

Armorlite® Type MC THHN/THWN Circuit Size Copper Conductor Neutral Per Phase 277/480 Colors

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.

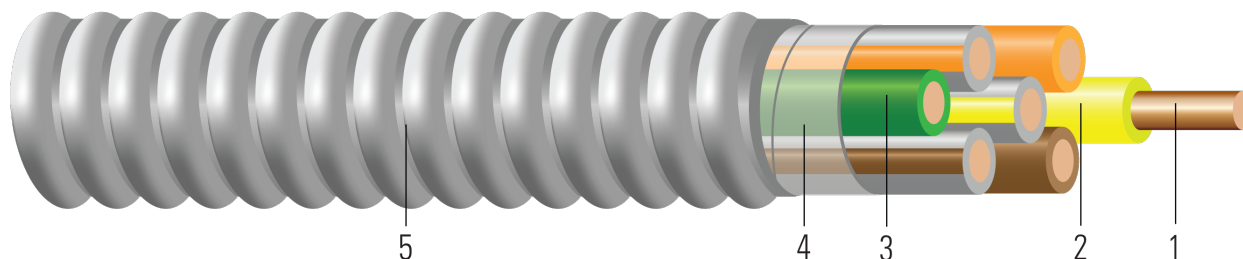


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 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:** Green insulated ground. 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 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 90°C 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)
- NFPA 70 (National Electrical Code), Article 330



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- Listed for use in UL 1, 2 and 3 Hour Through Penetration Firestop Systems

SPECIFICATIONS:

- ASTM B3 Standard Specification for 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.
- REACH - European Community Regulation

SAMPLE PRINT LEGEND:

SOUTHWIRE E96627 MASTER-DESIGN {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	Diameter Over Conductor	Conductor Stranding	Insulation Thickness	Ground Size x Num	Neutral Size x Num	Diameter Over Armor	Overall Weight
	AWG/ Kcmil		inch		mils	No. x AWG	No. x AWG	inch	lbs/1000ft
580820◇	12	4	0.080	Solid	20	1 x 12	2 x 12	0.553	162
567138◇	12	6	0.080	Solid	20	1 x 12	3 x 12	0.590	213
573930◇	10	4	0.101	Solid	25	1 x 10	2 x 10	0.637	235
573928◇	10	6	0.101	Solid	25	1 x 10	3 x 10	0.683	314
586585◇	12	4	0.090	19	20	1 x 12	2 x 12	0.580	169
587748◇	12	6	0.090	19	20	1 x 12	3 x 12	0.620	222
587181◇	10	4	0.117	19	25	1 x 10	2 x 10	0.678	254
587810◇	10	6	0.117	19	25	1 x 10	3 x 10	0.779	368

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 neutral. Does not include green ground.












































Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Neutral Stranding	Min. Bend Radius	DC Resistance at 25°C	AC Resistance at 75°C	Allowable Ampacity Raceway 60°C [†]	Allowable Ampacity Raceway 75°C [†]	Allowable Ampacity Raceway 90°C [†]
	AWG/Kcmil		Inches	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
580820	12	2	3.8	1.662	2.002	16	20	24
567138	12	3	4.1	1.662	2.002	16	20	24
573930	10	2	4.4	1.040	1.253	24	28	32
573928	10	3	4.7	1.040	1.253	24	28	32
586585	12	2	4.0	1.662	2.002	16	20	24
587748	12	3	4.3	1.662	2.002	16	20	24
587181	10	2	4.7	1.040	1.253	24	28	32
587810	10	3	5.4	1.040	1.253	24	28	32

[†] Ampacities have been adjusted for more than Three Current-Carrying Conductors

[†] 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). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.

Color Table

Stock Number	Cond. Size	Cond. Num.	1	2	3	4	5	6	7
580820	12	4							
567138	12	6							
573930	10	4							
573928	10	6							
586585	12	4							
587748	12	6							
587181	10	4							
587810	10	6	