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.

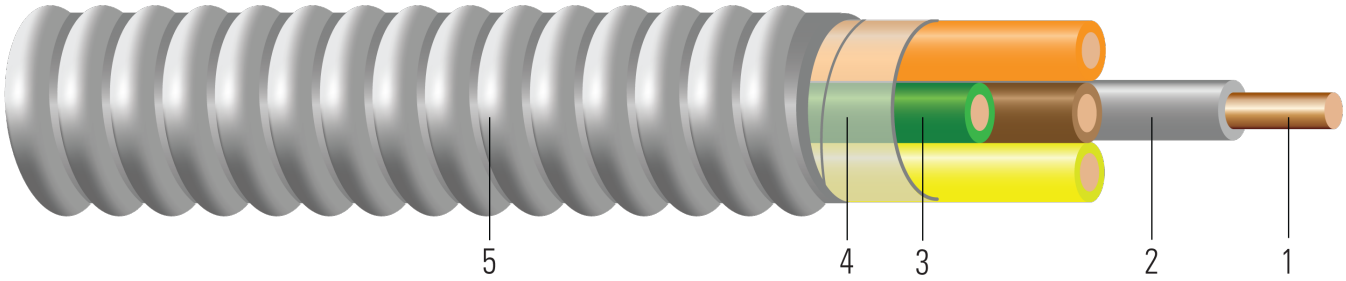


Image not to scale. See Table 1 for dimensions.

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 90ºC 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

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- 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

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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	Diameter Over Armor	Copper Weight	Overall Weight
	AWG/ Kcmil			inch		mils	No. x AWG	inch	lbs/1000ft	lbs/1000ft
14 AWG | SOLID Strands										
551841	14	2	OE,GY,GN	0.064	SOLID	15	1x14	0.442	38	79
553661	14	3	BN,OE,GY,GN	0.064	SOLID	15	1x14	0.469	50	97
589090	14	4	BN,OE,YW,GY	0.064	SOLID	15	1x14	0.5	63	116
12 AWG | SOLID Strands										
552962	12	2	PE,WE,GN	0.081	SOLID	15	1x12	0.474	60	105
553769	12	2	PE,GY,GN	0.081	SOLID	15	1x12	0.475	60	105
590607	12	2	OE,GY/OE,GN	0.081	SOLID	15	1x12	0.474	60	105
590640	12	2	OE,GY,GN	0.081	SOLID	15	1x12	0.534	60	136
555645	12	2	BN,YW,GN	0.081	SOLID	15	1x12	0.474	60	105
551389	12	2	BN,OE,GN	0.081	SOLID	15	1x12	0.475	60	105
590605	12	2	BN,GY/BN,GN	0.081	SOLID	15	1x12	0.474	60	105
555168	12	2	PK,GY,GN	0.081	SOLID	15	1x12	0.474	60	105
599040	12	2	PK,WE,GN	0.081	SOLID	15	1x12	0.474	60	105
552773	12	2	YW,GY,GN	0.081	SOLID	15	1x12	0.475	60	105
590609	12	2	YW,GY/YW,GN	0.081	SOLID	15	1x12	0.474	60	105
689323	12	2	YW,GY	0.081	SOLID	15	1x12	0.475	60	105
689364	12	2	BN,GY	0.081	SOLID	15	1x12	0.475	60	105
689448	12	2	PE,GY	0.081	SOLID	15	1x12	0.475	60	105
689406	12	2	OE,GY	0.081	SOLID	15	1x12	0.475	60	105
598132	12	3	PE,PE/WE,GY,GN	0.081	SOLID	15	1x12	0.505	80	132
678274	12	3	BN,BN/GY,GY,GN	0.081	SOLID	15	1x12	0.505	80	132
568461	12	3	BN,BN/WE,GY,GN	0.081	SOLID	15	1x12	0.505	80	132
553772	12	3	BN,YW,GY,GN	0.081	SOLID	15	1x12	0.506	80	132
678272	12	3	OE,OE/GY,GY,GN	0.081	SOLID	15	1x12	0.505	80	132
553771	12	3	PE,BN,GY,GN	0.081	SOLID	15	1x12	0.506	80	132
556393	12	3	PE,BN,GY,GN	0.081	SOLID	15	1x12	0.506	80	132
565735	12	3	PE,YW,GY,GN	0.081	SOLID	15	1x12	0.505	80	132
610552	12	3	PE,YW,GY,GN	0.081	SOLID	15	1x12	0.505	80	132
574706	12	3	PK,BN,GY,GN	0.081	SOLID	15	1x12	0.505	80	132
678277	12	3	YW,YW/GY,GY,GN	0.081	SOLID	15	1x12	0.505	80	132
568463	12	3	YW,YW/ WE,GY,GN	0.081	SOLID	15	1x12	0.505	80	132
551391	12	3	BN,OE,YW	0.081	SOLID	15	1x12	0.506	80	132
610523	12	3	BN,YW,GY	0.081	SOLID	15	1x12	0.506	80	132
689562	12	3	BN,OE,GY	0.081	SOLID	15	1x12	0.506	80	132
611270	12	3	OE,YW,GY	0.081	SOLID	15	1x12	0.506	80	132
689570	12	4	BN,OE,YW,GY	0.081	SOLID	15	1x12	0.541	100	159
610529	12	4	BN,YW,PE,GY,GN	0.081	SOLID	15	1x12	0.541	100	159
552777	12	4	BN,YW,PE,GY,GN	0.081	SOLID	15	1x12	0.541	100	159

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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	0.089	19	15	1x12	0.496	60	110
551112	12	2	OE,GY,GN	0.089	19	15	1x12	0.496	60	110
576625	12	2	BN,GY	0.089	19	15	1x12	0.47	60	103
576103	12	2	BN,GY	0.089	19	15	1x12	0.58	60	113
596129	12	3	YW,YW,GY,GN	0.089	19	15	1x12	0.539	80	154
576117	12	3	BN,OE,GY	0.089	19	15	1x12	0.58	80	138
576540	12	3	BN,OE,GY	0.089	19	15	1x12	0.525	80	133
563995	12	3	BN,OE,YW,GN	0.089	19	15	1x12	0.53	80	138
551116	12	3	BN,YW,GY,GN	0.089	19	15	1x12	0.53	80	138
551118	12	3	OE,YW,GY,GN	0.089	19	15	1x12	0.53	80	138
551122	12	4	BN,OE,YW,GY,GN	0.089	19	15	1x12	0.568	100	166
576500	12	4	BN,OE,GY,YW	0.089	19	15	1x12	0.58	100	164
10 AWG | SOLID Strands										
689604	10	2	BN,GY	0.102	SOLID	20	1x10	0.542	93	151
610522	10	2	YW,GY	0.102	SOLID	20	1x10	0.542	93	151
551167	10	2	BN,GY	0.102	SOLID	20	1x10	0.542	93	151
561775	10	2	BN,GY,GN	0.102	SOLID	20	1x10	0.542	93	151
559487	10	2	BN,OE,GN	0.102	SOLID	20	1x10	0.527	93	149
559491	10	2	BN,YW,GN	0.102	SOLID	20	1x10	0.541	93	150
559489	10	2	OE,YW,GN	0.102	SOLID	20	1x10	0.541	93	150
571920	10	2	PE,GY,GN	0.102	SOLID	20	1x10	0.542	93	151
563131	10	2	YW,GY,GN	0.102	SOLID	20	1x10	0.542	93	151
689539	10	3	BN,OE,GY	0.102	SOLID	20	1x10	0.581	124	192
553193	10	3	BN,OE,YW	0.102	SOLID	20	1x10	0.581	124	192
573514	10	3	BN,YW,GY,GN	0.102	SOLID	20	1x10	0.581	124	192
610550	10	3	BN,YW,GY,GN	0.102	SOLID	20	1x10	0.581	124	192
580424	10	3	PE,YW,GY,GN	0.102	SOLID	20	1x10	0.581	124	192
610970	10	3	YW,OE,GY,GN	0.102	SOLID	20	1x10	0.581	124	192
610530	10	4	BN,YW,PE,GY,GN	0.102	SOLID	20	1x10	0.625	155	232
689414	10	4	BN,OE,YW,GY	0.102	SOLID	20	1x10	0.625	155	232
10 AWG | 19 Strands										
553308	10	2	OE,GY,GN	0.113	19	20	1x10	0.574	97	163
587540	10	2	BN,GY/BN,GN	0.113	19	20	1x10	0.574	97	163
574820	10	2	BN,GY,10	0.113	19	20	1x10	0.66	96	162
551274	10	2	YW,GY,GN	0.113	19	20	1x10	0.574	97	163
576334	10	3	BN,OE,GY,10	0.113	19	20	1x10	0.66	128	203
555098	10	3	BN,OE,YW,GN	0.113	19	20	1x10	0.618	129	206
551128	10	3	BN,YW,GY,GN	0.113	19	20	1x10	0.618	129	206
551124	10	3	YW,OE,GY,GN	0.113	19	20	1x10	0.618	129	206
576523	10	4	BN,OE,YW,GY	0.113	19	20	1x10	0.66	160	243
12 AWG | 19 Strands										

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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	0.09	19	15	1x12	0.496	60	110
551110	12	2	BN,GY	0.09	19	15	1x12	0.496	60	110
587745	12	2	OE,GY	0.09	19	15	1x12	0.496	60	110
551114	12	3	BN,OE,GY	0.09	19	15	1x12	0.53	80	138
10 AWG | 19 Strands										
551276	10	2	BN,GY	0.117	19	20	1x10	0.574	97	163
551121	10	3	BN,OE,GY	0.117	19	20	1x10	0.618	129	206
551278	10	4	BN,OE,YW,GY	0.117	19	20	1x10	0.666	162	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.

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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
14 AWG | SOLID Strands							
14	2	3.1	2.631	3.265	0.058	20	25
14	3	3.3	2.631	3.265	0.058	20	25
14	4	3.5	2.631	3.265	0.058	16	20
12 AWG | SOLID Strands							
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.7	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	3	3.5	1.662	2.063	0.054	25	30
12	4	3.8	1.662	2.063	0.054	20	24
12	4	3.8	1.662	2.063	0.054	20	24
12	4	3.8	1.662	2.063	0.054	20	24
12 AWG | 19 Strands							

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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	2.063	0.054	25	30
12	2	3.5	1.662	2.063	0.054	25	30
12	2	3.3	1.662	2.063	0.054	25	30
12	2	4.1	1.662	2.063	0.054	25	30
12	3	3.8	1.662	2.063	0.054	25	30
12	3	4.1	1.662	2.063	0.054	25	30
12	3	3.7	1.662	2.063	0.054	25	30
12	3	3.7	1.662	2.063	0.054	25	30
12	3	3.7	1.662	2.063	0.054	25	30
12	3	3.7	1.662	2.063	0.054	25	30
12	4	4	1.662	2.063	0.054	20	24
12	4	4.1	1.662	2.063	0.054	20	24
10 AWG | SOLID Strands							
10	2	3.8	1.04	1.291	0.05	35	40
10	2	3.8	1.04	1.291	0.05	35	40
10	2	3.8	1.04	1.291	0.05	35	40
10	2	3.8	1.04	1.291	0.05	35	40
10	2	3.7	1.04	1.291	0.05	35	40
10	2	3.8	1.04	1.291	0.05	35	40
10	2	3.8	1.04	1.291	0.05	35	40
10	2	3.8	1.04	1.291	0.05	35	40
10	2	3.8	1.04	1.291	0.05	35	40
10	3	4.1	1.04	1.291	0.05	35	40
10	3	4.1	1.04	1.291	0.05	35	40
10	3	4.1	1.04	1.291	0.05	35	40
10	3	4.1	1.04	1.291	0.05	35	40
10	3	4.1	1.04	1.291	0.05	35	40
10	3	4.1	1.04	1.291	0.05	35	40
10	4	4.4	1.04	1.291	0.05	28	32
10	4	4.4	1.04	1.291	0.05	28	32
10 AWG | 19 Strands							
10	2	4	1.04	1.291	0.05	35	40
10	2	4	1.04	1.291	0.05	35	40
10	2	4.6	1.04	1.291	0.05	35	40
10	2	4	1.04	1.291	0.05	35	40
10	3	4.6	1.04	1.291	0.05	35	40
10	3	4.3	1.04	1.291	0.05	35	40
10	3	4.3	1.04	1.291	0.05	35	40
10	3	4.3	1.04	1.291	0.05	35	40
10	4	4.6	1.04	1.291	0.05	28	32
12 AWG | 19 Strands							
12	2	3.5	1.662	2.063	0.054	25	30

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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	2.063	0.054	25	30
12	2	3.5	1.662	2.063	0.054	25	30
12	3	3.7	1.662	2.063	0.054	25	30
10 AWG | 19 Strands							
10	2	4	1.04	1.291	0.05	35	40
10	3	4.3	1.04	1.291	0.05	35	40
10	4	4.7	1.04	1.291	0.05	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.

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