



Southwire®
Industrial Cable



600 VOLT PRODUCT CATALOG



Southwire[®]

THE LEADING MANUFACTURER OF WIRE AND CABLE

SOUTHWIRE THE COMPANY

Since 1950, Southwire has been on the move, growing and evolving into North America's largest building wire producer and supplier. With innovation backed by experience, Southwire leads the industry with the broadest line of wire and cable products, from copper and aluminum MC cable to industrial power cable and utility products.



SOUTHWIRE THE PEOPLE

Southwire started as a small operation in Carrollton, Georgia with 12 employees in 1950. Today, the company employs more than 3,500 people at sales offices, distribution centers and manufacturing facilities throughout North America. Southwire's employees are dedicated to the company's founding principles of developing quality products matched with quality service. **While others have come and gone, and come again, Southwire has remained a constant and reliable manufacturer and supplier of wire and cable products for more than 50 years.**

SOUTHWIRE THE PRODUCTS

Southwire provides a full line of products, in **both copper and aluminum**, for a wide range of applications. The company leads the industry in new and innovative products that help simplify installation, saving time and money. In addition to its standard product line, Southwire can also make custom products offering its customers the most complete line of products for almost any requirement or situation. No matter what the commercial or industrial application requires, you need look no farther. Southwire has just the right Industrial cable product you're looking for.

SOUTHWIRE THE SERVICE

With 9 distribution centers strategically located across the country, Southwire can fill all of your wire and cable product needs where you need them, when you need them, resulting in savings of time and money. The broad product range, combined with these distribution centers mean you **get more products in fewer deliveries**. Southwire's multiple manufacturing plants give Southwire the ability to offer the **widest range of custom armored products** in the industry.

SOUTHWIRE THE INNOVATION

As a technology leader, Southwire has developed new manufacturing processes to produce quality wire and cable products more efficiently. This means a lower cost product for you. In addition, **Southwire's on-site D.B. Cofer Technology Center leads the industry in new product innovation** that simplifies the installation process for contractors. This on-site research and development facility continues to keep Southwire Company a few steps ahead of the competition.

SOUTHWIRE THE COMMITMENT

SOLID COMPANY. DEDICATED PEOPLE. QUALITY PRODUCTS.
DEPENDABLE SERVICE. PRODUCT INNOVATION. MADE IN THE USA.
SOUTHWIRE COMPANY OFFERS PRODUCTS THAT OFFER SOLUTIONS.

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600 V INSTRUMENTATION CABLE



600 Volt

**PVC/Nylon
Insulated Singles**

**Sizes 18 AWG
or 16 AWG**

90°C

PVC Jacket

APPLICATIONS

Southwire's Instrumentation Cable is for use on Class 1 remote-control and signaling circuits where 600 volts is desired. For use indoors, outdoors, direct burial, free air, raceways, encased in concrete, open trays, troughs or continuous rigid cable supports. For use in Class I, Div 2, hazardous locations. For use as a nonpower-limited fire alarm circuit cable (NPLF) per NEC® Article 760. Rated for wet and dry applications at temperatures not to exceed 90°C. Provides sunlight, cold bend and cold impact resistance. Rated 90°C dry and 75°C wet. Rip cord applied to all cables with a jacket thickness of 60 mils or less. Meets -25°C cold bend. Meets -40°C cold impact.

SPECIFICATIONS

Southwire's Instrumentation Cable is manufactured and tested in accordance with the latest revisions of:

- UL 83 - Thermoplastic Insulated Wires
- UL 1277 - Electrical Power and Control Cables - Type TC-ER
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)
- ICEA T-29-520 - Vertical Cable Tray Flame Test (210,000 BTU/hr)
- ICEA T-30-250 - Vertical Cable Tray Flame Test (70,000 BTU/hr)
- UL 1685 - UL Flame Exposure Test (70,000 BTU/hr)
- UL 66 - Polyvinylchloride and Nylon Type TFN/TFFN/VW-1
- RoHS Compliant

CONSTRUCTION

Southwire's Instrumentation Cable has a PVC sheath impervious to moisture. Cable is flame retardant UL-listed for cable tray use, direct burial, sunlight resistant, RoHS Compliant and -40°C installation temperature. Conductors are sizes 18 AWG or 16 AWG, 7-strand copper conductors, PVC insulation with nylon covering, color coded, twisted pairs and triads, group of pairs and triads, numeric print identification on the groups, aluminum polyester foil with 100% coverage, overall tinned drain wire, a nylon ripcord and a black PVC jacket. Individual and overall shields are made with aluminum/polyester with a standard tinned copper drain wire. The paired conductors are colored black, white and numbered while the triads are color coded black, blue, red and numbered. Black/White conductors in pairs with alpha-numeric code for each pair. Black/White/Red for triad products.

• Scope

This specification covers multiconductor PVC insulated, thermoplastic jacketed, 600 volt instrumentation cable for use indoors, outdoors, direct buried, encased in concrete, cable trays, troughs or continuous rigid cable supports. For use on Class 1 remote control and signaling circuits where 600 volts is desired. For use in Classes I, Div 2 hazardous locations. This cable is capable of operating continuously at a conductor temperature of 90°C in wet or dry locations.

WEIGHTS AND MEASUREMENTS

SIZE	NUMBER OF		INSULATION THICKNESS		INSULATION JACKET THICKNESS		JACKET THICKNESS		APPROXIMATE CORE DIAMETER		APPROXIMATE OVERALL DIAMETER		APPROXIMATE NET WEIGHT	
AWG or kcmil	PAIRS	TRIADS	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs/1000 ft	kg/km
18	1	-	0.015	0.38	0.005	0.10	0.045	1.14	0.167	4.2	0.260	6.6	38	57
18	-	1	0.015	0.38	0.005	0.10	0.045	1.14	0.181	4.6	0.280	7.1	47	70
16	1	-	0.015	0.38	0.005	0.10	0.045	1.14	0.191	4.9	0.290	7.4	49	73
16	-	1	0.015	0.38	0.005	0.10	0.045	1.14	0.206	5.2	0.300	7.6	61	91
18	2	-	0.015	0.38	0.005	0.10	0.045	1.14	0.377	9.6	0.480	12.2	84	125
16	2	-	0.015	0.38	0.005	0.10	0.045	1.14	0.429	10.9	0.530	13.5	106	158
18	4	-	0.015	0.38	0.005	0.10	0.045	1.14	0.471	12.0	0.570	14.5	131	195
16	4	-	0.015	0.38	0.005	0.10	0.045	1.14	0.536	13.6	0.640	16.3	173	257
18	8	-	0.015	0.38	0.005	0.10	0.060	1.50	0.630	16.0	0.760	19.3	245	365
16	8	-	0.015	0.38	0.005	0.10	0.060	1.50	0.717	18.2	0.850	21.6	327	487
18	12	-	0.015	0.38	0.005	0.10	0.060	1.50	0.770	19.6	0.900	22.9	339	504
16	12	-	0.015	0.38	0.005	0.10	0.060	1.50	0.876	22.2	1.010	25.7	459	683

CONSTRUCTION (continued)

• **Standards**

The following standards will form part of this specification - ASTM B8, UL 83, UL 66, UL 1581, UL 1685, and UL 1277.

• **Conductor**

The conductor will be 18 AWG or 16 AWG, 7-strand, bare copper conductor.

• **Insulation**

The insulation will be PVC with a nylon covering per UL Standard 66, Type TFN/TFFN/VW-1. The insulation thickness will be 0.015" of PVC with 0.005" of nylon. Individual conductors will be color coded with the paired conductors colored black, white and numbered while the triads are color coded black, blue, red and numbered.

• **Assembly**

The insulated conductors will be twisted pairs or triads, group of pairs or triads, numeric print identification on the groups, aluminum polyester foil with 100% coverage and tinned copper drain wire over each group, overall aluminum polyester foil with 100% coverage, overall tinned drain wire, a nylon ripcord, and a black -40°C PVC jacket.

• **Jacket**

The cable will be covered with a black PVC jacket conforming to the requirements specified for polyvinyl chloride in ICEA. The average thickness will be in accordance with ICEA, and the minimum spot thickness will be not less than 80% of the average thickness. The jacket will be sunlight resistant and will meet the requirements of the IEEE 1202 (70,000 BTU/hr) and ICEA T-29-520 (210,000 BTU/hr) vertical cable tray flame tests. It is suitable for use at a minimum ambient temperature of -40°C.

• **Identification**

A manufacturer's identification will be printed on the jacket.

• **Tests**

Physical and electrical tests will be conducted in accordance with the requirements of the referenced standards.

300 V INSTRUMENTATION CABLE



300 Volt

PVC Insulated Singles

**Sizes 18 AWG
or 16 AWG**

90°C

PVC Jacket

APPLICATIONS

Southwire's Instrumentation Cable is for use on Class 1 remote-control and signaling circuits where 300 volts is desired. For use indoors, outdoors, direct burial, free air, raceways, encased in concrete, open trays, troughs or continuous rigid cable supports. For use in Class I, Div 2, hazardous locations. For use as a nonpower-limited fire alarm circuit cable (NPLF) per NEC® Article 760. Rated for wet and dry applications at temperatures not to exceed 90°C. Provides sunlight, cold bend and cold impact resistance. Rated 90°C dry and 75°C wet. Rip cord applied to all cables with a jacket thickness of 60 mils or less. Meets -25°C cold bend. Meets -40°C cold impact.

SPECIFICATIONS

Southwire's Instrumentation Cable is manufactured and tested in accordance with the latest revisions of:

- UL 83 - Thermoplastic Insulated Wires
- UL 1277 - Electrical Power and Control Cables
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- ICEA T-29-520 - Vertical Cable Tray Flame Test (210,000 BTU/hr)
- ICEA T-30-250 - Vertical Cable Tray Flame Test (70,000 BTU/hr)
- UL 1685 - UL Flame Exposure Test (70,000 BTU/hr)
- UL 13 - Type PLTC and CL3
- UL 2250 - Type ITC
- UL VW-1 - Individual Conductors
- RoHS Compliant
- IEEE - 383

CONSTRUCTION

Southwire's Instrumentation Cable has a PVC sheath impervious to moisture. Cable is flame retardant UL-listed for cable tray use, direct burial, sunlight resistant, RoHS Compliant and minus 40°C installation temperature. Conductors are sizes 18 AWG or 16 AWG, 7-strand copper conductors, PVC insulation, color coded, twisted pairs and triads, group of pairs and triads, numeric print identification on the groups, aluminum polyester foil with 100% coverage, overall tinned drain wire, a nylon ripcord and a black PVC jacket. Individual and overall shields are made with aluminum/polyester with a standard tinned copper drain wire. The paired conductors are colored black, white and numbered while the triads are color coded black, blue, red and numbered. Black/White conductors in pairs with alpha-numeric code for each pair. Black/White/Red for triad products.

• Scope

This specification covers multiconductor PVC insulated, thermoplastic jacketed, 600 volt instrumentation cable for use indoors, outdoors, direct buried, encased in concrete, cable trays, troughs or continuous rigid cable supports. For use on Class 1 remote control and signaling circuits where 600 volts is desired. For use in Classes I, Div 2 hazardous locations. This cable is capable of operating continuously at a conductor temperature of 90°C in wet or dry locations.

WEIGHTS AND MEASUREMENTS												
SIZE	NUMBER OF		INSULATION THICKNESS		JACKET THICKNESS		APPROXIMATE CORE DIAMETER		APPROXIMATE OVERALL DIAMETER		APPROXIMATE NET WEIGHT	
AWG or kcmil	PAIRS	TRIADS	inch	mm	inch	mm	inch	mm	inch	mm	lbs/1000 ft	kg/km
18	1	-	0.016	0.38	0.045	1.14	0.167	4.2	0.260	6.6	38	57
18	-	1	0.016	0.38	0.045	1.14	0.181	4.6	0.280	7.1	47	70
16	1	-	0.016	0.38	0.045	1.14	0.191	4.9	0.290	7.4	49	73
16	-	1	0.016	0.38	0.045	1.14	0.206	5.2	0.300	7.6	61	91
18	2	-	0.016	0.38	0.045	1.14	0.377	9.6	0.480	12.2	84	125
16	2	-	0.016	0.38	0.045	1.14	0.429	10.9	0.530	13.5	106	158
18	4	-	0.016	0.38	0.045	1.14	0.471	12.0	0.570	14.5	131	195
16	4	-	0.016	0.38	0.045	1.14	0.536	13.6	0.640	16.3	173	257
18	8	-	0.016	0.38	0.060	1.50	0.630	16.0	0.760	19.3	245	365
16	8	-	0.016	0.38	0.060	1.50	0.717	18.2	0.850	21.6	327	487
18	12	-	0.016	0.38	0.060	1.50	0.770	19.6	0.900	22.9	339	504
16	12	-	0.016	0.38	0.060	1.50	0.876	22.2	1.010	25.7	459	683

CONSTRUCTION (continued)

- **Standards**

The following standards will form part of this specification - ASTM B8, UL 83, UL 13, UL 1581, UL 2250, and UL 1277.

- **Conductor**

The conductor will be 18 AWG or 16 AWG, 7-strand, bare copper conductor.

- **Insulation**

The insulation will be PVC per UL Standard 13. The insulation thickness will be 0.016" of PVC. Individual conductors will be color coded with the paired conductors colored black, white and numbered while the triads are color coded black, blue, red and numbered.

- **Assembly**

The insulated conductors will be twisted pairs or triads, group of pairs or triads, numeric print identification on the groups, aluminum polyester foil with 100% coverage and tinned copper drain wire over each group, overall aluminum polyester foil with 100% coverage, overall tinned drain wire, a nylon ripcord, and a black -40°C PVC jacket.

- **Jacket**

The cable will be covered with a black PVC jacket conforming to the requirements specified for polyvinyl chloride in ICEA. The average thickness will be in accordance with ICEA, and the minimum spot thickness will be not less than 80% of the average thickness. The jacket will be sunlight resistant and will meet the requirements of the IEEE 383 (70,000 BTU/hr) and ICEA T-29-520 (210,000 BTU/hr) vertical cable tray flame tests. It is suitable for use at a minimum ambient temperature of -40°C.

- **Identification**

A manufacturer's identification will be printed on the jacket.

- **Tests**

Physical and electrical tests will be conducted in accordance with the requirements of the referenced standards.

THERMOCOUPLE EXTENSION CABLE



Single Pairs with
Overall Shield

PVC/PVC UL Type
PLTC Rated

APPLICATIONS

Southwire's Thermocouple Extension Cable Power Limited Tray Cable (PLTC) is suitable for installation in wet or dry locations and conductor temperature to 105°C. They may also be installed in conduit or other raceways. Designed for use with thermocouple temperature sensors.

SPECIFICATIONS

Southwire's Thermocouple Extension Cable Power Limited Tray Cable meets or exceeds the applicable requirements of the following standards and specifications:

- UL Subject 13 - Vertical Tray Flame Test
- UL Listed as Type PLTC
- RoHS Compliant
- IEEE 383 - Vertical Tray Flame Test (70,000 BTU)

CONSTRUCTION

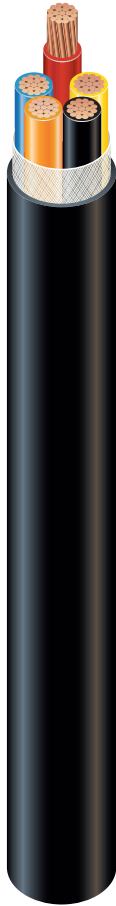
Southwire's Thermocouple Extension Cable has a PVC sheath impervious to moisture. Cable is flame retardant UL-listed for cable tray use. Each paired cables will be color coded and numbered. The conductor will be a solid thermocouple extension grade alloy. Insulation and jacket will consist of a flame retardant PVC with rip cord installed. The shield will be Aluminum Mylar with tinned copper drain wire.

WEIGHTS AND MEASUREMENTS											
CONDUCTOR		OUTER JACKET THICKNESS		OUTER DIAMETER		BEND RADIUS		PULL TENSION		NET WEIGHT	
SIZE (AWG or kcmil)	NUMBER OF PAIRS	inch	mm	inch	mm	inch	mm	lbs	kg	lbs/ 1000 ft	kg/km
16	1 EX	0.037	0.94	0.256	06.5	1.500	39	54	25	43	64
16	1 JX	0.053	1.35	0.471	12.0	2.800	72	172	78	135	201
16	1 KX	0.053	1.35	0.587	14.9	3.500	89	336	153	232	345
16	1 TX	0.064	1.63	0.708	18.0	4.200	108	500	227	340	506

COLOR CODING								
ANSI TYPE	ALLOY IDENTIFICATION		ANSI COLOR CODE		OVERALL JACKET	EXTENSION WIRE TEMPERATURE RANGE °C	LIMITS OF ERROR	THERMOCOUPLE WIRE TEMPERATURE RANGE °C
	POSITIVE WIRE	NEGATIVE WIRE	POSITIVE WIRE	NEGATIVE WIRE				
EX	Chromel	Constantan	Purple	Red	Purple	0 to +200	+/- 1.7°C	0 to 870
JX	Iron	Constantan	White	Red	Black	0 to +200	+/- 2.2°C	0 to 760
KX	Chromel	Alumel	Yellow	Red	Yellow	0 to +200	+/- 2.2°C	0 to 1260
TX	Copper	Constantan	Blue	Red	Blue	-60 to +100	+/- 1.0°C	0 to 370

TYPE TC CONTROL CABLE

THHN



600 Volt

Copper Conductors

**PVC/Nylon
Insulated Singles**

**Sizes 16 AWG
through 10 AWG**

Overall PVC Jacket

**High-Heat, Moisture,
and Sunlight Resistant**

Type TC-ER

APPLICATIONS

Southwire's Type TC Control Cable is for use in industrial power or control circuits where small diameter, flame retardant cables are desired. Primary installations include cable trays, raceways, and outdoor locations where supported by a messenger wire. Type TC is also listed for direct burial and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC® 336.10. Conductors may be used at temperatures not to exceed 75°C in wet locations or 90°C in dry locations.

SPECIFICATIONS

Southwire's Type TC Control Cable meets or exceeds the applicable requirements of the following standards and specifications:

- ASTM - (All applicable standards)
- UL 1277 - Electrical Power and Control Tray Cables
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- ICEA S-58-679 - Control Cable Conductor Identification. (Method 1, Table 2 - colored compounds with tracer colors - excluding white and green)
- UL 1685 - UL Flame Exposure Test (70,000 BTU/hr)
- ICEA T-30-250 - Vertical Cable Tray Flame Test (70,000 BTU/hr)
- ICEA T-29-520 - Vertical Cable Tray Flame Test (210,000 BTU/hr)
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)

CONSTRUCTION

Southwire's Type TC Control Cable is available in sizes 16 AWG through 10 AWG, with multiconductor constructions of 2 through 37 conductors. The product uses Type THHN¹ or THWN conductors in sizes 14 AWG through 10 AWG and Type TFFN conductors is size 16 AWG. Individual conductors are bare annealed copper covered with a polyvinyl chloride (PVC) insulation over which a nylon (polyamide) or UL listed equal jacket is applied. The overall jacket consists of a heat, moisture and sunlight resistant PVC.

¹Southwire offers in three and four conductor cables in sizes AWG 14, 12, 10, a green insulated ground wire using ICEA color code Method 1, Table 2.

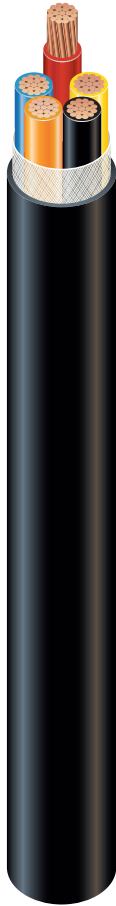
WEIGHTS AND MEASUREMENTS

NUMBER OF CONDUCTORS	JACKET THICKNESS (inch)	AVERAGE OVERALL DIAMETER		APPROXIMATE WEIGHT	
		inch	mm	lbs/1000 ft	kg/km
16 AWG (26 STRANDS) TYPE TC-TFFN* CONDUCTORS					
2	0.045	0.288	7.32	43	64
3	0.045	0.303	7.70	53	79
3 w/ground	0.045	0.329	8.36	66	98
4	0.045	0.329	8.36	66	98
4 w/ground	0.045	0.357	9.07	81	120
5	0.045	0.357	9.07	81	120
7	0.045	0.386	9.80	103	153
9	0.045	0.447	11.35	134	199
12	0.045	0.501	12.73	165	245
15	0.060	0.585	14.86	218	324
19	0.060	0.614	15.60	263	391
25	0.060	0.713	18.11	339	504
30	0.080	0.753	19.13	396	589
37	0.080	0.812	20.62	477	709
14 AWG (7 STRANDS) TYPE TC-THHN OR THWN CONDUCTORS					
2	0.045	0.305	7.8	56	83
3	0.045	0.322	8.2	74	110
3 w/ground	0.045	0.350	8.9	93	139
4	0.045	0.350	8.9	93	139
4 w/ground	0.045	0.381	9.7	109	162
5	0.045	0.381	9.7	109	162
6	0.045	0.413	10.5	129	192
7	0.045	0.413	10.5	145	215
8	0.045	0.446	11.3	164	243
9	0.045	0.478	12.2	182	271
10	0.060	0.550	14.0	217	322
12	0.060	0.568	14.4	251	373
15	0.060	0.627	15.9	305	454
19	0.060	0.658	16.7	373	555
20	0.060	0.691	17.6	393	584
25	0.060	0.766	19.4	483	719
30	0.060	0.810	20.6	568	845
37	0.080	0.913	23.2	720	1072
12 AWG (7 STRANDS) TYPE TC-THHN OR THWN CONDUCTORS					
2	0.045	0.340	8.6	75	112
3	0.045	0.360	9.2	105	156
3 w/ground	0.045	0.392	10.0	128	190
4	0.045	0.392	10.0	128	190
4 w/ground	0.045	0.428	10.9	154	229
5	0.045	0.428	10.9	154	229
6	0.045	0.466	11.8	183	272
7	0.045	0.466	11.8	207	308
8	0.045	0.504	12.8	234	349
9	0.060	0.572	14.5	277	412
10	0.060	0.621	15.8	307	457
12	0.060	0.641	16.3	358	532
15	0.060	0.710	18.0	438	652
19	0.060	0.746	18.9	539	802
20	0.060	0.785	19.9	568	845
25	0.080	0.911	23.1	734	1092
30	0.080	0.963	24.4	863	1284
37	0.080	1.036	26.3	1044	1553
10 AWG (7 STRANDS) TYPE TC-THHN OR THWN CONDUCTORS					
2	0.045	0.407	10.3	111	166
3	0.045	0.433	11.0	155	230
3 w/ground	0.045	0.473	12.0	198	294
4	0.045	0.473	12.0	198	294
4 w/ground	0.060	0.549	13.9	250	371
5	0.060	0.549	13.9	250	371
6	0.060	0.596	15.1	294	437
7	0.060	0.596	15.1	333	495
8	0.060	0.645	16.4	377	561
9	0.060	0.693	17.6	421	626
10	0.060	0.755	19.2	467	694
12	0.060	0.780	19.8	547	814
15	0.080	0.908	23.1	706	1050
19	0.080	0.954	24.2	867	1291
20	0.080	1.003	25.5	913	1359
25	0.080	1.112	28.2	1125	1675
30	0.080	1.177	29.9	1329	1977
37	0.080	1.271	32.3	1614	2402

*Similar to Type TFFN except rated 75°C in wet locations or 90°C in dry locations.

TYPE TC CONTROL CABLE

XHHW-2



600 Volt

Copper Conductors

**FR-XLP Insulated Singles
Type XHHW Rated VW-1**

Overall PVC Jacket

**High-Heat, Moisture,
and Sunlight Resistant**

Type TC-ER

APPLICATIONS

Southwire's Type TC Control Cable is for use in industrial power or control circuits where small diameter, flame retardant cables are desired. Primary installations include cable trays, raceways, and outdoor locations where supported by a messenger wire. Type TC Control Cable is also listed for direct burial and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC® 336.10. Conductors may be used in wet or dry locations at temperatures not to exceed 90°C

SPECIFICATIONS

Southwire's Type TC Control Cable meets or exceeds the applicable requirements of the following standards and specifications:

- ASTM - (All applicable standards)
- UL 1277 - Electrical Power and Control Tray Cables
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- ICEA S-58-679 - Control Cable Conductor Identification. (Method 1, Table 2 - colored compounds with tracer colors - excluding white and green)
- UL 1685 - UL Flame Exposure Test (70,000 BTU/hr)
- ICEA T-29-520 - Vertical Cable Tray Flame Test (210,000 BTU/hr)
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)
- ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements
- RoHS Compliant

CONSTRUCTION

Southwire's Type TC Control Cable is available in sizes 14 AWG through 10 AWG, with multiconductor constructions of 2 through 37 conductors. The product uses Type XHHW-2¹ rated VW-1 conductors. Individual conductors are bare annealed copper covered with a cross-linked polyethylene (XLP). The overall jacket consists of a flame retardant, moisture, and sunlight resistant PVC. Non-halogen and CPE jacket available upon request.

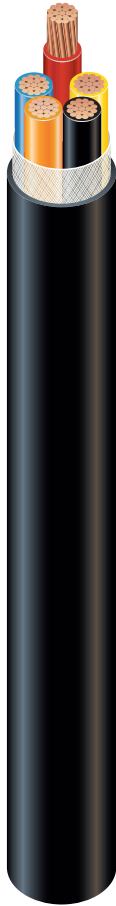
¹Southwire offers in three and four conductor cables in sizes AWG 14, 12, 10, a green insulated ground wire using ICEA color code Method 1, Table 2.

WEIGHTS AND MEASUREMENTS					
NUMBER OF CONDUCTORS	JACKET THICKNESS (inch)	AVERAGE OVERALL DIAMETER		APPROXIMATE WEIGHT	
		inch	mm	lbs/1000 ft	kg/km
14 AWG (7 STRANDS) TYPE TC-XHHW-2 CONDUCTORS					
2	0.045	0.349	8.9	63	94
3	0.045	0.370	9.4	87	129
3 w/ground	0.045	0.403	10.2	106	157
4	0.045	0.403	10.2	106	157
4 w/ground	0.045	0.440	11.2	125	186
5	0.045	0.440	11.2	125	186
6	0.045	0.479	12.2	146	218
7	0.045	0.479	12.2	164	245
8	0.060	0.549	13.9	201	299
9	0.060	0.588	14.9	223	332
10	0.060	0.638	16.2	247	367
12	0.060	0.659	16.7	285	424
15	0.060	0.730	18.6	347	517
19	0.060	0.768	19.5	424	630
20	0.060	0.808	20.5	446	664
25	0.080	0.938	23.8	582	866
30	0.080	0.991	25.2	680	1012
37	0.080	1.067	27.1	818	1217
12 AWG (7 STRANDS) TYPE TC-XHHW-2 CONDUCTORS					
2	0.045	0.384	9.8	85	127
3	0.045	0.408	10.4	115	172
3 w/ground	0.045	0.445	11.3	147	219
4	0.045	0.445	11.3	147	219
4 w/ground	0.045	0.487	12.4	171	255
5	0.045	0.487	12.4	171	255
6	0.060	0.562	14.3	217	323
7	0.060	0.562	14.3	244	363
8	0.060	0.607	15.4	275	410
9	0.060	0.651	16.5	307	457
10	0.060	0.709	18.0	340	506
12	0.060	0.732	18.6	396	589
15	0.060	0.813	20.7	484	721
19	0.080	0.896	22.8	628	934
20	0.080	0.942	23.9	661	984
25	0.080	1.043	26.5	811	1207
30	0.080	1.104	28.0	953	1418
37	0.080	1.190	30.2	1152	1714
10 AWG (7 STRANDS) TYPE TC-XHHW-2 CONDUCTORS					
2	0.045	0.431	11.0	116	172
3	0.045	0.459	11.7	161	239
3 w/ground	0.045	0.502	12.8	205	306
4	0.045	0.502	12.8	205	306
4 w/ground	0.060	0.581	14.8	260	387
5	0.060	0.581	14.8	260	387
6	0.060	0.632	16.1	306	455
7	0.060	0.632	16.1	346	514
8	0.060	0.685	17.4	392	583
9	0.060	0.736	18.7	437	651
10	0.060	0.803	20.4	485	721
12	0.060	0.870	22.1	599	892
15	0.080	0.964	24.5	733	1091
19	0.080	1.014	25.7	901	1340
20	0.080	1.066	27.1	949	1412
25	0.080	1.184	30.1	1168	1739
30	0.080	1.254	31.9	1379	2052
37	0.080	1.355	34.4	1674	2491
*Similar to Type TFFN except rated 75°C in wet locations or 90°C in dry locations.					

*Similar to Type TFFN except rated 75°C in wet locations or 90°C in dry locations.

TYPE TC CONTROL CABLE

XHHW/CPE



600 Volt

Copper Conductors

**FR-XLP Insulated Singles
Type XHHW-2 Rated VW-1**

**Overall Chlorinated
Polyethylene (CPE)
Jacket**

**High-Heat, Moisture,
and Sunlight Resistant**

Type TC-ER

APPLICATIONS

Southwire's Type TC Control Cable is for use in industrial power or control circuits where small diameter, flame retardant cables are desired. Primary installations include cable trays, raceways, and outdoor locations where supported by a messenger wire. Type TC Control Cable is also listed for direct burial and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC® 336.10. Conductors may be used in wet or dry locations at temperatures not to exceed 90°C.

SPECIFICATIONS

Southwire's Type TC Control Cable meets or exceeds the applicable requirements of the following standards and specifications:

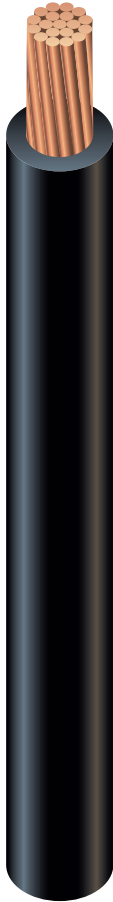
- ASTM - (All applicable standards)
- UL 1277 - Electrical Power and Control Tray Cables
- UL 1685 - UL Flame Exposure Test
- ICEA S-58-679 - Control Cable Conductor Identification. (Method 1, Table 2 - colored compounds with tracer colors - excluding white and green)
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)
- ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements

CONSTRUCTION

Southwire's Type TC Control Cable is available in sizes 14 AWG through 10 AWG, with multiconductor constructions of 2 through 37 conductors. The product uses Type XHHW-2 rated VW-1 conductors. Individual conductors are bare annealed copper covered with a cross-linked polyethylene (XLP). The overall jacket consists of a flame retardant, moisture, and sunlight resistant CPE. PVC and non-halogen jackets available upon request.

WEIGHTS AND MEASUREMENTS					
NUMBER OF CONDUCTORS	JACKET THICKNESS (inch)	AVERAGE OVERALL DIAMETER		APPROXIMATE WEIGHT	
		inch	mm	lbs/1000 ft	kg/km
14 AWG (7 STRANDS) TYPE TC-XHHW-2 CONDUCTORS					
2	0.045	0.349	8.9	62	92
3	0.045	0.370	9.4	85	127
3 w/ground	0.045	0.403	10.2	104	155
4	0.045	0.403	10.2	104	155
4 w/ground	0.045	0.440	11.2	123	183
5	0.045	0.440	11.2	123	183
7	0.045	0.479	12.2	163	242
9	0.060	0.588	14.9	220	327
12	0.060	0.659	16.7	282	419
15	0.060	0.730	18.6	343	511
19	0.060	0.768	19.5	420	624
25	0.080	0.938	23.8	576	857
37	0.080	1.067	27.1	811	1206
12 AWG (7 STRANDS) TYPE TC-XHHW-2 CONDUCTORS					
2	0.045	0.384	9.8	84	125
3	0.045	0.408	10.4	114	169
3 w/ground	0.045	0.445	11.3	147	216
4	0.045	0.445	11.3	147	216
4 w/ground	0.045	0.487	12.4	170	252
5	0.045	0.487	12.4	170	252
7	0.060	0.562	14.3	241	358
9	0.060	0.651	16.5	303	452
12	0.060	0.732	18.6	392	583
15	0.060	0.813	20.7	480	714
19	0.080	0.896	22.8	622	925
25	0.080	1.043	26.5	804	1196
37	0.080	1.190	30.2	1144	1702
10 AWG (7 STRANDS) TYPE TC-XHHW-2 CONDUCTORS					
2	0.045	0.431	11.0	114	170
3	0.045	0.459	11.7	159	236
3 w/ground	0.045	0.502	12.8	204	303
4	0.045	0.502	12.8	204	303
4 w/ground	0.060	0.581	14.8	257	382
5	0.060	0.581	14.8	257	382
7	0.060	0.632	16.1	342	510
9	0.060	0.736	18.7	433	645
12	0.060	0.870	22.1	593	883
15	0.080	0.964	24.5	726	1081

XHHW-2/CT



600 Volt

Copper Conductors

**Flame Retardant
Cross-Linked
Polyethylene Insulation**

**High-Heat, Moisture,
and Sunlight Resistant,
and Rated for CT Use**

APPLICATIONS

Southwire Type XHHW-2 conductors are primarily used in conduit, cable tray or other recognized raceways for service, feeders, and branch circuit wiring as specified in the NEC®. XHHW-2 conductors are sunlight resistant and may be used in wet or dry locations at temperatures not to exceed 90°C. Voltage rating for XHHW-2 conductors is 600 volts.

SPECIFICATIONS

Southwire Type XHHW-2 conductors meet or exceed the applicable requirements of the following standards and specifications:

- UL 44 - Thermoset-Insulated Wire and Cables
- UL 1685 - UL Flame Exposure Test
- UL 1581 - UL Flame Exposure Test (VW-1)
- IEEE 1202 - Flame Test (70,000 BTU/hr Vertical Tray Test)

Type XHHW-2 meets and exceeds all construction requirements of ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements.

CONSTRUCTION

Southwire Type XHHW-2 copper conductors are annealed (soft) copper. Insulation is an abrasion, moisture, heat and sunlight resistant, flame retardant cross-linked polyethylene. This cable is rated for cable tray use.

• Scope

This specification covers single conductor XHHW-2, a flame retardant cross-linked polyethylene insulated 600 volt cable primarily used in conduit, cable tray or other recognized raceways for service, feeders, and branch circuit wiring as specified in the NEC®. This cable is capable of operating continuously at a conductor temperature of 90°C in wet or dry locations, and is listed as sunlight resistant.

• Standards

The following standards shall form part of this specification: UL 44 - Thermoset-Insulated Wires and Cables and UL 1685 - UL Flame Exposure Test.

• Conductor

The conductor shall be stranded bare copper in accordance with ASTM standards.

• Insulation

The insulation shall be a flame retardant cross-linked polyethylene meeting the requirements of the referenced standards. The minimum spot thickness shall not be less than 90% of the average insulation thickness.

• Identification

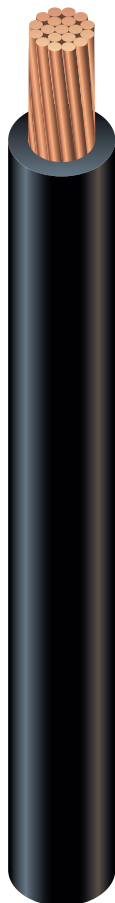
Cable shall be identified by surface printing.

• Tests

Cable shall meet the requirements of UL 44, UL 1685, and the flame test requirements of IEEE 1202.

WEIGHTS AND MEASUREMENTS									
CONDUCTOR		INSULATION THICKNESS		AVERAGE OVERALL DIAMETER		APPROXIMATE NET WEIGHT		ALLOWABLE AMPACITIES*	
SIZE (AWG or kcmil)	STRANDING	inch	mm	inch	mm	lbs/1000 ft	kg/km	CONDUIT	FREE AIR
1/0	19	0.055	1.40	0.475	12.0	369	549	170	260
2/0	19	0.055	1.40	0.518	13.1	458	682	195	300
3/0	19	0.055	1.40	0.569	14.4	572	851	225	350
4/0	19	0.055	1.40	0.623	15.8	713	1060	260	405
250	37	0.065	1.65	0.691	17.5	844	1256	290	455
300	37	0.065	1.65	0.744	18.9	1005	1495	320	505
350	37	0.065	1.65	0.794	20.1	1166	1735	350	570
400	37	0.065	1.65	0.839	21.3	1325	1972	380	616
500	37	0.065	1.65	0.923	23.4	1645	2448	430	700
600	61	0.080	2.03	1.029	26.1	1982	2949	475	780
750	61	0.080	2.03	1.131	28.7	2458	3658	535	885
1000	61	0.080	2.03	1.280	32.5	3250	4836	615	1055
*Ampacities based on Table 310.16 and 310.17 of the NEC® 2008 Edition. Ampacities are for general use with 90°C conductor and 30°C ambient temperatures as specified in section 310.15 and in cable trays as specified in section 392.11.									

RHH OR RHW/CT



600 Volt

Copper Conductors

**Flame Retardant
Cross-Linked
Polyethylene Insulation**

**High-Heat, Moisture,
and Sunlight Resistant,
and Rated for CT Use**

UL VW-1

APPLICATIONS

Southwire Type RHH or RHW-2 or USE-2 conductors are used in conduit or cable tray as specified in the NEC®. When used as Type USE-2 conductor is suitable for use as underground service entrance cable for direct burial at conductor temperatures not to exceed 90°C. When used as RHH or RHW-2, conductor temperatures shall not exceed 90°C in wet or dry locations. Voltage rating for RHH or RHW-2 or USE-2 conductors is 600 volts.

SPECIFICATIONS

Southwire Type RHH or RHW-2 or USE-2 conductors meet or exceed the applicable requirements of the following standards and specifications:

- UL 44 - Thermoset-Insulated Wires and Cables
- UL 854 - Service Entrance Cables
- UL 1685 - UL Flame Exposure Test
- UL 1581 - UL Flame Exposure Test (VW-1)
- ICEA S-95-658 - (NEMA WC70) Nonshielded Power Cables 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr) 4/0 and larger

Type RHH or RHW-2 or USE-2 meets and exceeds all construction requirements of ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements.

CONSTRUCTION

Southwire Type RHH or RHW-2 or USE-2 copper conductors are annealed (soft) copper. Insulation is an abrasion, moisture, heat resistant and flame retardant cross-linked polyethylene (XLP). This product is sunlight resistant and rated for cable tray use.

• Scope

This specification covers single conductor RHH or RHW-2 or USE-2 a flame retardant cross-linked polyethylene insulated cable for use in circuits not exceeding 600 volts. This cable is capable of operating continuously in wet or dry locations at a maximum conductor temperature of 90°C for normal conditions, 130°C for emergency overload conditions and 250°C for short circuit conditions. Cables may be installed in air, duct, underground, or in cable tray. This product meets UL VW-1 flame test requirements and is listed for sunlight resistant.

• Standards

The following standards shall form part of this specification: ICEA S-95-658 - Standard for Nonshielded Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy. UL 44 - Thermoset-Insulated Wire and Cables and UL 1685 - UL Flame Exposure Test.

WEIGHTS AND MEASUREMENTS

CONDUCTOR		INSULATION THICKNESS		AVERAGE OVERALL DIAMETER		APPROXIMATE NET WEIGHT		ALLOWABLE AMPACITIES*	
SIZE (AWG or kcmil)	STRANDING	inch	mm	inch	mm	lbs/1000 ft	kg/km	CONDUIT	FREE AIR
1/0	19	0.080	2.03	0.525	13.3	390	580	170	260
2/0	19	0.080	2.03	0.568	14.4	481	716	195	300
3/0	19	0.080	2.03	0.619	15.7	597	888	225	350
4/0	19	0.080	2.03	0.675	17.1	741	1102	260	405
250	37	0.095	2.41	0.751	19.1	880	1309	290	455
350	37	0.095	2.41	0.854	21.7	1207	1796	350	570
500	37	0.095	2.41	0.983	25.0	1693	2519	430	700
750	61	0.110	2.79	1.191	30.3	2516	3744	535	885
1000	61	0.110	2.79	1.340	34.0	3315	4933	615	1055

*Ampacities based on Table 310.16 and 310.17 of the NEC® 2008 Edition. Ampacities are for general use with 90°C conductor and 30°C ambient temperatures as specified in section 310.15 and in cable trays as specified in section 392.11.

CONSTRUCTION (continued)

• Conductor

The conductor shall be stranded bare copper in accordance with ASTM standards.

• Insulation

The insulation shall be a flame retardant cross-linked polyethylene meeting the requirements of the referenced standards. The minimum spot thickness shall not be less than 90% of the average insulation thickness.

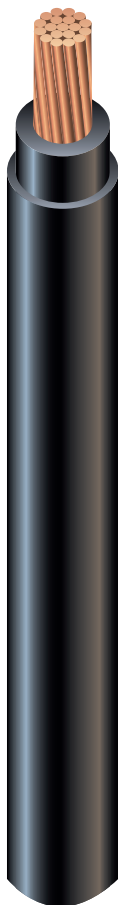
• Identification

Cable shall be identified by surface printing on the jacket.

• Tests

Cable shall be tested in accordance with ICEA S-105-692, UL 1685, and the flame test requirements of IEEE 1202 (4/0 and larger).

XHHW/PVC/CT



600 Volt

Copper Conductors

Flame Retardant Cross-Linked Polyethylene Insulation with Overall PVC Jacket

High-Heat, Moisture, and Sunlight Resistant, and Rated for CT Use

APPLICATIONS

Southwire XHHW/PVC conductors are primarily used in conduit, cable tray or other recognized raceways for services, feeders, and branch circuit wiring as specified in the NEC®. XHHW/PVC conductors are sunlight resistant and may be used in wet or dry locations at temperatures not to exceed 90°C. Voltage rating for XHHW/PVC conductors is 600 volts.

SPECIFICATIONS

Southwire XHHW/PVC conductors meet or exceed the applicable requirements of the following standards and specifications:

- UL 44 - Thermoset-Insulated Wires and Cables
- UL 1685 - UL Flame Exposure Test
- UL 1581 - UL Flame Exposure Test (VW-1)
- IEEE 1202 (2/0 AWG and larger) - Flame Test (70,000 BTU/hr Vertical Tray Test)
- ICEA S-95-658 (NEMA WC70) Nonshielded Power Cables 2000 Volts or Less for the Distribution of Electrical Energy

CONSTRUCTION

Southwire XHHW/PVC copper conductors are annealed (soft) copper. Insulation is an abrasion, moisture, and heat resistant, flame retardant cross-linked polyethylene. The overall jacket consists of a flame retardant, moisture and sunlight resistant PVC jacket. This cable is rated for cable tray use.

• Scope

This specification covers single conductor XHHW/PVC, a flame retardant cross-linked polyethylene insulated 600 volt cable with overall PVC jacket, primarily used in conduit, cable tray or other recognized raceways for services, feeders, and branch circuit wiring as specified in the NEC®. This cable is capable of operating continuously at a conductor temperature of 90°C in wet or dry locations, and is listed as sunlight resistant.

• Standards

The following standards shall form part of this specification: UL 44 - Thermoset-Insulated Wire and Cable and UL 1685 - UL Flame Exposure Test. ICEA S-95-658 Nonshielded Power Cable 2000 Volts or Less for the Distribution of Electrical Energy.

• Conductor

The conductor shall be stranded bare copper in accordance with ASTM standards.

• Insulation

The insulation shall be a flame retardant cross-linked polyethylene meeting the requirements of the referenced standards. The minimum spot thickness shall not be less than 90% of the average insulation thickness.

• Jacket

The cable shall be provided with a black sunlight resistant polyvinyl chloride jacket.

WEIGHTS AND MEASUREMENTS

CONDUCTOR		INSULATION THICKNESS		JACKET THICKNESS		APPROXIMATE OVERALL DIAMETER		APPROXIMATE NET WEIGHT		ALLOWABLE AMPACITIES*	
SIZE (AWG or kcmil)	STRANDING	inch	mm	inch	mm	inch	mm	lbs/1000 ft	kg/km	CONDUIT	FREE AIR
1/0	19	0.055	1.40	0.045	1.14	0.565	14.3	412	613	170	260
2/0	19	0.055	1.40	0.045	1.14	0.608	15.4	505	751	195	300
3/0	19	0.055	1.40	0.045	1.14	0.659	16.7	623	927	225	350
4/0	19	0.055	1.40	0.045	1.14	0.715	18.1	769	1145	260	405
250	37	0.065	1.65	0.065	1.65	0.821	20.8	934	1390	290	455
350	37	0.065	1.65	0.065	1.65	0.924	23.4	1268	1887	350	570
500	37	0.065	1.65	0.065	1.65	1.053	26.7	1763	2624	430	700
750	61	0.080	2.03	0.065	1.65	1.261	32.0	2602	3871	535	885
1000	61	0.080	2.03	0.065	1.65	1.410	35.8	3411	5076	615	1055

*Ampacities based on Table 310.16 and 310.17 of the NEC® 2008 Edition. Ampacities are for general use with 90°C conductor and 30°C ambient temperatures as specified in section 310.15 and in cable trays as specified in section 318.11.

CONSTRUCTION (continued)

- **Identification**

Cable shall be identified by surface printing on the jacket.

- **Tests**

Cable shall meet the requirements of UL 44 and UL 1685, the flame requirements of IEEE 1202.

XHHW-2/CT

ALUMINUM



600 Volt

Aluminum Conductors

**Flame Retardant
Cross-Linked
Polyethylene Insulation**

**High-Heat, Moisture,
and Sunlight Resistant,
and Rated for CT Use**

APPLICATIONS

Southwire Type XHHW-2 conductors are primarily used in conduit, cable tray or other recognized raceways for service, feeders, and branch circuit wiring as specified in the NEC®. XHHW-2 conductors are sunlight resistant and may be used in wet or dry locations at temperatures not to exceed 90°C. Voltage rating for XHHW-2 conductors is 600 volts.

SPECIFICATIONS

Southwire Type XHHW-2 conductors meet or exceed the applicable requirements of the following standards and specifications:

- Federal Specification A-A-59544
- UL 44 - Thermoset-Insulated Wire and Cables
- UL 1685 - UL Flame Exposure Test
- UL 1581 - UL Flame Exposure Test (VW-1)
- IEEE 1202 - Flame Test (70,000 BTU/hr Vertical Tray Test)

Type XHHW-2 meets and exceeds all construction requirements of ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements.

CONSTRUCTION

Southwire Type XHHW-2 copper conductors are annealed (soft) copper. Insulation is an abrasion, moisture, heat and sunlight resistant, flame retardant cross-linked polyethylene. This cable is rated for cable tray use.

- **Scope**

This specification covers Aluminum single conductor XHHW-2, a flame retardant cross-linked polyethylene insulated 600 volt cable primarily used in conduit, cable tray or other recognized raceways for service, feeders, and branch circuit wiring as specified in the NEC®. This cable is capable of operating continuously at a conductor temperature of 90°C in wet or dry locations, and is listed as sunlight resistant.

- **Standards**

The following standards shall form part of this specification: UL 44 - Thermoset-Insulated Wires and Cables and UL 1685 - UL Flame Exposure Test.

- **Conductor**

The conductor shall be AlumaFlex® AA-8000 Series aluminum alloy compact stranded.

- **Insulation**

The insulation shall be a flame retardant cross-linked polyethylene meeting the requirements of the referenced standards. The minimum spot thickness shall not be less than 90% of the average insulation thickness.

WEIGHTS AND MEASUREMENTS									
CONDUCTOR		INSULATION THICKNESS		AVERAGE OVERALL DIAMETER		APPROXIMATE NET WEIGHT		ALLOWABLE AMPACITIES*	
SIZE (AWG or kcmil)	STRANDING	inch	mm	inch	mm	lbs/1000 ft	kg/km	CONDUIT	FREE AIR
1/0	10	0.055	1.40	0.449	11.40	138	205	135	205
2/0	12	0.055	1.40	0.489	12.42	171	254	150	235
4/0	19	0.055	1.40	0.588	14.94	253	376	205	315
250	22	0.065	1.65	0.653	16.59	304	452	230	355
300	35	0.065	1.65	0.703	17.86	358	533	255	395
350	35	0.065	1.65	0.749	19.02	410	610	280	445
400	35	0.065	1.65	0.792	20.12	463	689	305	480
500	35	0.065	1.65	0.869	22.07	567	844	350	545
600	58	0.080	2.03	0.976	24.79	695	1034	385	615
750	58	0.080	2.03	1.071	27.20	851	1266	435	700

*Ampacities based on Table 310.16 and 310.17 of the NEC® 2008 Edition. Ampacities are for general use with 90°C conductor and 30°C ambient temperatures as specified in section 310.15 and in cable trays as specified in section 392.11.

CONSTRUCTION (continued)

- **Identification**

Cable shall be identified by surface printing.

- **Tests**

Cable shall meet the requirements of UL 44, UL 1685, and the flame test requirements of IEEE 1202.

TYPE TC POWER CABLE

THHN/PVC THREE CONDUCTOR



600 Volt

Copper Conductors

**PVC/Nylon Insulated
Singles Rated THHN**

**Three Conductors
With Ground**

Overall PVC Jacket

**Heat, Moisture and
Sunlight Resistant**

Type TC-ER

APPLICATIONS

Southwire's Type TC Power Cable is used to supply power to motors, or for connection to other power devices in industrial settings. Primary installations include cable trays, raceways, and outdoor locations where supported by a messenger wire. Type TC Power Cable is listed for direct burial and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. This cable may be used at temperatures not to exceed 75°C in wet locations and 90°C in dry locations. 6 and 8 AWG constructions with insulated grounds (standard) and 4 AWG and larger with bare or insulated ground are UL listed for exposed runs (ER) per NEC® 336.10.

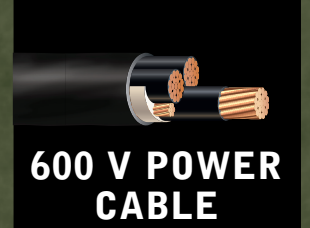
SPECIFICATIONS

Southwire's Type TC Power Cable meets or exceeds the applicable requirements of the following standards and specifications:

- ASTM - (All applicable standards)
- UL 1277 - Electrical Power and Control Tray Cables
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- ICEA S-58-679 - Control Cable Conductor Identification. (Method 4 - single color compounds with surface printing of numbers)
- UL 1685 - UL Flame Exposure Test
- ICEA T-29-520 - Vertical Cable Tray Flame Test (210,000 BTU/hr)
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)

CONSTRUCTION

Southwire's Type TC Power Cable is available in sizes 8 AWG through 750 kcmil and is manufactured using Type THHN or THWN conductors. Individual conductors are bare annealed copper covered with a polyvinyl chloride (PVC) insulation over which a nylon (polyamide) or UL listed equal jacket is applied. The overall jacket consists of a flame retardant, moisture and sunlight resistant PVC jacket.



WEIGHTS AND MEASUREMENTS									
SIZE	STRANDING	GROUND CONDUCTOR SIZE (AWG)	JACKET THICKNESS (inch)	AVERAGE OVERALL DIAMETER		APPROXIMATE WEIGHT		ALLOWABLE AMPACITIES*	
AWG or kcmil				inch	mm	lbs/1000 ft	kg/km	75°C	90°C
TYPE TC-POWER CABLE THREE THHN OR THWN CONDUCTORS WITH GROUND									
8	7	10	0.060	0.625	15.9	295	440	50	55
6	7	8	0.060	0.710	18.0	435	647	65	75
4	7	8	0.060	0.795	20.2	606	902	85	95
2	7	6	0.080	0.958	24.3	942	1401	115	130
1	19	6	0.080	1.100	27.9	1195	1779	130	150
1/0	19	6	0.080	1.184	30.1	1445	2150	150	170
2/0	19	6	0.080	1.281	32.5	1734	2579	175	195
3/0	19	4	0.080	1.391	35.3	2163	3218	200	225
4/0	19	4	0.080	1.508	38.3	2617	3894	230	260
250	37	4	0.080	1.659	42.1	3070	4568	255	290
350	37	3	0.110	1.942	49.3	4276	6363	310	350
500	37	2	0.110	2.220	56.4	5906	8788	380	430
750	61	1	0.110	2.652	67.4	8601	12811	475	535
Note: Ampacities are based on Table 310.16 of the NEC® 2008 Edition. *Ampacities are for general use with a 90°C conductor and 30°C ambient temperature as specified in section 310.15 and in cable trays as specified in section 392.11.									

TYPE TC POWER CABLE

THHN/PVC FOUR CONDUCTOR



600 Volt

Copper Conductors

**PVC/Nylon Insulated
Singles Rated THHN**

**Four Conductors
With Ground**

Overall PVC Jacket

**Heat, Moisture and
Sunlight Resistant**

Type TC-ER

APPLICATIONS

Southwire's Type TC Power Cable is used to supply power to motors, or for connection to other power devices in industrial settings. Primary installations include cable trays, raceways, and outdoor locations where supported by a messenger wire. Type TC Power Cable is listed for direct burial and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. This cable may be used at temperatures not to exceed 75°C in wet locations and 90°C in dry locations. 6 and 8 AWG constructions with insulated grounds (standard) and 4 AWG and larger with bare or insulated ground are UL Listed for exposed runs (ER) per NEC® 336.10.

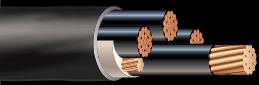
SPECIFICATIONS

Southwire's Type TC Power Cable meets or exceeds the applicable requirements of the following standards and specifications:

- ASTM - (All applicable standards)
- UL 1277 - Electrical Power and Control Tray Cables
- UL 1581 - Electrical Wire, Cables and Flexible Cords
- ICEA S-58-679 - Control Cable Conductor Identification (Method 4 - single color compounds with surface printing of numbers)
- UL 1685 - UL Flame Exposure Test (70,000 BTU/hr)
- ICEA T-29-520 - Vertical Cable Tray Flame Test (210,000 BTU/hr)
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)

CONSTRUCTION

Southwire's Type TC Power Cable is available in sizes 8 AWG through 750 kcmil and is manufactured using Type THHN or THWN conductors. Individual conductors are bare annealed copper covered with a polyvinyl chloride (PVC) insulation over which a nylon (polyamide) or UL listed equal jacket is applied. The overall jacket consists of a flame retardant, moisture and sunlight resistant PVC jacket.



600 V POWER CABLE

TYPE TC POWER CABLE THHN/PVC FOUR CONDUCTOR

WEIGHTS AND MEASUREMENTS

SIZE	STRANDING	GROUND CONDUCTOR SIZE (AWG)	JACKET THICKNESS (inch)	AVERAGE OVERALL DIAMETER		APPROXIMATE WEIGHT		ALLOWABLE AMPACITIES*	
AWG or kcmil				inch	mm	lbs/1000 ft	kg/km	75°C	90°C
TYPE TC-POWER CABLE FOUR THHN OR THWN CONDUCTORS WITH GROUND									
8	7	10	0.060	0.685	17.4	639	548	50	55
6	7	8	0.060	0.780	19.8	549	817	65	75
4	7	8	0.080	0.914	23.2	808	1202	85	95
2	7	6	0.080	1.052	26.7	1197	1782	115	130
1	19	6	0.080	1.210	30.7	1532	2280	130	150
1/0	19	6	0.080	1.304	33.1	1838	2734	150	170
2/0	19	6	0.080	1.413	35.9	2238	3330	175	195
3/0	19	4	0.080	1.536	39.0	2782	4139	200	225
4/0	19	4	0.110	1.726	43.8	3477	5173	230	260
250	37	4	0.110	1.895	48.1	4095	6093	255	290
350	37	3	0.110	2.144	54.5	5530	8228	310	350
500	37	2	0.110	2.455	62.4	7652	11386	380	430
750	61	1	0.140	2.998	76.2	11365	16911	475	535

Note: Ampacities are based on Table 310.16 of the NEC® 2008 Edition. *Ampacities are for general use with a 90°C conductor and 30°C ambient temperature as specified in section 310.15 and in cable trays as specified in section 392.11. Ampacities shall be reduced by a factor of 0.80 when the number of current-carrying conductors exceeds three.

TYPE TC POWER CABLE

XHHW/PVC THREE CONDUCTOR



600 Volt

Copper Conductors

**XLP Insulated Singles
Rated XHHW-2**

**Three Conductors
With Ground**

Overall PVC Jacket

**Heat, Moisture and
Sunlight Resistant**

Type TC-ER

APPLICATIONS

Southwire's Type TC Power Cable is used to supply power to motors, or for connection to other power devices in industrial settings. Primary installations include cable trays, raceways, and outdoor locations where supported by a messenger wire. Type TC Power Cable is listed for direct burial or in underground ducts and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. This cable may be used in wet and dry locations at temperatures not to exceed 90°C. 6 and 8 AWG constructions with insulated grounds (standard) and 4 AWG and larger with bare insulated ground are UL Listed for exposed runs (ER) per NEC® 336.10.

SPECIFICATIONS

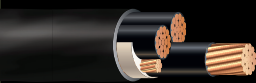
Southwire's Type TC Power Cable meets or exceeds the applicable requirements of the following standards and specifications:

- ASTM - (All applicable standards)
- UL 1277 - Electrical Power and Control Tray Cables.
- ICEA S-58-679 - Control Cable Conductor Identification (Method 4 - single color (black) compounds with surface printing of numbers)
- UL 1685 - UL Flame Exposure Test (70,000 BTU/hr)
- UL 1581 - UL Flame Exposure Test (VW-1)
- ICEA T-29-520 - Vertical Cable Tray Flame Test (210,000 BTU/hr)
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)

Southwire's Type TC Cable meets and exceeds all construction requirements of ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements.

CONSTRUCTION

Southwire's 600 Volt Type TC Power Cable is available in sizes 8 AWG through 750 kcmil and is manufactured using Type XHHW-2 conductors. Individual conductors are bare annealed copper covered with a cross-linked polyethylene (XLP) insulation. The overall jacket consists of a flame retardant, moisture and sunlight resistant PVC jacket. Non-halogen and CPE jacket available upon request.



600 V POWER CABLE

WEIGHTS AND MEASUREMENTS

SIZE	STRANDING	GROUND CONDUCTOR SIZE (AWG)	JACKET THICKNESS (inch)	AVERAGE OVERALL DIAMETER		APPROXIMATE WEIGHT		ALLOWABLE AMPACITIES*
AWG or kcmil				inch	mm	lbs/1000 ft	kg/km	90°C
TYPE TC-POWER CABLE THREE XLP (XHHW-2) CONDUCTORS WITH GROUND								
8	7	10	0.060	0.681	17.3	330	491	55
6	7	8	0.060	0.766	19.4	468	697	75
4	7	8	0.060	0.797	20.2	606	901	95
2	7	6	0.080	0.960	24.4	954	1420	130
1	19	6	0.080	1.100	27.9	1173	1746	150
1/0	19	6	0.080	1.186	30.1	1421	2115	170
2/0	19	6	0.080	1.279	32.5	1704	2536	195
3/0	19	4	0.080	1.385	35.2	2135	3177	225
4/0	19	4	0.080	1.506	38.2	2580	3839	260
250	37	4	0.080	1.653	42.0	3021	4496	290
300	37	3	0.110	1.827	46.4	3684	5481	320
350	37	3	0.110	1.935	49.1	4219	6277	350
400	37	3	0.110	2.032	51.6	4747	7064	380
500	37	2	0.110	2.214	56.2	5755	8564	430
750	61	1	0.110	2.663	67.6	8543	12711	535

Note: Ampacities are based on Table 310.16 of the NEC® 2008 Edition. *Ampacities are for general use with a 90°C conductor and 30°C ambient temperature as specified in section 310.15 and in cable trays as specified in section 392.11. Insulation thickness are per UL 44 for XHHW conductors. See XHHW for insulation thickness.

TYPE TC POWER CABLE

XHHW/PVC FOUR CONDUCTOR



600 Volt

Copper Conductors

**XLP Insulated Singles
Rated XHHW-2**

**Four Conductors
With Ground**

Overall PVC Jacket

**Heat, Moisture and
Sunlight Resistant**

Type TC-ER

APPLICATIONS

Southwire's Type TC Power Cable is used to supply power to motors, or for connection to other power devices in industrial settings. Primary installations include cable trays, raceways, and outdoor locations where supported by a messenger wire. Type TC Power Cable is listed for direct burial and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. This cable may be used in wet and dry locations at temperatures not to exceed 90°C. 6 AWG and 8 AWG constructions with insulated grounds (standard) and 4 AWG and larger with bare or insulated ground are UL Listed for exposed runs (ER) per NEC® 336.10.

SPECIFICATIONS

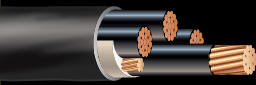
Southwire's Type TC Power Cable meets or exceeds the applicable requirements of the following standards and specifications:

- ASTM - (All applicable standards)
- UL 1277 - Electrical Power and Control Tray Cables
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- ICEA S-58-679 - Control Cable Conductor Identification (Method 4 - single color compounds with surface printing of numbers)
- UL 1685 - UL Flame Exposure Test (70,000 BTU/hr)
- ICEA T-29-520 - Vertical Cable Tray Flame Test (210,000 BTU/hr)
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)

Southwire's Type TC Power Cable meets and exceeds all construction requirements of ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements.

CONSTRUCTION

Southwire's Type TC Power Cable is available in sizes 8 AWG through 750 kcmil and is manufactured using Type XHHW-2 conductors. Individual conductors are bare annealed copper covered with a cross-linked polyethylene (XLP) insulation. The overall jacket consists of a flame retardant, moisture and sunlight resistant PVC jacket. Non-halogen and CPE jacket available upon request.



600 V POWER CABLE

TYPE TC POWER CABLE XHHW/PVC FOUR CONDUCTOR

WEIGHTS AND MEASUREMENTS								
SIZE	STRANDING	GROUND CONDUCTOR SIZE (AWG)	JACKET THICKNESS (inch)	AVERAGE OVERALL DIAMETER		APPROXIMATE WEIGHT		ALLOWABLE AMPACITIES*
AWG or kcmil				inch	mm	lbs/1000 ft	kg/km	90°C
TYPE TC-POWER CABLE FOUR XLP (XHHW-2) CONDUCTORS WITH GROUND								
8	7	10	0.060	0.747	19.0	404	601	55
6	7	8	0.080	0.882	22.4	613	912	75
4	7	8	0.080	0.917	23.3	802	1193	95
2	7	6	0.080	1.054	26.8	1191	1772	130
1	19	6	0.080	1.210	30.7	1503	2236	150
1/0	19	6	0.080	1.307	33.2	1806	2688	170
2/0	19	6	0.080	1.411	35.8	2199	3272	195
3/0	19	4	0.080	1.529	38.8	2744	4084	225
4/0	19	4	0.110	1.724	43.8	3427	5100	260
250	37	4	0.110	1.888	48.0	4030	5996	290
350	37	3	0.110	2.137	54.3	5454	8115	350
500	37	2	0.110	2.448	62.2	7562	11252	430
Note: Ampacities are based on Table 310.16 of the NEC® 2008 Edition. *Ampacities are for general use with a 90°C conductor and 30°C ambient temperature as specified in section 310.15 and in cable trays as specified in section 392.11. The ampacity shall be reduced by a factor of 0.80 when the number of current-carrying conductors exceeds three.								

TYPE TC POWER CABLE

XHHW/CPE THREE CONDUCTOR



600 Volt

Copper Conductors

**FR-XLP Insulated
Singles Rated XHHW-2**

**Three Conductors
With Ground**

**Overall Chlorinated
Polyethylene (CPE)
Jacket**

**Heat, Moisture, and
Sunlight Resistant**

Type TC-ER

APPLICATIONS

Southwire's Type TC Power Cable is used to supply power to motors, or for connection to other power devices in industrial settings. Primary installations include cable trays, raceways, and outdoor locations where supported by a messenger wire. Type TC Power Cable is listed for direct burial and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. This cable may be used in wet and dry locations at temperatures not to exceed 90°C. 6 and 8 AWG constructions with insulated grounds (standards) and 4 AWG and larger with bare or insulated ground are UL Listed for exposed runs (ER) per NEC® 336.10.

SPECIFICATIONS

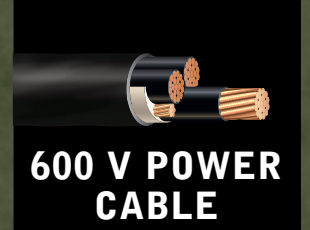
Southwire's Type TC Power Cable meets or exceeds the applicable requirements of the following standards and specifications:

- ASTM - (All applicable standards)
- UL 1277 - Electrical Power and Control Tray Cables
- UL 1685 - UL Flame Exposure Test
- ICEA S-58-679 - Control Cable Conductor Identification (Method 4 - single color compounds with surface printing of numbers)
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)

Southwire's Type TC Power Cable meets and exceeds all construction requirements of ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements.

CONSTRUCTION

Southwire's Type TC Power Cable is available in sizes 8 AWG through 750 kcmil and is manufactured using Type XHHW-2 conductors. Individual conductors are bare annealed copper covered with a flame retardant cross-linked polyethylene (XLP) insulation. The overall jacket consists of a flame retardant, moisture and sunlight resistant CPE jacket. PVC and non-halogen jackets available upon request.



WEIGHTS AND MEASUREMENTS								
SIZE	STRANDING	GROUND CONDUCTOR SIZE (AWG)	JACKET THICKNESS (inch)	AVERAGE OVERALL DIAMETER		APPROXIMATE WEIGHT		ALLOWABLE AMPACITIES*
AWG or kcmil				inch	mm	lbs/1000 ft	kg/km	90°C
TYPE TC-POWER CABLE THREE XLP (XHHW-2) CONDUCTORS WITH GROUND								
8	7	10	0.060	0.681	17.3	327	486	55
6	7	8	0.060	0.766	19.4	465	691	75
4	7	8	0.060	0.797	20.2	610	907	95
2	7	6	0.080	0.960	24.4	958	1425	130
1	19	6	0.080	1.097	27.9	1169	1739	150
1/0	19	6	0.080	1.182	30.0	1426	2121	170
2/0	19	6	0.080	1.277	32.4	1711	2546	195
3/0	19	4	0.080	1.385	35.2	2144	3190	225
4/0	19	4	0.080	1.506	38.2	2591	3855	260
250	37	4	0.080	1.653	42.0	3036	4517	290
350	37	3	0.110	1.935	49.1	4231	6295	350
500	37	2	0.110	2.214	56.2	5853	8709	430
750	61	1	0.110	2.663	67.6	8568	12750	535
Note: Ampacities are based on Table 310.16 of the NEC® 2008 Edition. *Ampacities are for general use with a 90°C conductor and 30°C ambient temperature as specified in section 310.15 and in cable trays as specified in section 392.11.								

TYPE TC POWER CABLE

XHHW/CPE FOUR CONDUCTOR



600 Volt

Copper Conductors

**FR-XLP Insulated
Singles Rated XHHW-2**

**Four Conductors
With Ground**

**Overall Chlorinated
Polyethylene (CPE)
Jacket**

**Heat, Moisture, and
Sunlight Resistant**

Type TC-ER

APPLICATIONS

Southwire's Type TC Power Cable is used to supply power to motors, or for connection to other power devices in industrial settings. Primary installations include cable trays, raceways, and outdoor locations where supported by a messenger wire. Type TC Power Cable is listed for direct burial and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. This cable may be used in wet and dry locations at temperatures not to exceed 90°C. 6 and 8 AWG constructions with insulated grounds (standard) and 4 AWG and larger with bare or insulated ground are UL Listed for exposed runs (ER) per NEC® 336.10.

SPECIFICATIONS

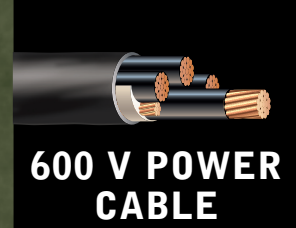
Southwire's Type TC Power Cable meets or exceeds the applicable requirements of the following standards and specifications:

- ASTM - (All applicable standards)
- UL 1277 - Electrical Power and Control Tray Cables
- UL 1685 - UL Flame Exposure Test
- ICEA S-58-679 - Control Cable Conductor Identification (Method 4 - single color compounds with surface printing of numbers)
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)

Southwire's Type TC Power Cable meets and exceeds all construction requirements of ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements.

CONSTRUCTION

Southwire's Type TC Power Cable is available in sizes 8 AWG through 750 kcmil and is manufactured using Type XHHW-2 conductors. Individual conductors are bare annealed copper covered with a flame retardant cross-linked polyethylene (XLP) insulation. The overall jacket consists of a flame retardant, moisture and sunlight resistant CPE jacket. PVC and non-halogen jackets available upon request.



**600 V POWER
CABLE**

TYPE TC POWER CABLE XHHW/CPE FOUR CONDUCTOR

WEIGHTS AND MEASUREMENTS								
SIZE	STRANDING	GROUND CONDUCTOR SIZE (AWG)	JACKET THICKNESS (inch)	AVERAGE OVERALL DIAMETER		APPROXIMATE WEIGHT		ALLOWABLE AMPACITIES*
AWG or kcmil				inch	mm	lbs/1000 ft	kg/km	90°C
TYPE TC-POWER CABLE FOUR XLP (XHHW-2) CONDUCTORS WITH GROUND								
8	7	10	0.060	0.747	19.0	401	596	55
6	7	8	0.080	0.882	22.4	607	903	75
4	7	8	0.080	0.917	23.3	807	1200	95
2	7	6	0.080	1.054	26.8	1197	1781	130
1	19	6	0.080	1.208	30.7	1511	2249	150
1/0	19	6	0.080	1.302	33.1	1814	2699	170
2/0	19	6	0.080	1.408	35.8	2210	3288	195
3/0	19	4	0.080	1.529	38.8	2759	4105	225
4/0	19	4	0.110	1.724	43.8	3439	5118	260
250	37	4	0.110	1.888	48.0	4046	6021	290
350	37	3	0.110	2.137	54.3	5474	8145	350
500	37	2	0.110	2.448	62.2	7586	11288	430
Note: Ampacities are based on Table 310.16 of the NEC® 2008 Edition. *Ampacities are for general use with a 90°C conductor and 30°C ambient temperature as specified in section 310.15 and in cable trays as specified in section 392.11. The ampacity shall be reduced by a factor of 0.80 when the number of current-carrying conductors exceeds three.								

AL01XXH

ALUMINUM ARMORED XLPE



600 Volt

Copper Conductors

Cross-linked
Polyethylene (XLP)
Insulation

Bare Copper Grounding
Conductor

Aluminum Armor

PVC Jacket

Type MC

APPLICATIONS

Southwire's 600 Volt Type MC Cable is for use in aerial installations, direct burial, metal racks, cable trays, troughs or continuous rigid cable supports. Listed by Underwriters Laboratories as Type MC, this cable is capable of operating continuously at a maximum conductor temperature of 90°C in wet or dry locations. For use in Class 1 Division 2, Class 2 Division 2 and Class 3 Division 1, hazardous locations.

SPECIFICATIONS

Southwire's 600 Volt Type MC Cable is manufactured and tested in accordance with the latest revisions of:

- UL 44 - Thermoset-Insulated Wires and Cables
- UL 1569 - Metal-Clad Cables
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)
- ICEA T-29-520 - Vertical Cable Tray Flame Tests (210,000 BTU/hr)

Southwire's 600 Volt Type MC Cable meets and exceeds all construction requirements of ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements.

CONSTRUCTION

Southwire's 600 Volt Type MC Cable is rated 90°C wet or dry and is flame and sunlight resistant. Features include a heavy duty construction, proven XLP insulated XHHW-2 conductors and a Type MC listing. For use in cable trays per NEC® Article 392. CPE and non-halogen jacket are available upon request.

- **Scope**

This specification covers three conductor XLP (cross-linked polyethylene) insulated, interlocked armored, thermoplastic jacketed, 600 volt cable with grounding conductor for use in aerial installations, metal racks, cable trays, troughs or continuous rigid cable supports. This cable is capable of operation continuously at a conductor temperature of 90°C in wet or dry locations.

- **Standards**

The following standards will form part of this specification - ICEA S-95-658/NEMA WC70, UL 44, UL 1569 Type MC.

- **Conductor**

The conductor will be Class B compressed concentric stranded bare copper in accordance with ASTM B3 and B8 and ICEA Part 2.

- **Insulation**

The insulation will be XLP meeting the requirements of the referenced standards. The insulation thickness will be as listed in ICEA, and the minimum spot thickness will not be less than 90% of the listed amounts. The method of phase identification will be similar to ICEA Method 3 using printed circuit numbers and colors (1-BLACK, 2-RED, 3-BLUE). UL Listed XHHW-2 conductors are used.



**600 V
MC ARMOR**

AL01XXH ALUMINUM ARMORED XLPE

WEIGHTS AND MEASUREMENTS

PRODUCT CODE	SIZE	CONDUCTOR DIAMETER		INSULATION THICKNESS		INSULATION DIAMETER		GND.* COND. SIZE	APPROX. CORE DIAMETER		ARMORED DIAMETER		JACKET THICKNESS		APPROX. OVERALL DIAMETER		APPROXIMATE NET WEIGHT		ALLOWABLE AMPACITIES**
	AWG OR kcmil	inch	mm	inch	mm	inch	mm	AWG	inch	mm	inch	mm	inch	mm	inch	mm	lbs/1000 ft	kg/km	
AL01-XXH-008	8	0.139	3.53	0.045	1.14	0.232	5.90	10	0.510	12.9	0.720	18.3	0.050	1.27	0.820	20.8	405	603	59
AL01-XXH-006	6	0.174	4.43	0.045	1.14	0.267	6.79	8	0.586	14.9	0.796	20.2	0.050	1.27	0.896	22.7	550	819	79
AL01-XXH-004	4	0.221	5.60	0.045	1.14	0.314	7.96	8	0.685	17.4	0.895	22.7	0.050	1.27	0.995	25.3	727	1082	104
AL01-XXH-002	2	0.277	7.04	0.045	1.14	0.370	9.41	6	0.808	20.5	1.018	25.9	0.050	1.27	1.118	28.4	1048	1560	138
AL01-XXH-001	1	0.322	8.18	0.055	1.40	0.435	11.05	6	0.948	24.1	1.158	29.4	0.050	1.27	1.258	31.9	1269	1888	161
AL01-XXH-010	1/0	0.362	9.19	0.055	1.40	0.475	12.07	6	1.034	26.3	1.244	31.6	0.050	1.27	1.344	34.1	1533	2281	186
AL01-XXH-020	2/0	0.405	10.29	0.055	1.40	0.518	13.16	6	1.127	28.6	1.337	34.0	0.050	1.27	1.437	36.5	1823	2713	215
AL01-XXH-030	3/0	0.454	11.53	0.055	1.40	0.567	14.40	4	1.233	31.3	1.443	36.6	0.050	1.27	1.547	39.2	2262	3366	249
AL01-XXH-040	4/0	0.510	12.95	0.055	1.40	0.623	15.82	4	1.354	34.4	1.664	42.3	0.060	1.52	1.784	45.3	2814	4187	287
AL01-XXH-250	250	0.558	14.17	0.065	1.65	0.691	17.55	4	1.501	38.1	1.811	46.0	0.060	1.52	1.931	49.0	3275	4874	320
AL01-XXH-350	350	0.661	16.79	0.065	1.65	0.794	20.17	3	1.723	43.8	2.033	51.6	0.060	1.52	2.153	54.7	4396	6542	394
AL01-XXH-500	500	0.790	20.07	0.065	1.65	0.923	23.44	2	2.002	50.8	2.312	58.7	0.075	1.52	2.462	62.5	6104	9083	487
AL01-XXH-750	750	0.968	24.59	0.080	2.03	1.131	28.73	1	2.455	62.4	2.765	70.2	0.075	1.91	2.915	74.0	8860	13184	615

*Three uncoated standard ground conductors may be provided upon request. **Ampacities are based on Table B.310.3 of the NEC® 2008 edition. Ampacities are for multiconductor cables in free air, 90°C conductor, 40°C ambient temperature, for use as specified in section Annex B and for use in cable trays as specified in section 392-11. Note: All sizes available as four power conductor construction with two ground wires.

CONSTRUCTION (continued)

- **Grounding Conductor**

The grounding conductor will be Class B compressed concentric stranded bare copper in accordance with ASTM B3 and B8.

- **Assembly**

The insulated conductors will be cabled round with fillers and with a grounding conductor in one outer interstice and covered with a binder tape.

- **Armor**

A single strip of interlocked aluminum tape will be applied over the assembly.

- **Jacket**

The cable will be covered with a black PVC jacket conforming to the requirements specified for polyvinyl chloride in ICEA. The average thickness will be in accordance with ICEA, and the minimum spot thickness will be not less than 80% of the average thickness. The jacket will be sunlight resistant and will meet the requirements of the IEEE 1202 (70,000 BTU/hr) vertical tray flame test and ICEA T-29-520 (210,000 BTU/hr) ribbon burner flame test. Optional CPE and non-halogen jackets are available.

- **Identification**

Manufacturer's identification will be printed on the jacket.

- **Tests**

Physical and electrical tests will be conducted in accordance with the requirements of the referenced standards.

GS01XXH

GALVANIZED STEEL INTERLOCKED ARMORED XLPE



600 Volt

3 Stranded Copper
Power Conductors

Cross-linked
Polyethylene (XLP)
Insulation

Bare Copper Grounding
Conductor

Galvanized Steel Armor

PVC Jacket

Type MC

APPLICATIONS

Southwire's 600 Volt Type MC Cable is for use in aerial installations, direct burial, metal racks, cable trays, troughs or continuous rigid cable supports. Listed by Underwriters Laboratories as Type MC, this cable is capable of operating continuously at a maximum conductor temperature of 90°C in wet or dry locations.

SPECIFICATIONS

Southwire's 600 Volt Type MC Cable is manufactured and tested in accordance with the latest revisions of:

- UL 44 - Thermoset-Insulated Wires and Cables
- UL 1569 - Metal-Clad Cables
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)
- ICEA T-29-520 - Vertical Cable Tray Flame Tests (210,000 BTU/hr)

Southwire's 600 Volt Type MC meets and exceeds all construction requirements of ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements.

CONSTRUCTION

Southwire's 600 Volt Type MC Cable is rated 90°C wet or dry and is flame and sunlight resistant. Features include a heavy duty construction, proven XLP insulated XHHW-2 conductors and a Type MC listing. For use in cable trays per NEC® Article 392. CPE and non-halogen jackets are available upon request.

• Scope

This specification covers three conductor XLP (cross-linked polyethylene) insulated, interlocked armored, thermoplastic jacketed, 600 volt cable with grounding conductor for use in aerial installations, metal racks, cable trays, troughs or continuous rigid cable supports. This cable is capable of operation continuously at a conductor temperature of 90°C in wet or dry locations.

• Standards

The following standards will form part of this specification - ICEA S-95-658/NEMA WC 70, UL 44, UL 1569 Type MC.

• Conductor

The conductor will be Class B compressed concentric stranded bare copper in accordance with ASTM B3 and B8 and ICEA Part 2.

• Insulation

The insulation will be XLP meeting the requirements of the referenced standards. The insulation thickness will be as listed in ICEA Table 3.1, and the minimum spot thickness will not be less than 90% of the listed amounts. The method of phase identification will be similar to ICEA Method 3 using printed circuit numbers and colors (1-BLACK, 2-RED, 3-BLUE). UL Listed XHHW-2 conductors are used.

WEIGHTS AND MEASUREMENTS

PRODUCT CODE	SIZE	CONDUCTOR DIAMETER		INSULATION THICKNESS		INSULATION DIAMETER		GND.* COND. SIZE	APPROX. CORE DIAMETER		ARMORED DIAMETER		JACKET THICKNESS		APPROX. OVERALL DIAMETER		APPROXIMATE NET WEIGHT		ALLOWABLE AMPACITIES**
	AWG OR kcmil	inch	mm	inch	mm	inch	mm	AWG	inch	mm	inch	mm	inch	mm	inch	mm	lbs/1000 ft	kg/km	
GS01XXH-008	8†	0.139	3.53	0.045	1.14	0.232	5.90	10	0.510	12.9	0.720	18.3	0.050	1.27	0.820	20.8	511	761	59
GS01XXH-006	6†	0.174	4.43	0.045	1.14	0.267	6.79	8	0.586	14.9	0.796	20.2	0.050	1.27	0.896	22.7	671	999	79
GS01XXH-004	4	0.221	5.60	0.045	1.14	0.314	7.96	8	0.685	17.4	0.895	22.7	0.050	1.27	0.995	25.3	867	1290	104
GS01XXH-002	2	0.277	7.04	0.045	1.14	0.370	9.41	6	0.808	20.5	1.018	25.9	0.050	1.27	1.118	28.4	1211	1802	138
GS01XXH-001	1	0.322	8.18	0.055	1.14	0.435	11.05	6	0.948	24.1	1.158	29.4	0.050	1.27	1.258	31.9	1458	2170	161
GS01XXH-010	1/0	0.362	9.19	0.055	1.40	0.475	12.07	6	1.034	26.3	1.244	31.6	0.050	1.27	1.344	34.1	1738	2586	186
GS01XXH-020	2/0	0.405	10.29	0.055	1.40	0.518	13.16	6	1.127	28.6	1.337	34.0	0.050	1.27	1.437	36.5	2046	3044	215
GS01XXH-030	3/0	0.454	11.53	0.055	1.40	0.567	14.40	4	1.233	31.3	1.443	36.26	0.050	1.27	1.543	39.2	2504	3727	249
GS01XXH-040	4/0	0.510	12.95	0.055	1.40	0.623	15.82	4	1.354	34.4	1.564	39.7	0.060	1.52	1.684	42.8	3131	4659	287
GS01XXH-250	250	0.558	14.17	0.065	1.65	0.691	17.55	4	1.501	38.1	1.711	43.4	0.060	1.52	1.831	46.5	3627	5397	320
GS01XXH-350	350	0.661	16.79	0.065	1.65	0.794	20.17	3	1.723	43.8	1.933	49.1	0.060	1.52	2.053	52.1	4800	7142	394
GS01XXH-500	500	0.790	20.07	0.065	1.65	0.923	23.44	2	2.002	50.8	2.212	56.2	0.060	1.52	2.332	59.2	6505	9679	487

*Three uncoated standard ground conductors may be provided upon request. **Ampacities are based on Table B.310-3 of the NEC® 2008 edition. Ampacities are for multiconductor cables in free air, 90°C conductor, 40°C ambient temperature, for use as specified in Annex B and for use in cable trays as specified in section 392.11. Note: All sizes available as four power conductor construction with two ground wires.
†These are not type MC rated.

CONSTRUCTION (continued)

- **Grounding Conductor**

The grounding conductor will be Class B compressed concentric stranded bare copper in accordance with ASTM B3 and B8.

- **Assembly**

The insulated conductors will be cabled round with fillers and with a grounding conductor in one outer interstice and covered with a binder tape.

- **Armor**

A single strip of interlocked galvanized steel tape will be applied over the assembly.

- **Jacket**

The cable will be covered with a black PVC jacket conforming to the requirements specified for polyvinyl chloride in ICEA. The average thickness will be in accordance with ICEA, and the minimum spot thickness will be not less than 80% of the average thickness. The jacket will be sunlight resistant and will meet the requirements of the IEEE 1202 (70,000 BTU/hr) vertical tray flame test and ICEA T-29-520 (210,000 BTU/hr) ribbon burner flame test. Optional CPE and non-halogen jackets are available.

- **Identification**

Manufacturer's identification will be printed on the jacket.

- **Tests**

Physical and electrical tests will be conducted in accordance with the requirements of the referenced standards.

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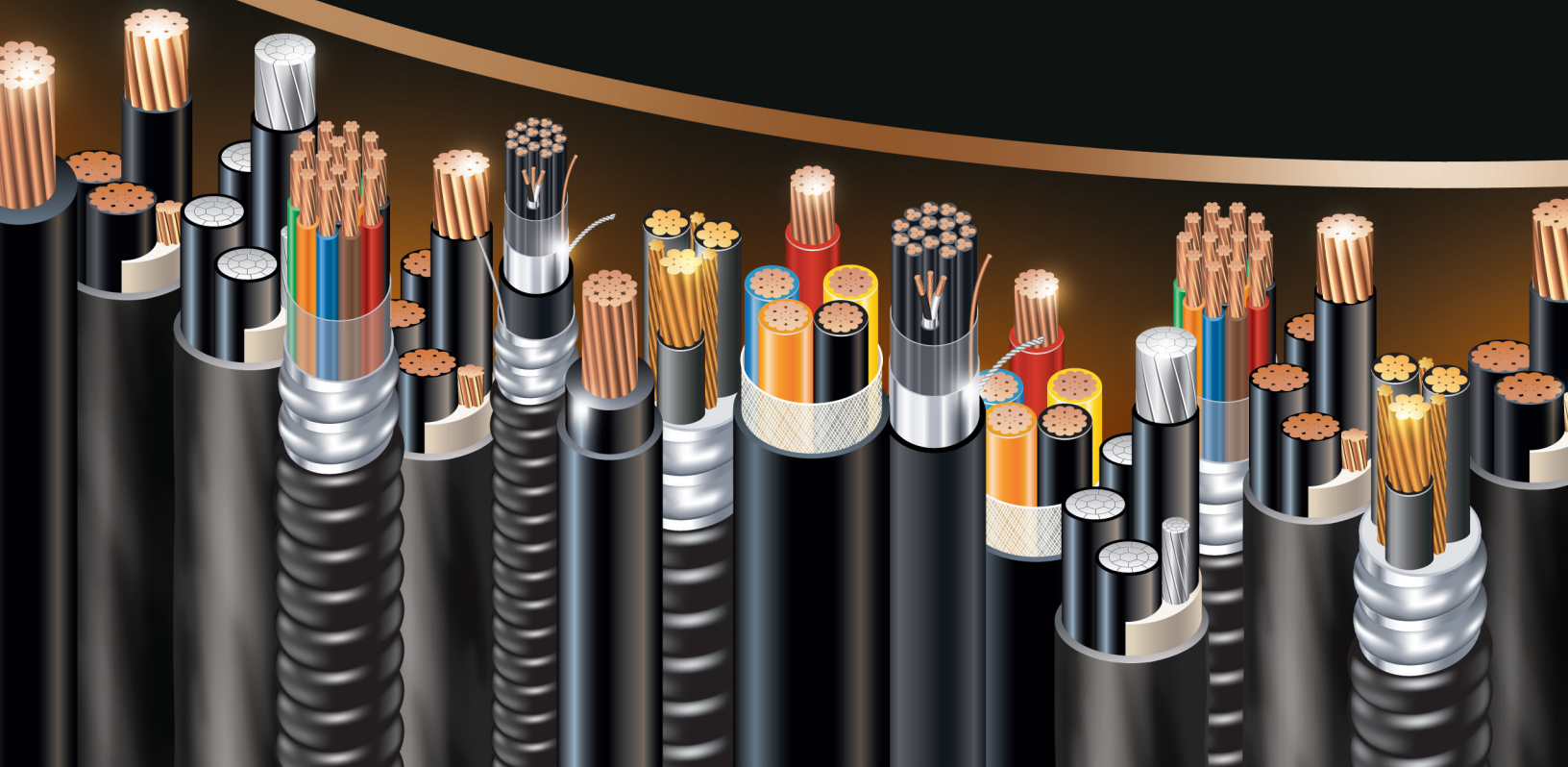
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