Armorlite® Type MC THHN/THWN Circuit Size Copper Conductor Neutral Per Phase

Copper THHN/THWN Insulated Singles. Dedicated Neutral Conductor for Each Phase Conductor. Green Insulated Copper Grounding Conductor. UL Listed 600 Volts. Rated VW-1. Lightweight Aluminum Interlocked Armor.

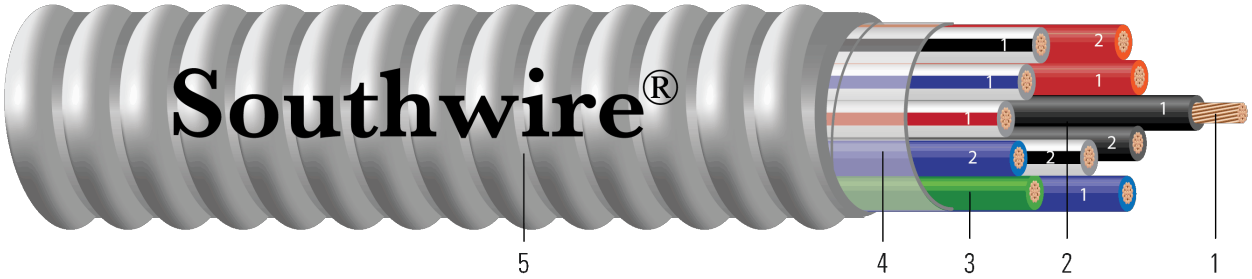


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

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

Contact Southwire SPEED™ Services to request a quote.

APPLICATIONS AND FEATURES:

Southwire Armorlite® Type MC Cable Neutral-per-phase products comply with NEC 200.4 requirements (added in the 2011 NEC) for the installation and marking of neutral conductors. Neutrals are not to be used for more than one circuit (branch, multiwire branch, or ungrounded feeder). See NEC 200.4 for complete requirements.

Southwire Armorlite® Type MC Cable - Neutral per phase is suitable for use as follow:

- Applications affected by harmonics generated from non-linear switching loads, such as computers, variable frequency drives, electrical test equipment, and office equipment.
- Multiple circuits for 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 90ºC Dry.

Southwire Armorlite® Type MC Cable -Neutral per phase 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)

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- NFPA 70 (National Electrical Code), Article 330
- Listed for use in UL 1, 2 and 3 Hour Through Penetration Firestop Systems

SPECIFICATIONS:

- 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	Conductor Stranding	Insulation Thickness	Ground Size	Num x Neutral Size	Diameter Over Armor	Copper Weight	Overall Weight
	AWG/ Kcmil			mils	No. x AWG	No. x AWG	inch	lbs/1000ft	lbs/1000ft
TBA	12	2	19	20	1 x 12	1 x 12	0.508	60	111
TBA	12	4	19	20	1 x 12	2 x 12	0.580	100	169
137844	12	6	19	20	1 x 12	3 x 12	0.620	160	222
665362	12	12	19	20	1 x 12	6 x 12	0.854	265	422
665364	12	18	19	20	1 x 12	9 x 12	0.932	387	580
TBA	10	2	19	25	1 x 10	1 x 10	0.587	97	166
TBA	10	4	19	25	1 x 10	2 x 10	0.678	161	254
677554	10	12	19	25	1 x 10	6 x 10	0.929	226	637
678254	10	18	19	25	1 x 10	9 x 10	1.027	379	495

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 and neutrals. Does not include the green ground.

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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 60°C	Allowable Ampacity Raceway 75°C	Allowable Ampacity Raceway 90°C
AWG/ Kcmil		Inches	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
12	2	3.5	1.662	2.002	0.0297	20	25	30
12	4	4.0	1.662	2.002	0.0383	16	20	24
12	6	4.3	1.662	2.002	0.0383	16	20	24
12	12	5.9	1.662	2.002	0.0383	10	12	15
12	18	6.5	1.662	2.002	0.0383	10	12	15
10	2	4.1	1.040	1.253	0.0290	30	35	40
10	4	4.7	1.04	1.253	0.0304	24	28	32
10	12	6.5	1.04	1.253	0.0304	15	17	20
10	18	7.2	1.04	1.253	0.0304	15	18	20

† 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.

* Inductive impedance is based on non-ferrous conduit with one diameter spacing.

Color Table

Cond. Num.	Black 1	Black 2	Black 3	Red 1	Red 2	Red 3	Blue 1	Blue 2	Blue 3	White/ Black 1	White/ Black 2	White/ Black 3	White/ Red 1	White/ Red 2	White/ Red 3	White/ Blue 1	White/ Blue 2	White/ Blue 3	Green
2	X									X									X
4	X			X						X			X						X
6	X			X			X			X			X			X			X
12	X	X		X	X		X	X		X	X		X	X		X	X		X
18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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