



# 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.

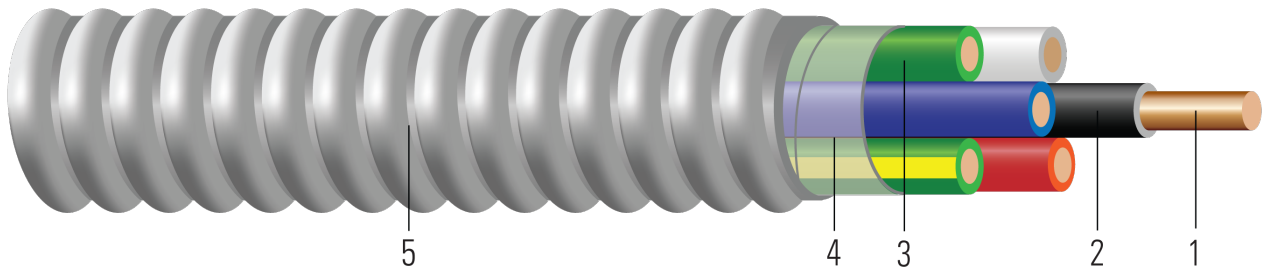


Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Solid or 19 strands class C compressed copper per ASTM B3 and ASTM B8
2. **Insulation:** All phases are insulated with Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
3. **Ground:** Two insulated Green and Green/Yellow grounds. Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
4. **Binder:** Mylar tape
5. **Aarmor:** Aluminum Interlocked Armor

## APPLICATIONS AND FEATURES:

Southwire Armorlite® Type MC Cable -Isolated Ground 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.
- Type THHN/THWN rated 90°C Dry.

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

- UL Online Product Guide Info - Metal-Clad Cable (PJAZ) ( [www.ul.com](http://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
- 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
<b>12 AWG   Solid</b>										
695965◇	12	2	BK,WE	0.080	Solid	20	2x12	0.505	79	132
556323◇	12	2	RD,WE	0.080	Solid	20	2x12	0.505	79	132
556325◇	12	2	BE,WE	0.080	Solid	20	2x12	0.505	79	132
695973◇	12	3	BK,RD,WE	0.080	Solid	20	2x12	0.541	99	159
560950◇	12	3	BK,BE,WE	0.080	Solid	20	2x12	0.550	99	159
695981◇	12	4	BK,RD,BE,WE	0.080	Solid	20	2x12	0.586	119	187
562419◇	12	4	BK,RD,BE,WE	0.080	Solid	20	2x12	0.577	119	187
587697◇	12	6	See Table	0.080	Solid	20	2x12	0.625	159	238
<b>10 AWG   Solid</b>										
695999◇	10	2	BK,WE	0.101	Solid	25	2x10	0.581	123	192
555636◇	10	2	BE,WE	0.101	Solid	25	2x10	0.590	123	192
696005◇	10	3	BK,RD,WE	0.101	Solid	25	2x10	0.625	154	233
696013◇	10	4	BK,RD,BE,WE	0.101	Solid	25	2x10	0.671	185	274
<b>12 AWG   19 Strands</b>										
551104◇	12	2	BK,WE	0.090	19	20	2x12	0.530	80	138
551106◇	12	3	BK,RD,WE	0.090	19	20	2x12	0.565	100	159
551296◇	12	4	BK,RD,BE,WE	0.090	19	20	2x12	0.604	120	197
<b>10 AWG   19 Strands</b>										
551298◇	10	2	BK,WE	0.117	19	25	2x10	0.618	129	206
551302◇	10	3	BK,RD,WE	0.117	19	25	2x10	0.675	161	250
555184◇	8	2	BK,WE	0.143	19	35	2x10	0.682	167	260
555189◇	8	4	BK,RD,BE,WE	0.143	19	35	2x10	0.869	270	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.





**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
<b>12 AWG   Solid</b>							
12	2	3.6	1.662	2.002	0.054	25	30
12	2	3.6	1.662	2.002	0.054	25	30
12	2	3.6	1.662	2.002	0.054	25	30
12	3	3.8	1.662	2.002	0.054	25	30
12	3	3.8	1.662	2.002	0.054	25	30
12	4	4.1	1.662	2.002	0.054	20	24
12	4	4.1	1.662	2.002	0.054	20	24
12	6	4.4	1.662	2.002	0.054	20	24
<b>10 AWG   Solid</b>							
10	2	4.1	1.040	1.253	0.050	35	40
10	2	4.1	1.040	1.253	0.050	35	40
10	3	4.4	1.040	1.253	0.050	35	40
10	4	4.8	1.040	1.253	0.050	28	32
<b>12 AWG   19 Strands</b>							
12	2	3.8	1.662	2.002	0.054	25	30
12	3	4.0	1.662	2.002	0.054	25	30
12	4	4.3	1.662	2.002	0.054	20	24
<b>10 AWG   19 Strands</b>							
10	2	4.4	1.040	1.253	0.050	35	40
10	3	4.7	1.040	1.253	0.050	35	40
8	2	4.8	0.653	0.786	0.052	50	55
8	4	6.1	0.653	0.786	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.





**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

