MC-PCS Duo™ Power & Control/Signal Cable 120/208V Colors

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

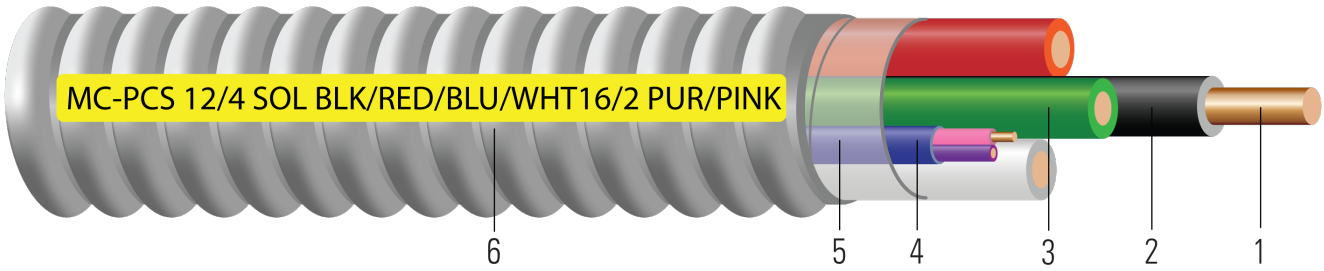

Image not to scale. See Table 1 for dimensions.

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. **Ground:** Green Polyvinyl Chloride with Nylon Sheath Type THHN/THWN insulated ground conductor
4. **Signal:** 16 AWG copper Type TFN insulated singles (pink and purple). Overall light blue jacket over the signal cables
5. **Binder:** Mylar tape
6. **Armor:** Aluminum Interlocked Armor

APPLICATIONS AND FEATURES:

Southwire MC PCS Duo™ Power & Control/Signal 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
- LED lighting with 0-10V dimming
- 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
- 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 MC 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

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- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 66 Fixture Wire Type TFN
- 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.
- VW-1 (Vertical-Wire) Flame Test

SAMPLE PRINT LEGEND:

ALUMINUM CLAD CABLE WITH COPPER CDRS TYPE THHN OR THWN MAX VOLTAGE 600V, FOR USE IN CABLE TRAY 90°C - WET OR DRY LOCATIONS GASOLINE & OIL RESISTANT CDRS LISTED FOR FIREWALL PENTRATION (GREEN INSULATED GROUND)

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										
674332	14	2	BK,WE	0.064	SOLID	15	1x14	0.583	54	128
12 AWG | SOLID Strands										
592240	12	2	BK,WE	0.081	SOLID	15	1x12	0.611	76	154
592241	12	2	RD,WE	0.081	SOLID	15	1x12	0.611	76	154
592243	12	2	BE,WE	0.081	SOLID	15	1x12	0.608	76	153
592251	12	3	BK,RD,WE	0.081	SOLID	15	1x12	0.653	96	182
12 AWG | 19 Strands										
596411	12	2	BE,WE,GN	0.089	19	15	1x12	0.63	76	158
599404	12	2	BK,WE,GN	0.089	19	15	1x12	0.63	76	225
596409	12	2	RD,WE,GN	0.089	19	15	1x12	0.63	76	158
10 AWG | SOLID Strands										
592255	10	2	BK,WE	0.102	SOLID	20	1x10	0.67	109	199
643284	10	2	BE,WE,GN	0.102	SOLID	20	1x10	0.67	109	199
643282	10	2	RD,WE,GN	0.102	SOLID	20	1x10	0.67	109	199
12 AWG | 19 Strands										
592259	12	2	BK,WE	0.09	19	15	1x12	0.63	76	158
592318	12	3	BK,RD,WE	0.09	19	15	1x12	0.677	96	188

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.

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
14 AWG | SOLID Strands							
14	2	4.1	2.631	3.265	0.058	20	25
12 AWG | SOLID Strands							
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	3	4.6	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	2	4.4	1.662	2.063	0.054	25	30
10 AWG | SOLID Strands							
10	2	4.7	1.04	1.291	0.05	35	40
10	2	4.7	1.04	1.291	0.05	35	40
10	2	4.7	1.04	1.291	0.05	35	40
12 AWG | 19 Strands							
12	2	4.4	1.662	2.063	0.054	25	30
12	3	4.7	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.

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