	0.031	0.039	0.046	0.045	0.040 + j0.045	0.345 + j0.206	5261	390 / 415	545 / 605
890068 [◇]	500	0.022	0.028	0.041	0.043	0.029 + j0.043	0.321 + j0.186	5677	465 / 500	680 / 755
890084	750	0.014	0.019	0.035	0.040	0.020 + j0.040	0.295 + j0.161	6289	565 / 610	870 / 970
890085	1000	0.011	0.015	0.032	0.038	0.016 + j0.038	0.279 + j0.145	6773	640 / 690	1040 / 1160

* 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

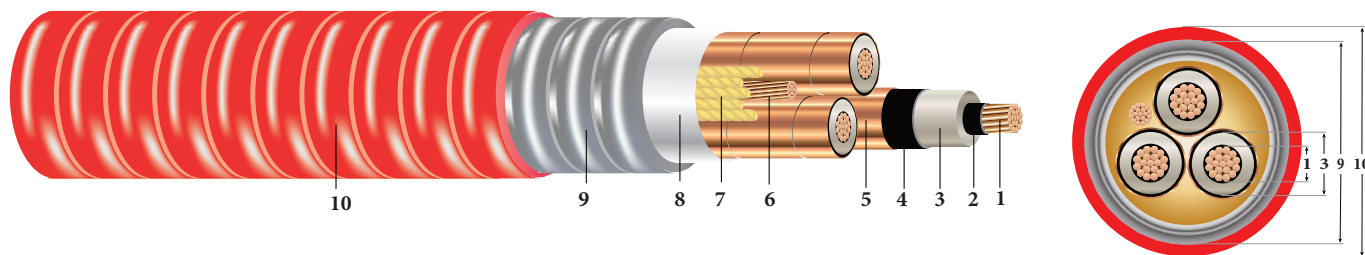
† Ampacities are based on TABLE 310.60(C)(77) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(69) of the 2014 National Electrical Code (40°C Ambient Air Temperature)



3/C CU 15KV 220 NL-EPR 133% TS AIA PVC MV-105

Type MV-105 Three Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Aluminum Interlocked Armor (AIA), Polyvinyl Chloride (PVC) Jacket. Type MC For Cable Tray Use - Sunlight Resistant



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 No Lead Ethylene Propylene Rubber (NL-EPR) 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. **Grounding Conductor:** 1 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
7. **Filler:** Wax paper filler
8. **Binder:** Polypropylene tape
9. **Armor:** Aluminum Interlocked Armor (AIA)
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. 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
- 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 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] #P# (UL) 3/C [#AWG or #kcmil] CU 220 MILS NL-EPR AIA 15KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. FOR DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



Southwire[®]

Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Ground No. x AWG	Dia. Over Armor (9) inches	Jacket Thickness mils	Approx. OD (10) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches							
551671 ◊	2	0.283	0.760	0.820	1 x 6	2.136	60	2.256	2419	1593	15.8
556844	1	0.322	0.799	0.859	1 x 4	2.221	60	2.341	2723	2009	16.4
556951	1/0	0.362	0.839	0.899	1 x 4	2.307	75	2.457	3104	2534	17.2
957886 ◊	2/0	0.405	0.882	0.942	1 x 4	2.400	75	2.550	3481	3194	17.8
556969	3/0	0.456	0.933	0.993	1 x 3	2.510	75	2.660	3985	4027	18.6
551648 ◊	4/0	0.512	0.989	1.049	1 x 3	2.631	75	2.781	4554	5078	19.5
447276	250	0.558	1.044	1.104	1 x 3	2.750	75	2.900	5070	6000	20.3
551614 ◊	350	0.661	1.147	1.207	1 x 2	2.972	75	3.122	6352	8400	21.9
409169 ◊	500	0.789	1.275	1.335	1 x 1	3.249	85	3.419	8256	12000	23.9
556977	750	0.968	1.463	1.523	1 x 0	3.655	85	3.825	11252	18000	26.8

All dimensions are nominal and subject to normal manufacturing tolerances
 ◊ Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C	AC @ 90°C	X _C @ 60Hz	X _L @ 60Hz				Directly Buried †	In Air ‡
		Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT				Amps	Amps
551671 ◊	2	0.162	0.203	0.053	0.047	0.203 + j0.047	0.577 + j0.419	2700	185 / 200	165 / 185
556844	1	0.129	0.161	0.049	0.045	0.162 + j0.045	0.535 + j0.401	2827	210 / 225	185 / 210
556951	1/0	0.102	0.128	0.045	0.043	0.128 + j0.043	0.499 + j0.383	2957	240 / 255	215 / 240
957886 ◊	2/0	0.081	0.101	0.042	0.042	0.102 + j0.042	0.471 + j0.366	3097	270 / 290	245 / 275
556969	3/0	0.064	0.081	0.039	0.040	0.081 + j0.040	0.446 + j0.346	3263	305 / 330	285 / 315
551648 ◊	4/0	0.051	0.064	0.036	0.039	0.065 + j0.039	0.426 + j0.327	3445	350 / 375	325 / 360
447276	250	0.043	0.054	0.034	0.038	0.055 + j0.038	0.411 + j0.309	3624	380 / 410	360 / 400
551614 ◊	350	0.031	0.039	0.030	0.036	0.040 + j0.036	0.386 + j0.279	3959	460 / 495	435 / 490
409169 ◊	500	0.022	0.028	0.026	0.034	0.028 + j0.034	0.362 + j0.247	4376	550 / 590	535 / 600
556977	750	0.014	0.020	0.022	0.032	0.020 + j0.032	0.335 + j0.209	4987	665 / 720	670 / 745

* Calculations are based on 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

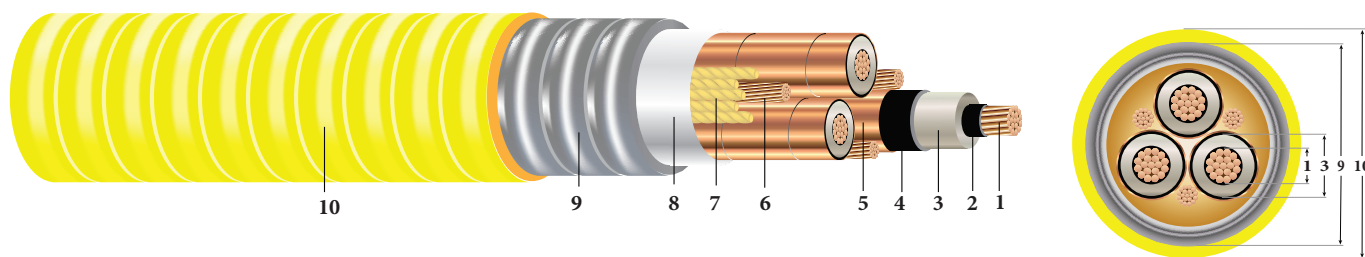
† Ampacities are based on TABLE 310.60(C)(83) of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(71) of the 2014 National Electrical Code (40°C Ambient Air Temperature)



3/C CU 5KV 115 NL-EPR 133% TS ARMOR-X PVC MV-105

Type MV-105 Three Conductor Copper, 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Continuous Corrugated Welded Armor (Armor-X), Polyvinyl Chloride (PVC) Jacket



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Conductor Shield:** Semi-conducting cross-linked copolymer
- Insulation:** 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level,
- Insulation Shield:** Stripable semi-conducting cross-linked copolymer
- Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
- Grounding Conductor:** 3 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
- Filler:** Wax paper filler
- Binder:** Polypropylene tape
- Armor:** Continuous Corrugated Welded Armor (Armor-X)
- Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 5KV ARMOR-X are armored cables 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, 250°C for short circuit conditions, and -50°C for cold bend. For uses in Class I, II, and III, Division 1 and 2 hazardous locations per NEC Article 501, 502, and 503. Suitable for VFD application.

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 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] #P# ARMOR-X (UL) 3/C [#AWG or #kcmil] CU 115 MILS NL-EPR 5KV 133%/ 8KV 100% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. FOR DIRECT BURIAL FT4 [-50°C] YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



Southwire[®]

Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Ground No. x AWG	Dia. Over Armor (9) inches	Jacket Thickness mils	Approx. OD (10) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches							
890636 ◊	2	0.283	0.550	0.610	3 x 10	1.670	60	1.790	1808	1593	12.5
890637	1	0.322	0.589	0.649	3 x 8	1.845	60	1.965	2127	2009	13.8
890638 ◊	1/0	0.362	0.629	0.689	3 x 8	1.870	60	1.990	2393	2534	13.9
890639 ◊	2/0	0.405	0.672	0.732	3 x 8	2.040	60	2.160	2762	3194	15.1
TBA	3/0	0.456	0.723	0.783	3 x 6	2.200	60	2.320	3302	4027	16.2
890640 ◊	4/0	0.512	0.779	0.839	3 x 6	2.290	75	2.440	3892	5078	17.1
890641	250	0.558	0.834	0.894	3 x 6	2.430	75	2.580	4380	6000	18.1
890642 ◊	350	0.661	0.937	0.997	3 x 6	2.670	75	2.820	5561	8400	19.7
890643 ◊	500	0.789	1.065	1.125	3 x 4	3.000	75	3.150	7715	12000	22.1
890644 ◊	750	0.968	1.253	1.313	3 x 4	3.540	85	3.710	10724	18000	26.0

All dimensions are nominal and subject to normal manufacturing tolerances
 ◊ Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C Ω/MFT	AC @ 90°C Ω/MFT	X _C @ 60Hz MΩ*MFT	X _L @ 60Hz Ω/MFT				Directly Buried † Amps	In Air ‡ Amps
890636 ◊	2	0.162	0.203	0.036	0.040	0.203 + j0.040	0.573 + j0.514	2017	180 / 190	140 / 154
890637	1	0.129	0.161	0.033	0.039	0.162 + j0.038	0.534 + j0.492	2144	200 / 215	160 / 180
890638 ◊	1/0	0.102	0.128	0.030	0.037	0.128 + j0.037	0.503 + j0.470	2274	230 / 245	185 / 205
890639 ◊	2/0	0.081	0.102	0.027	0.036	0.102 + j0.036	0.477 + j0.448	2414	260 / 280	215 / 240
TBA	3/0	0.064	0.081	0.025	0.035	0.081 + j0.035	0.456 + j0.423	2580	295 / 320	250 / 280
890640 ◊	4/0	0.051	0.064	0.023	0.034	0.065 + j0.034	0.438 + j0.398	2762	335 / 360	285 / 320
890641	250	0.043	0.054	0.022	0.033	0.055 + j0.033	0.426 + j0.375	2941	365 / 395	320 / 355
890642 ◊	350	0.031	0.039	0.019	0.032	0.040 + j0.032	0.405 + j0.337	3276	440 / 475	395 / 440
890643 ◊	500	0.022	0.028	0.016	0.030	0.029 + j0.030	0.383 + j0.296	3693	530 / 570	485 / 545
890644 ◊	750	0.014	0.020	0.014	0.029	0.020 + j0.029	0.357 + j0.247	4304	650 / 700	615 / 685

* Calculations are based on 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

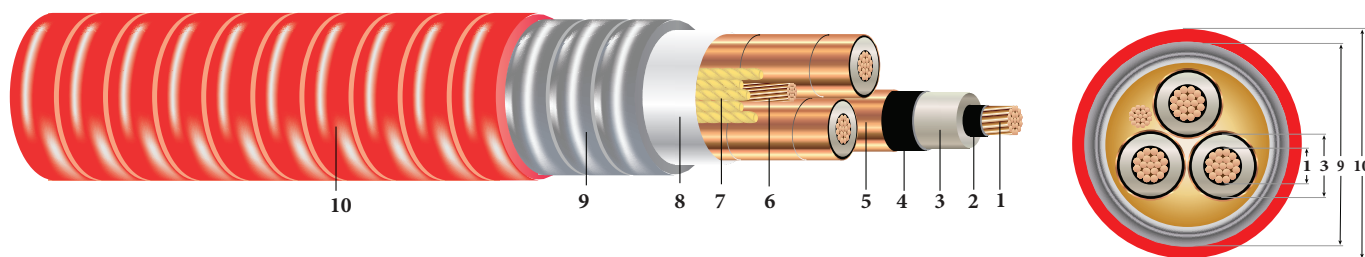
† Ampacities are based on TABLE 310.60(C)(83) of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(71) of the 2014 National Electrical Code (40°C Ambient Air Temperature)



3/C CU 15KV 220 NL-EPR 133% TS ARMOR-X PVC MV-105

Type MV-105 Three Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Continuous Corrugated Welded Armor (Armor-X), Polyvinyl Chloride (PVC) Jacket



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Conductor Shield:** Semi-conducting cross-linked copolymer
- Insulation:** 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level,
- Insulation Shield:** Stripable semi-conducting cross-linked copolymer
- Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
- Grounding Conductor:** 1 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
- Filler:** Wax paper filler
- Binder:** Polypropylene tape
- Armor:** Continuous Corrugated Welded Armor (Armor-X)
- Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 15KV ARMOR-X are armored cables 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, 250°C for short circuit conditions, and -50°C for cold bend. For uses in Class I, II, and III, Division 1 and 2 hazardous locations per NEC Article 501, 502, and 503.

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 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# ARMOR-X (UL) 3/C [#AWG or #kcmil] CU 220 MILS NL-EPR 15KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. FOR DIRECT BURIAL FT4 [-50°C] YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



Southwire[®]

Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Ground No. x AWG	Dia. Over Armor (9) inches	Jacket Thickness mils	Approx. OD (10) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches							
890663	2	0.283	0.760	0.820	1 x 6	2.290	75	2.440	2529	1593	17.1
TBA	1	0.322	0.799	0.859	1 x 4	2.290	75	2.440	2811	2009	17.1
890664	1/0	0.362	0.839	0.899	1 x 4	2.430	75	2.580	3142	2534	18.1
890665	2/0	0.405	0.882	0.942	1 x 4	2.550	75	2.700	3527	3194	18.9
TBA	3/0	0.456	0.933	0.993	1 x 3	2.670	75	2.820	4033	4027	19.7
890666	4/0	0.512	0.989	1.049	1 x 3	2.880	75	3.030	4630	5078	21.2
890667	250	0.558	1.044	1.104	1 x 3	2.880	75	3.030	5109	6000	21.2
890668 [◇]	350	0.661	1.147	1.207	1 x 2	3.220	85	3.390	6839	8400	23.7
890669 [◇]	500	0.789	1.275	1.335	1 x 1	3.540	85	3.710	8731	12000	26.0
550439	750	0.968	1.463	1.523	1 x 0	3.850	85	4.020	11729	18000	28.1

All dimensions are nominal and subject to normal manufacturing tolerances

[◇] Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C	AC @ 90°C	X _C @ 60Hz	X _L @ 60Hz				Directly Buried †	In Air ‡
		Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT				Amps	Amps
890663	2	0.162	0.203	0.053	0.047	0.203 + j0.047	0.577 + j0.419	2700	185 / 200	165 / 185
TBA	1	0.129	0.161	0.049	0.045	0.162 + j0.045	0.535 + j0.401	2827	210 / 225	185 / 210
890664	1/0	0.102	0.128	0.045	0.043	0.128 + j0.043	0.499 + j0.383	2957	240 / 255	215 / 240
890665	2/0	0.081	0.101	0.042	0.042	0.102 + j0.042	0.471 + j0.366	3097	270 / 290	245 / 275
TBA	3/0	0.064	0.081	0.039	0.040	0.081 + j0.040	0.446 + j0.346	3263	305 / 330	285 / 315
890666	4/0	0.051	0.064	0.036	0.039	0.065 + j0.039	0.426 + j0.327	3445	350 / 375	325 / 360
890667	250	0.043	0.054	0.034	0.038	0.055 + j0.038	0.411 + j0.309	3624	380 / 410	360 / 400
890668 [◇]	350	0.031	0.039	0.030	0.036	0.040 + j0.036	0.386 + j0.279	3959	460 / 495	435 / 490
890669 [◇]	500	0.022	0.028	0.026	0.034	0.028 + j0.034	0.362 + j0.247	4376	550 / 590	535 / 600
550439	750	0.014	0.020	0.022	0.032	0.020 + j0.032	0.335 + j0.209	4987	665 / 720	670 / 745

* Calculations are based on 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)(83) of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(71) of the 2014 National Electrical Code (40°C Ambient Air Temperature)



