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

Copper THHN/THWN Insulated Singles. Oversized Neutral Conductor. Green Insulated Ground. UL Listed. 600 Volts. Rated VW-1. Lightweight Aluminum Interlocked Armor.

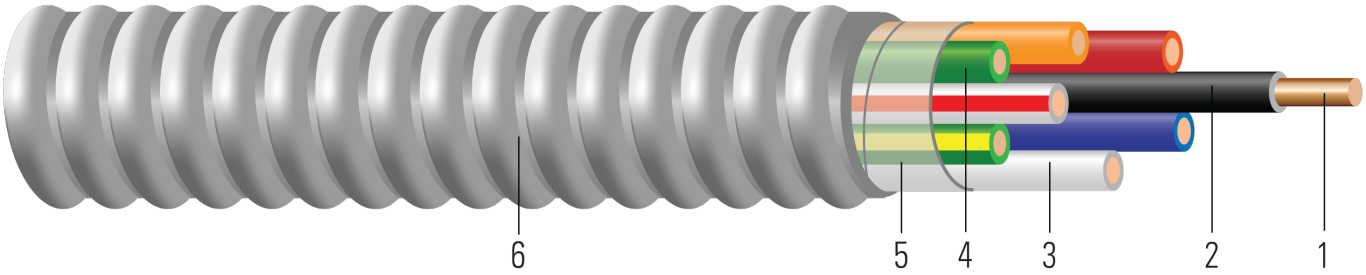


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Solid copper per ASTM B3 or 19-strand combination unilay copper per ASTM B3 and B787
2. **Insulation:** Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
3. **Neutral:** Oversized insulated neutral with Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
4. **Ground:** Green Polyvinyl Chloride with Nylon Sheath Type THHN/THWN insulated ground conductor
5. **Binder:** Mylar tape
6. **Armor:** Aluminum Interlocked Armor

APPLICATIONS AND FEATURES:

Southwire Armorlite® Type MC Oversized-Neutral Cable 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
- 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
- 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 Oversized-Neutral 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:

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- ASTM B3 Soft or Annealed Copper Wire
- ASTM B787 19 Wire Combination Unilay-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 WITH 2 X XX AWG NEUTRAL FOR USE IN CABLE TRAYS 600 VOLTS

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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Conductor Number	Color	Diameter Over Conductor	Conductor Stranding	Insulation Thickness	Ground Size	Num x Neutral Size	Diameter Over Armor	Copper Weight	Overall Weight
	AWG/ Kcmil			inch		mils	No. x AWG	No. x AWG	inch	lbs/ 1000ft	lbs/ 1000ft
12 AWG | SOLID Strands											
690826	12	2	BK,WE	0.081	SOLID	15	1x12	1x10	0.497	71	120
690859	12	3	BK,RD,WE	0.081	SOLID	15	1x12	1x10	0.524	91	147
550654	12	3	BK,RD,GN	0.081	SOLID	15	2x12	1x10	0.566	111	175
690883	12	4	BK,RD,BE,WE	0.081	SOLID	15	1x12	1x10	0.558	111	174
690917	12	4	BK,RD,BE,WE	0.081	SOLID	15	1x12	1x8	0.591	131	205
565760	12	4	BN,OE,YW,GY	0.081	SOLID	15	1x12	1x10	0.566	111	175
690941	12	5	SEE TABLE	0.081	SOLID	15	1x12	1x10	0.593	131	201
695130	12	6	SEE TABLE	0.081	SOLID	15	2x12	2x10	0.642	182	266
581968	12	6	BK,RD,BE,BK/ OE,GN,GN/ YW,WE,WE/OE	0.081	SOLID	15	2x12	2x10	0.65	182	336
555209	12	6	SEE TABLE	0.081	SOLID	15	2x12	3x10	0.663	193	282
553633	12	8	SEE TABLE	0.081	SOLID	15	2x12	2x10	0.784	222	353
12 AWG | 19 Strands											
589165	12	2	BN,GY,GN	0.089	19	15	1x12	1x10	0.52	72	188
674428	12	6	BK,RD,BK/BE,RD/ BE,WE,WE/BE,GN	0.089	19	15	1x12	2x10	0.639	165	252
568714	6	4	BK,RD,BE,WE,GN	0.178	19	30	1x8	1x4	0.968	427	625
10 AWG | SOLID Strands											
690974	10	3	BK,RD,WE	0.102	SOLID	20	1x10	1x8	0.648	144	227
691006	10	4	BK,RD,BE,WE	0.102	SOLID	20	1x10	1x8	0.7	175	266
552985	10	6	SEE TABLE	0.102	SOLID	20	2x10	2x8	0.878	289	449
552983	10	8	SEE TABLE	0.102	SOLID	20	2x10	2x8	0.934	351	529
585022	10	8	SEE TABLE	0.102	SOLID	20	1x10	2x8	0.903	320	489
12 AWG | 19 Strands											
551318	12	2	BK,WE	0.09	19	15	1x12	1x10	0.522	73	128
551330	12	5	SEE TABLE	0.09	19	15	1x12	1x10	0.635	133	212

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 green 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	3	3.7	1.662	2.063	0.054	25	30
12	3	4	1.662	2.063	0.054	25	30
12	4	3.9	1.662	2.063	0.054	20	24
12	4	4.1	1.662	2.063	0.054	20	24
12	4	4	1.662	2.063	0.054	20	24
12	5	4.2	1.662	2.063	0.054	20	24
12	6	4.5	1.662	2.063	0.054	20	24
12	6	4.6	1.662	2.063	0.054	20	24
12	6	4.6	1.662	2.063	0.054	20	24
12	8	5.5	1.662	2.063	0.054	18	21
12 AWG | 19 Strands							
12	2	3.6	1.662	2.063	0.054	25	30
12	6	4.5	1.662	2.063	0.054	20	24
6	4	6.8	0.411	0.51	0.051	52	60
10 AWG | SOLID Strands							
10	3	4.5	1.04	1.291	0.05	35	40
10	4	4.9	1.04	1.291	0.05	28	32
10	6	6.1	1.04	1.291	0.05	28	32
10	8	6.5	1.04	1.291	0.05	24	28
10	8	6.3	1.04	1.291	0.05	24	28
12 AWG | 19 Strands							
12	2	3.7	1.662	2.063	0.054	25	30
12	5	4.4	1.662	2.063	0.054	20	24

***** 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. Does not include neutrals and green ground. (/ means stripe RD/WE is Red with White Stripe)

Size (Strand)	Cond. Number	Stock Code	Color
12 (Solid)	1	690826	BK, GN, WE
12 (Solid)	2	690859	BK, RD, GN, WE
12 (Solid)	2	550654	BK, RD, GN, GN/YW, WE
12 (Solid)	3	690883	BK, RD, BE, WE, GN
12 (Solid)	3	690917	BK, RD, BE, GN, WE
12 (Solid)	3	565760	BN, OE, YW, GN, GY
12 (Solid)	3	555209	BK, RD, BE, GN, GN/YW, WE, WE/BE, WE/RD
12 (Solid)	4	690941	BK, RD, BE, OE, GN, WE
12 (Solid)	4	695130	BK, RD, BE, OE, GN, GN/YW, WE, WE/OE
12 (Solid)	6	553633	BK, RD, BE, BK/WE, RD/WE, BE/WE, WE, WE/BK, GN, GN/YW
10 (Solid)	2	690974	BK, RD, GN, WE
10 (Solid)	3	691006	BK, RD, BE, GN, WE
10 (Solid)	4	552985	BK, RD, BE, PE, WE, WE/BK, GN, GN/YW
10 (Solid)	6	585022	BK, RD, BE, BK/WE, RD/WE, BE/WE, WE, WE/BK, GN
10 (Solid)	6	552983	BK, RD, BE, BK/WE, RD/WE, BE/WE, WE, WE/BK, GN, GN/YW
12 (19)	1	551318	BK, GN, WE
12 (19)	4	551330	BK, RD, BE, OE, GN, WE

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