MC AP-PCS Duo™ Power & Control/Signal Cable

Copper THHN/THWN Insulated Singles. UL Listed 600 Volts. Rated VW-1. Lightweight Interlocked Armor. Signal: 16 AWG Copper TFN insulated singles.

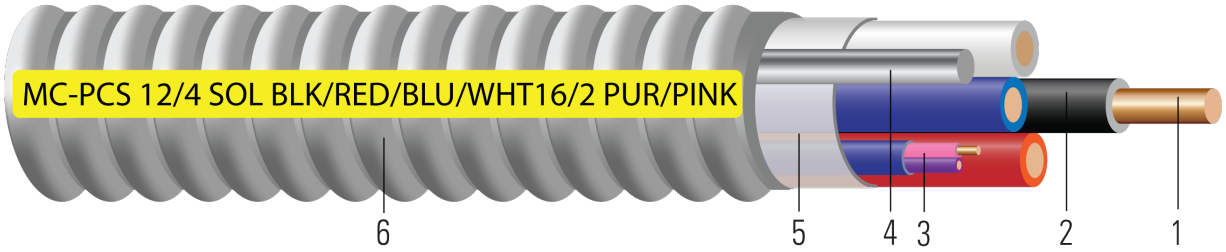


Image not to scale. See Table 1 for dimensions.

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. **Signal:** 16 AWG copper Type TFN insulated singles (pink and purple). Overall light blue jacket over the signal cables
4. **Ground:** Full-sized bare 8000 series aluminum grounding/bonding conductor per ASTM B800. Armor and bare aluminum conductor form the equipment ground path
5. **Binder:** Mylar tape
6. **Armor:** Aluminum Interlocked Armor

APPLICATIONS AND FEATURES:

Southwire MC AP-PCS Duo™ 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 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
- Unjacketed Type MC cables are rated for dry, indoor locations only per NEC 330.10(A)(10)

Southwire MC AP-PCS Duo™ 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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- ASTM B800 8000 Series Aluminum Alloy Wire
- 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:

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
12 AWG | SOLID Strands										
644051	12	2	BK,WE	0.081	SOLID	15	1x10	0.618	56	140
648736	12	2	RD,WE	0.081	SOLID	15	1x10	0.582	56	137
644055	12	2	BN,GY	0.081	SOLID	15	1x10	0.618	56	140
647640	12	2	OE,GY	0.081	SOLID	15	1x10	0.618	56	140
647642	12	2	YW,GY	0.081	SOLID	15	1x10	0.618	56	140
12 AWG | 19 Strands										
644057	12	2	BK,WE	0.081	19	15	1x10	0.633	56	143
644059	12	2	BN,GY	0.081	19	15	1x10	0.633	56	144
12 AWG | SOLID Strands										
648738	12	3	BK,RD,WE	0.081	SOLID	15	1x10	0.635	76	166
648740	12	3	BN,OE,GY	0.081	SOLID	15	1x10	0.635	76	166
677961	12	4	BN,OE,YW,GY	0.081	SOLID	15	1x10	0.677	96	193
12 AWG | 19 Strands										
674829	12	2	YW,GY,LBE	0.089	19	15	1x10	0.633	56	144
674827	12	2	OE,GY	0.09	19	15	1x10	0.633	56	144

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

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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	4.3	1.662	2.063	0.054	25	30
12	2	4.1	1.662	2.063	0.054	25	30
12	2	4.3	1.662	2.063	0.054	25	30
12	2	4.3	1.662	2.063	0.054	25	30
12	2	4.3	1.662	2.063	0.054	25	30
12 AWG | 19 Strands							
12	2	4.4	1.662	2.063	0.054	25	30
12	2	4.4	1.662	2.063	0.054	25	30
12 AWG | SOLID Strands							
12	3	4.4	1.662	2.063	0.054	25	30
12	3	4.4	1.662	2.063	0.054	25	30
12	4	4.7	1.662	2.063	0.054	20	24
12 AWG | 19 Strands							
12	2	4.4	1.662	2.063	0.054	25	30
12	2	4.4	1.662	2.063	0.054	25	30

***** 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.

MCAP Savings Calculator

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