Armorlite® Type MC THHN/THWN Circuit Size Copper Conductor Isolated Ground 120/208V Colors

Copper THHN/THWN Insulated Singles. Two Insulated Grounding Conductors. UL Listed. 600 Volts. Rated VW-1. Lightweight Aluminum Interlocked Armor.

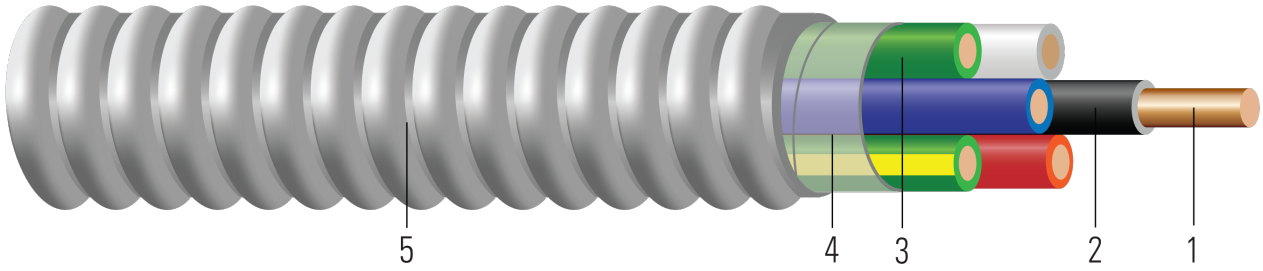


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Solid copper per ASTM B3 or 19-strand class C compressed copper and ASTM B3 and B8
2. **Insulation:** Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
3. **Grounds:** Two insulated green and green/yellow grounds. Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
4. **Binder:** Mylar tape
5. **Armor:** Aluminum Interlocked Armor

APPLICATIONS AND FEATURES:

Southwire Armorlite® Type MC Isolated Ground Cable is suitable for use as follow:

- Applications requiring redundant, dedicated or isolated grounding paths
- Branch, feeder and service power distribution in commercial, industrial, institutional, and multi-residential buildings
- Fished or embedded in plaster
- Concealed or exposed installations
- Environmental air-handling spaces per NEC 300.22 (C)
- Places of Assembly per NEC 518.4 and theaters per NEC 520.5
- Installation in cable tray and approved raceways
- Under raised floors for information technology equipment conductors and cables per NEC 645.5(D) & 645.5(D)(2)
- Class I Div. 2, Class II Div 2, & Class III Div. 1 Hazardous Locations
- Binder tape with print legend wrapped around assembly
- Unjacketed Type MC cables are rated for dry, indoor locations only per NEC 330.10(A)(10)
- Type THHN/THWN rated 90ºC dry

Southwire Armorlite® Type MC Isolated Ground Cable meets or exceeds the following requirements:

- UL Online Product Guide Info - Metal-Clad Cable (PJAZ) (www.ul.com)
- Federal Specification A-A59544 (formerly J-C-30B)
- NFPA 70 (National Electrical Code), Article 330
- Listed for use in UL 1, 2 and 3 Hour Through Penetration Firestop Systems

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors

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- UL 83 Thermoplastic Insulated Wires and Cables
- UL 1569 Metal-Clad Cables
- UL 1479 Standard for Safety Fire Tests of Penetration Firestops
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- Buy American: Compliant with Buy American Requirements, found in 49 U.S.C. § 5323(j); specify "Made in the USA Only!" when ordering to ensure your project receives American made products.

SAMPLE PRINT LEGEND:

E96627 {UL} TYPE MC XX AWG THHN OR THWN CDRS FOR USE IN CABLE TRAYS 600 VOLTS

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Conductor Number	Color	Diameter Over Conductor	Conductor Stranding	Insulation Thickness	Ground Size	Diameter Over Armor	Copper Weight	Overall Weight
	AWG/ Kcmil			inch		mils	No. x AWG	inch	lbs/1000ft	lbs/1000ft
12 AWG | SOLID Strands										
556323	12	2	RD,WE	0.081	SOLID	15	2x12	0.506	80	132
556325	12	2	BE,WE	0.081	SOLID	15	2x12	0.506	80	132
695965	12	2	BK,WE	0.081	SOLID	15	2x12	0.506	80	132
695973	12	3	BK,RD,WE	0.081	SOLID	15	2x12	0.541	100	159
560950	12	3	BK,BE,WE	0.081	SOLID	15	2x12	0.55	100	160
695981	12	4	BK,RD,BE,WE	0.081	SOLID	15	2x12	0.578	120	186
562419	12	4	BK,RD,BE,WE	0.081	SOLID	15	2x12	0.577	120	187
587697	12	6	SEE TABLE	0.081	SOLID	15	2x12	0.624	160	238
10 AWG | SOLID Strands										
695999	10	2	BK,WE	0.102	SOLID	20	2x10	0.581	124	192
555636	10	2	BE,WE	0.102	SOLID	20	2x10	0.59	124	192
555634	10	2	RD,WE,GN,GN/YW	0.102	SOLID	20	2x10	0.58	124	191
696005	10	3	BK,RD,WE	0.102	SOLID	20	2x10	0.625	155	234
696013	10	4	BK,RD,BE,WE	0.102	SOLID	20	2x10	0.671	186	274
584080	1	4	BK,RD,BE/ WE,GN,GN/YW	0.322	19	50	2x6	1.406	1207	1597
12 AWG | 19 Strands										
551104	12	2	BK,WE	0.09	19	15	2x12	0.53	81	138
551106	12	3	BK,RD,WE	0.09	19	15	2x12	0.556	101	166
551296	12	4	BK,RD,BE,WE	0.09	19	15	2x12	0.604	121	195
10 AWG | 19 Strands										
551298	10	2	BK,WE	0.117	19	20	2x10	0.618	129	205
551302	10	3	BK,RD,WE	0.117	19	20	2x10	0.675	162	251
555184	8	2	BK,WE	0.143	19	30	2x10	0.682	168	260
555189	8	4	BK,RD,BE,WE	0.143	19	30	2x10	0.869	271	433

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

Note: Conductor number = number of phase conductors plus neutrals. Does not include green and green/yellow ground.

TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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Table 2 – Electrical and Engineering Data

Cond. Size	Conductor Number	Min. Bend Radius	DC Resistance at 25°C	AC Resistance at 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity Raceway 75°C	Allowable Ampacity Raceway 90°C
AWG/ Kcmil		Inches	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
12 AWG | SOLID Strands							
12	2	3.5	1.662	2.063	0.054	25	30
12	2	3.5	1.662	2.063	0.054	25	30
12	2	3.5	1.662	2.063	0.054	25	30
12	3	3.8	1.662	2.063	0.054	25	30
12	3	3.9	1.662	2.063	0.054	25	30
12	4	4	1.662	2.063	0.054	20	24
12	4	4	1.662	2.063	0.054	20	24
12	6	4.4	1.662	2.063	0.054	20	24
10 AWG | SOLID Strands							
10	2	4.1	1.04	1.291	0.05	35	40
10	2	4.1	1.04	1.291	0.05	35	40
10	2	4.1	1.04	1.291	0.05	35	40
10	3	4.4	1.04	1.291	0.05	35	40
10	4	4.7	1.04	1.291	0.05	28	32
1	4	9.8	0.128	0.159	0.046	104	116
12 AWG | 19 Strands							
12	2	3.7	1.662	2.063	0.054	25	30
12	3	3.9	1.662	2.063	0.054	25	30
12	4	4.2	1.662	2.063	0.054	20	24
10 AWG | 19 Strands							
10	2	4.3	1.04	1.291	0.05	35	40
10	3	4.7	1.04	1.291	0.05	35	40
8	2	4.8	0.653	0.81	0.052	50	55
8	4	6.1	0.653	0.81	0.052	40	44

***** Ampacities based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.

***** Ampacities have been adjusted for more than Three Current-Carrying Conductors.

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Color

Table - Conductor number = number of phase conductors plus neutrals. Does not include green and green/yellow ground (/ means stripe RD/WE is Red with White Stripe)

Size (Strand)	Cond. Number	Stock Code	Color
12 (Solid)	2	695965	BK, WE, GN, GN/YW
12 (Solid)	2	556323	RD, WE, GN, GN/YW
12 (Solid)	2	556325	BE, WE, GN, GN/YW
12 (Solid)	3	695973	BK, WE, RD, GN, GN/YW
12 (Solid)	3	560950	BK, BE, WE, GN, GN/YW
12 (Solid)	4	695981	BK, WE, RD, BE, GN, GN/YW
12 (Solid)	4	562419	BK, WE, WE/BK, BK/WE, GN, GN/YW
12 (Solid)	6	587697	BK, RD, BE, PK, PE, WE, GN, GN/YW
10 (Solid)	2	695999	BK, WE, GN, GN/YW
10 (Solid)	2	555636	BE, WE, GN, GN/YW
10 (Solid)	3	696005	BK, WE, RD, GN, GN/YW
10 (Solid)	4	696013	BK, WE, RD, BE, GN, GN/YW
12 (19)	2	551104	BK, WE, GN, GN/YW
12 (19)	3	551106	BK, WE, RD, GN, GN/YW
12 (19)	4	551296	BK, WE, RD, BE, GN, GN/YW
10 (19)	2	551298	BK, WE, GN, GN/YW
10 (19)	3	551302	BK, WE, RD, GN, GN/YW
8 (19)	2	555184	BK, WE, GN GND, GN/YW GND
8 (19)	4	555189	BK, WE, RD, BE, GN GND, GN/YW GND

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