



Armorlite® Type MC THHN/THWN Circuit Size Copper Conductor 277/480V Colors

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

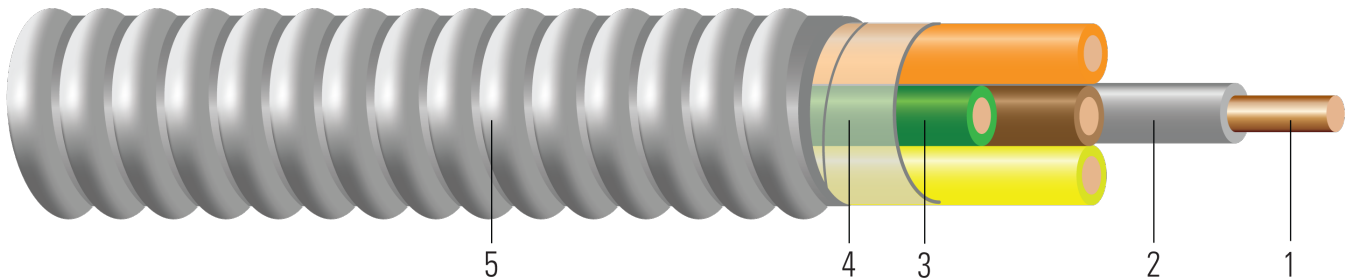


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Solid 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. **Ground:** Green Polyvinyl Chloride with Nylon Sheath Type THHN/THWN insulated ground conductor
4. **Binder:** Mylar tape
5. **Armor:** Aluminum Interlocked Armor

APPLICATIONS AND FEATURES:

Southwire Armorlite® Type MC Cable is suitable for use as follows:

- 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 Article 645
- 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
- Unjacketed Type MC cables are rated for dry, indoor locations only per NEC 330.10(A)(10)
- Anti-Short bushing not required

Southwire Armorlite® Type MC 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





- 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
- RoHS-2 (European Directive 2011/65/EU)
- 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.
- VW-1 (Vertical-Wire) Flame Test

SAMPLE PRINT LEGEND:

SOUTHWIRE 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
14 AWG Solid										
551841	14	2	OE,GY,GN	0.064	Solid	20	1x14	0.442	37	79
553661	14	3	BN,OE,GY,GN	0.064	Solid	20	1x14	0.469	50	97
589090	14	4	BN,OE,YW,GY	0.064	Solid	20	1x14	0.508	62	116
12 AWG Solid										
552962	12	2	PE,WE,GN	0.08	Solid	20	1x12	0.474	59	105
553769	12	2	PE,GY,GN	0.08	Solid	20	1x12	0.475	59	105
590607	12	2	OE,GY/OE,GN	0.08	Solid	20	1x12	0.474	59	105
590640	12	2	OE,GY,GN	0.08	Solid	20	1x12	0.533	59	136
555645	12	2	BN,YW,GN	0.08	Solid	20	1x12	0.474	59	105
551389	12	2	BN,OE,GN	0.08	Solid	20	1x12	0.475	59	105
590605	12	2	BN,GY/BN,GN	0.08	Solid	20	1x12	0.474	59	105
555168	12	2	PK,GY,GN	0.08	Solid	20	1x12	0.474	59	105
599040	12	2	PK,WE,GN	0.08	Solid	20	1x12	0.474	59	105
552773	12	2	YW,GY,GN	0.08	Solid	20	1x12	0.475	59	105
590609	12	2	YW,GY/YW,GN	0.08	Solid	20	1x12	0.474	59	105
678274	12	3	BN,BN,GY,GY,GN	0.08	Solid	20	1x12	0.505	79	131
568461	12	3	BN,BN/WE,GY,GN	0.08	Solid	20	1x12	0.505	79	131
553772	12	3	BN,YW,GY,GN	0.08	Solid	20	1x12	0.506	79	131
678272	12	3	OE,OE/GY,GY,GN	0.08	Solid	20	1x12	0.505	79	131
553771	12	3	PE,BN,GY,GN	0.08	Solid	20	1x12	0.506	79	131
556393	12	3	PE,BN,GY,GN	0.08	Solid	20	1x12	0.506	79	131
598132	12	3	PE,PE/WE,GY,GN	0.08	Solid	20	1x12	0.505	79	131
568463	12	3	YW,YW/ WE,GY,GN	0.08	Solid	20	1x12	0.505	79	131
678277	12	3	YW,YW/GY,GY,GN	0.08	Solid	20	1x12	0.505	79	131
574706	12	3	PK,BN,GY,GN	0.08	Solid	20	1x12	0.505	79	131
610552	12	3	PE,YW,GY,GN	0.08	Solid	20	1x12	0.505	79	131
565735	12	3	PE,YW,GY,GN	0.08	Solid	20	1x12	0.505	79	131
552777	12	4	BN,YW,PE,GY,GN	0.08	Solid	20	1x12	0.541	99	158
610529	12	4	BN,YW,PE,GY,GN	0.08	Solid	20	1x12	0.541	99	158
689406	12	2	OE,GY	0.080	Solid	20	1x12	0.483	59	105
689448	12	2	PE,GY	0.080	Solid	20	1x12	0.483	59	105
689364	12	2	BN,GY	0.080	Solid	20	1x12	0.483	59	105
689323	12	2	YW,GY	0.080	Solid	20	1x12	0.483	59	105
551391	12	3	BN,OE,YW	0.080	Solid	20	1x12	0.514	79	132
610523	12	3	BN,YW,GY	0.080	Solid	20	1x12	0.514	79	132
689562	12	3	BN,OE,GY	0.080	Solid	20	1x12	0.514	79	132
611270	12	3	OE,YW,GY	0.080	Solid	20	1x12	0.514	79	132
689570	12	4	BN,OE,YW,GY	0.080	Solid	20	1x12	0.549	99	159





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 19 Strands										
551254	12	2	PE,GY,GN	0.088	19	20	1x12	0.495	60	109
551112	12	2	OE,GY,GN	0.088	19	20	1x12	0.496	60	109
576625	12	2	BN,GY	0.088	19	20	1x12	0.47	60	102
576103	12	2	BN,GY	0.088	19	20	1x12	0.58	60	113
596129	12	3	YW,YW,GY,GN	0.088	19	20	1x12	0.538	80	154
576117	12	3	BN,OE,GY	0.088	19	20	1x12	0.58	80	138
576540	12	3	BN,OE,GY	0.088	19	20	1x12	0.525	80	132
563995	12	3	BN,OE,YW,GN	0.088	19	20	1x12	0.529	80	138
551116	12	3	BN,YW,GY,GN	0.088	19	20	1x12	0.53	80	138
551118	12	3	OE,YW,GY,GN	0.088	19	20	1x12	0.53	80	138
551122	12	4	BN,OE,YW,GY,GN	0.088	19	20	1x12	0.568	100	166
576500	12	4	BN,OE,GY,YW	0.088	19	20	1x12	0.58	100	164
10 AWG Solid										
689604◇	10	2	BN,GY	0.101	Solid	25	1x10	0.550	92	151
610522◇	10	2	YW,GY	0.101	Solid	25	1x10	0.550	92	151
551167◇	10	2	BN,GY	0.101	Solid	25	1x10	0.550	92	151
561775	10	2	BN,GY,GN	0.101	Solid	25	1x10	0.542	92	150
559487	10	2	BN,OE,GN	0.101	Solid	25	1x10	0.526	92	149
559491	10	2	BN,YW,GN	0.101	Solid	25	1x10	0.541	92	150
559489	10	2	OE,YW,GN	0.101	Solid	25	1x10	0.541	92	150
571920	10	2	PE,GY,GN	0.101	Solid	25	1x10	0.542	92	150
563131	10	2	YW,GY,GN	0.101	Solid	25	1x10	0.542	92	150
689539◇	10	3	BN,OE,GY	0.101	Solid	25	1x10	0.589	123	192
553193◇	10	3	BN,OE,YW	0.101	Solid	25	1x10	0.589	123	192
573514	10	3	BN,YW,GY,GN	0.101	Solid	25	1x10	0.581	123	191
610550	10	3	BN,YW,GY,GN	0.101	Solid	25	1x10	0.581	123	191
580424	10	3	PE,YW,GY,GN	0.101	Solid	25	1x10	0.581	123	191
610970	10	3	YW,OE,GY,GN	0.101	Solid	25	1x10	0.581	123	191
610530	10	4	BN,YW,PE,GY,GN	0.101	Solid	25	1x10	0.625	154	232
689414◇	10	4	BN,OE,YW,GY	0.101	Solid	25	1x10	0.633	154	232
10 AWG 19 Strands										
553308	10	2	OE,GY,GN	0.113	19	25	1x10	0.574	97	162
587540	10	2	BN,GY/BN,GN	0.113	19	25	1x10	0.574	97	162
574820	10	2	BN,GY,10	0.113	19	25	1x10	0.66	95	161
551274	10	2	YW,GY,GN	0.113	19	25	1x10	0.574	97	162
576334	10	3	BN,OE,GY,10	0.113	19	25	1x10	0.66	127	202
555098	10	3	BN,OE,YW,GN	0.113	19	25	1x10	0.617	129	206
551128	10	3	BN,YW,GY,GN	0.113	19	25	1x10	0.617	129	205
551124	10	3	YW,OE,GY,GN	0.113	19	25	1x10	0.617	129	206
576523	10	4	BN,OE,YW,GY	0.113	19	25	1x10	0.66	160	242
12 AWG 19 Strands										





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
551108◇	12	2	YW,GY	0.090	19	20	1x12	0.504	60	110
551110◇	12	2	BN,GY	0.090	19	20	1x12	0.504	60	110
587745◇	12	2	OE,GY	0.090	19	20	1x12	0.504	60	110
551114◇	12	3	BN,OE,GY	0.090	19	20	1x12	0.538	80	138
10 AWG 19 Strands										
551276◇	10	2	BN,GY	0.117	19	25	1x10	0.583	97	163
551121◇	10	3	BN,OE,GY	0.117	19	25	1x10	0.626	129	206
551278◇	10	4	BN,OE,YW,GY	0.117	19	25	1x10	0.674	161	251

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

[illegible]



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	2	3.5	1.662	2.002	0.054	25	30
12	2	3.5	1.662	2.002	0.054	25	30
12	2	3.3	1.662	2.002	0.054	25	30
12	2	4.1	1.662	2.002	0.054	25	30
12	3	3.8	1.662	2.002	0.054	25	24
12	3	4.1	1.662	2.002	0.054	25	24
12	3	3.7	1.662	2.002	0.054	25	24
12	3	3.7	1.662	2.002	0.054	25	30
12	3	3.7	1.662	2.002	0.054	25	24
12	3	3.7	1.662	2.002	0.054	25	24
12	4	4	1.662	2.002	0.054	20	24
12	4	4.1	1.662	2.002	0.054	20	24
10 AWG Solid							
10	2	3.9	1.040	1.253	0.050	35	40
10	2	3.9	1.040	1.253	0.050	35	40
10	2	3.9	1.040	1.253	0.050	35	40
10	2	3.8	1.04	1.253	0.05	35	40
10	2	3.7	1.04	1.253	0.05	35	40
10	2	3.8	1.04	1.253	0.05	35	40
10	2	3.8	1.04	1.253	0.05	35	40
10	2	3.8	1.04	1.253	0.05	35	40
10	2	3.8	1.04	1.253	0.05	35	40
10	2	3.8	1.04	1.253	0.05	35	40
10	3	4.1	1.040	1.253	0.050	35	40
10	3	4.1	1.040	1.253	0.050	35	40
10	3	4.1	1.04	1.253	0.05	35	32
10	3	4.1	1.04	1.253	0.05	35	32
10	3	4.1	1.04	1.253	0.05	35	32
10	3	4.1	1.04	1.253	0.05	35	32
10	4	4.4	1.04	1.253	0.05	28	32
10	4	4.4	1.040	1.253	0.050	28	32
10 AWG 19 Strands							
10	2	4	1.04	1.253	0.05	35	40
10	2	4	1.04	1.253	0.05	35	40
10	2	4.6	1.04	1.253	0.05	35	40
10	2	4	1.04	1.253	0.05	35	40
10	3	4.6	1.04	1.253	0.05	35	32
10	3	4.3	1.04	1.253	0.05	35	40
10	3	4.3	1.04	1.253	0.05	35	32
10	3	4.3	1.04	1.253	0.05	35	32
10	4	4.6	1.04	1.253	0.05	28	32
12 AWG 19 Strands							
12	2	3.5	1.662	2.002	0.054	25	30





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	2	3.5	1.662	2.002	0.054	25	30
12	2	3.5	1.662	2.002	0.054	25	30
12	3	3.8	1.662	2.002	0.054	25	30
10 AWG 19 Strands							
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	4.7	1.040	1.253	0.050	28	32

* 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.

