

# MC<sup>AP</sup> -PCS Duo™

## Power & Control/Signal Cable Type MC All Purpose



Copper Power & Control/Signal Conductors. Power: 12 AWG & 10 AWG Copper THHN/THWN Insulated Singles. Signal: 16 AWG Copper TFN Insulated Singles. Full-Sized Aluminum Equipment Grounding/Bonding Conductor. UL Listed. 600 Volts. Rated VW-1. Lightweight Aluminum Interlocked Armor is Part of Equipment Bonding/Grounding Path. Southwire® MC-PCS Duo™ Cable meets the NEC and UL listing requirements for combining power/lighting circuits and Class 2 or Class 3 signal or control circuits in the same cable.

### APPLICATIONS

MC-PCS Duo™ Cable is suitable for use as follows:

- Circuits for branch power distribution in commercial, industrial, institutional, and multi-residential buildings.
- Power, lighting, control, and signal circuits.
- LED lighting with 0-10V dimming.
- 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.
- Use UL Listed Type MCI-A connectors

### STANDARDS & REFERENCES

MC-PCS Duo™ Cable meets or exceeds the requirements of:

- UL 83
- UL 1569 (Including new Sections 9.4, 40.1(q), and 41.1(r) as detailed in the latest UL 1569 CRD)
- UL 1685
- Federal Specification A-A59544 (formerly J-C-30B)
- NFPA 70 (National Electrical Code), Article 330 and 725.136(l)(1) & (2) as described in the latest UL 1569 CRD
- Listed for use in UL 1, 2 and 3 Hour Through Penetration Firestop Systems
- Passes both "UL Test" & "FT4/IEEE 1202" (70,000 Btu/hr) Vertical Cable Tray Flame Test
- REACH/RoHS-2 (Chemical Limit) Compliant

### CONSTRUCTION

MC-PCS Duo™ Cable is constructed with 12 AWG or 10 AWG CU Type THHN/THWN power and ground conductors along with a control conductor assembly composed of a 30 mil PVC jacket covering two 16 AWG CU Type TFN control conductors. The phase conductors, and control conductor assembly are cabled together and a binder tape bearing the print legend is wrapped around the assembly. The bare aluminum grounding/bonding conductor is located outside the binding tape and has the same lay as the insulated conductors. Aluminum interlocking armor is snugly applied over the assembly. The aluminum armor and bare aluminum conductor are in intimate contact and together form the equipment ground path. To insure proper installation, refer to the installation instructions provided with every reel and coil. Yellow stripe/blocks are printed on the outside of the armor and the print legend is applied in black print on every 4<sup>th</sup> yellow stripe/block. Also available with overall PVC jacket.



The Power of Connections.™



Southwire®

CONDUCTOR SIZE AND COLORS	GROUNDING SIZE AND COLOR	STOCK NUMBER		WEIGHT (LBS/1000')	OVERALL DIAMETER (INCHES)
		COIL (250')	REEL (1000')		
<b>SOLID CONDUCTOR COLORS 120/208V</b>					
12-2 SOLID (BLACK/WHITE) 16-2 SOLID (PURPLE/PINK)	10 SOLID ALUMINUM	64-40-51-01	64-40-51-02	128	.535
12-2 SOLID (RED/WHITE) 16-2 SOLID (PURPLE/PINK)	10 SOLID ALUMINUM	-	64-87-36-02	128	.535
12-3 SOLID (BLACK/RED/WHITE) 16-2 SOLID (PURPLE/PINK)	10 SOLID ALUMINUM	64-87-38-01	64-87-38-02	155	.585
<b>SOLID CONDUCTOR COLORS 277/480V</b>					
12-2 SOLID (BROWN/GRAY) 16-2 SOLID (PURPLE/PINK)	10 SOLID ALUMINUM	64-40-55-01	64-40-55-02	128	.535
12-2 SOLID (ORANGE/GRAY) 16-2 SOLID (PURPLE/PINK)	10 SOLID ALUMINUM	-	64-76-40-02	128	.535
12-2 SOLID (YELLOW/GRAY) 16-2 SOLID (PURPLE/PINK)	10 SOLID ALUMINUM	-	64-76-42-02	128	.535
12-3 SOLID (BROWN/ORANGE/GRAY) 16-2 SOLID (PURPLE/PINK)	10 SOLID ALUMINUM	64-87-40-01	64-87-40-02	155	.585

<b>STRANDED CONDUCTOR</b>					
12-2 STRANDED (BLACK/WHITE) 16-2 SOLID (PURPLE/PINK)	10 SOLID ALUMINUM	64-40-57-01	64-40-57-02	131	.535
12-2 STRANDED (BROWN/GRAY) 16-2 SOLID (PURPLE/PINK)	10 SOLID ALUMINUM	64-40-59-01	64-76-40-02	131	.535

Consult NEC 310.15 for ampacities.  
Other constructions available upon request.



# FEATURES

- Full compliance with NEC 330, NEC 725, and UL 1569
- 16 AWG signal wiring for 0-10V dimming.
- Circuit Identification printed directly on the armor
- Available in 250' coils, 1000' reels, barrels, boxes, or prefab assemblies
- Available with steel armor
- Available with overall PVC jacket
- UL Classified 1, 2, and 3 hour Through Penetration Firestop Systems: W -J-3037, W-L-3110, W-L-3113, W-L-3117, W-L-3120, W-L-3121, W-L-3160, C-AJ-3115, C-AJ-3140, C-AJ-3142, C-AJ-3145, C-AJ-3173, C-AJ-3202, C-AJ-4065, C-AJ-4066, F-C-3038.
- Cable reverse wound on reel for ease of pulling and installation. When pulling from coils, pull from inside to ensure ease of installation.
- Anti-short bushings are not required for use with Type MC Cable per the NEC and UL.

NEC TABLE 310.15(B)(16)- ALLOWABLE AMPACITY FOR 600V CONDUCTORS

SIZE AWG OR KCMIL	TEMPERATURE RATING OF CONDUCTOR		
	60°C (140°F)	75°C (167°F)	90°C (194°F)
	Types: TW, UF	Types: RHW, THHW, THW, THWN, XHHW, USE, ZW	Types: TBS, SA, SIS, RHH, RHW-2, THHN, THHW, THW-2, THWN- 2, USE-2, XHH, XHHW, XHHW-2, ZW-2
	<b>COPPER</b>		
18	-	-	14
16	-	-	18
14	15	20	25
12	20	25	30
10	30	35	40
8	40	50	55
6	55	65	75
4	70	85	95
3	85	100	115
2	95	115	130
1	110	130	145
1/0	125	150	170
2/0	145	175	195
3/0	165	200	225
4/0	195	230	260
250	215	255	290
300	240	285	320
350	260	310	350
400	280	335	380
500	320	380	430
600	350	420	475
700	385	460	520
750	400	475	535
800	410	490	555
900	435	520	585
1000	455	545	615
1250	495	590	665
1500	525	625	705
1750	545	650	735
2000	555	665	750
Per NEC 310.15(B)(5), the ampacity of 4/C cables shall be reduced by a factor of 0.80 when the neutral is considered a current-carrying conductor.			

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