



# Flat Cables and Connectors

## Standard Copper Cable (Model FC)

- Yellow PVC Jacketed Flat Cable – 600 Volt AC Rated
- Extra Flexible, Color Coded According to NEMA Standards
- UL and CSA –40°C to +105°C (–40°F to +221°F) Temperature Range

## Shielded Copper Cable (Model SFC)

- 600 Volt AC Rated
- Standard Cable with Tinned Copper Braided Shield
- 95.7% Min. RFI Rating
- Black Heat Shrink Tubing Outer Cover

## Test Report

The following numerical data was used to calculate braid angle and shield coverage (per QQB-575B1 PARA.4.3.2.)

Braid Angle	A = 24
Coverage	K = 99
Diameter of Shield	D = 0.750
Strand Diameter	d = .005
Picks per inch	P = 9
Number of Carriers	C = 96
Strands per Carrier	N = 9
NPd/sin a	F = 99118776

## Flat Cables

Required cable length equals track length plus 10% plus length required for end connections

Catalog Number††		Cable Size		Continuous Duty Rating at 30°C (86°F) Ambient Amps*	Short Time Rating - Amps**		No. of Strands per Conductor	Weight per Foot-Pounds	Nominal Dimensions Unshielded Cable Inchest†
Yellow PVC Jacket	Shielded Flat Cable	Number of Conductors	AWG Wire Size		60 Min.	30 Min.			
FC-42		4	#2		130	148			
FC-44		4	#4	95	111	130	420	.896	.515 x 1.750
FC-46	SFC-46	4	#6	75	83	94	266	.620	.435 x 1.490
FC-48	SFC-48	4	#8	50	63	69	168	.401	.375 x 1.225
FC-410	SFC-410	4	#10	40	49	52	105	.239	.290 x .890
FC-412	SFC-412	4	#12	30	36	40	65	.180	.260 x .800
FC-414	SFC-414	4	#14	25	31	32	41	.138	.240 x .690
FC-712	SFC-712	7	#12	21	Control Cables		65	.308	.260 x 1.310
FC-812	SFC-812	8	#12	20			65	.343	.260 x 1.440
FC-814	SFC-814	8	#14	17	No Short Time Rating		41	.254	.240 x 1.290
FC-816	SFC-816	8	#16	15			65	.194	.225 x 1.170
FC-1214	SFC-1214	12	#14	17			41	.380	.240 x 1.825
FC-1216	SFC-1216	12	#16	15	65	.292	65	.292	.225 x 1.700

\* See Current Correction Factors for Temperatures above 30°C (86°F)

\*\* For crane and hoist motors in accord with article 610 of the 1989 National Electrical Code for 90°C Cables

† Unshielded cable measurements may vary due to manufacturing tolerances. Contact factory for shielded cable dimensions.

†† All cables from #10 AWG through #16 AWG have zip cords for easy removal of the outer jacket.



## Connectors

## CAUTION

MAKE CERTAIN POWER SUPPLY IS DISCONNECTED BEFORE INSTALLING, REPAIRING, OR WORKING IN THE PROXIMITY OF ANY ELECTRICAL SYSTEM. ONLY QUALIFIED ELECTRICAL PERSONNEL SHOULD INSTALL OR REPAIR THESE PRODUCTS.

## Connectors with Bushings for Unshielded Flat Cables

For shielded cable, use heat shrink fittings.

COLOR CODING	
NO. COND	COLOR
1	Green
2	Black
3	Red
4	Blue
5	Orange
6	Yellow
7	Brown
8	Red w/Black
9	Blue w/Black
10	Orange w/Black
11	Yellow w/Black
12	Brown w/Black

Catalog No.	Number of Cables	Cable Size		NPS
		Number of Conductors	AWG Wire Size	
FC-4/8C	One 4-conductor cable, #10, 12, or 14 AWG and one 8-conductor cable, #14 or 16 AWG			1.25
FC-42C	1	4	#2	2"
FC-44C	1	4	#4	2"
FC-46C	1	4	#6	1.50
FC-48C	1	4	#8	1.25
FC-410C	1	4	#10	1"
FC-412C	1	4	#12	1"
FC-414C	1	4	#14	1"
FC-712C	1	7	#12	1.25
FC-712C2	2	7	#12	1.25
FC-812C	1	8	#12	1.50
FC-812C2	2	8	#12	1.50
FC-816C	1	8	#14 or 16	1.25
FC-816C2	2	8	#14 or 16	1.25
FC-1216C	1	12	#14 or 16	2"
FC-1216C2	2	12	#14 or 16	2"
FC-1216C3	3	12	#14 or 16	2"

## Heat Shrinkable Cable Connectors for Single Cable and Multiple Cable Groupings

Corrosion Resistant • Flame Retardant • Exceed Navy Requirements for Tightness and Integrity when used with One Flat Cable or Multiple Flat Cables of the Same Size.

Catalog Number	Maximum Number of Cables	Cable Size		Cable Entry Range		NPS
		Number of Conductors	AWG Wire Size	Min.	Max.	
HS-CG1	3	4	#12 or 14	.5	1.125	1"
HS-CG2	4	8	#14 or 16	.75	1.625	1.5
		7	#12			
	3	4	#8, 10 or 12			
	2	4	#6 or 8			
HS-CG3	1	4	#6			
	5	12	#14 or 16	1"	2.125	2"
	4	4	#8			
	3	4	#6 or 4			

## Continuous Duty Current Correction Factors for Ambient Temperatures Above 30°C (86°F)

(Per Article 310-16 of the 1996 National Electrical Code)

Ambient Temperature		Correction Factor
°C	°F	
30	86	1.00 (Full load current rating)
50	122	.82
65	149	.58

# Round Pendant Control Cables and Accessories

## Round Pendant Control Cables (UL Listed and CSA Approved)

With 600V 105°C Yellow PVC. Color-coded in accord with NEMA standards.

Catalog Number	Description	Weight # / ft.
<b>RPC-414</b>	4-Conductor, #14 AWG, .460" Nominal O.D.	.14
<b>RPC-816</b>	8-Conductor, #16 AWG, .640" Nominal O.D.	.20
<b>RPC-1216</b>	12-Conductor, #16 AWG, .745" Nominal O.D.	.30
<b>RPC-1616</b>	16-Conductor, #16 AWG, .840" Nominal O.D.	.38
<b>RPC-2416</b>	24-Conductor, #16 AWG, .890" Nominal O.D.	.49
<b>RPC-3616</b>	36-Conductor, #16 AWG, 1.050" Nominal O.D.	.68
<b>RPC-316-S2</b>	3-Conductor, #16 AWG with Internal Steel Strain Relief Cable, .520" Nominal O.D. Not U.L.	.13

### Steel Strain Relief Cable and Accessories

- RPC-SRC** Nylon-Coated Steel Cable, 1/8" Diameter, 480 lb. Capacity
- RPC-SRCC** U-Clamp for Strain Cable (4 required per cable)
- RPC-SRCE** Eye-Bolt to Connect Strain Cable to Junction Box
- RPC-SRCT** Steel Thimble for Cable Bend
- RPC-SR HDW KIT** — 4 RPC-SRCC, 1 RPC-SRCE & 1 RPC-SRCT.

## Cord Grips for Round Cable

Catalog Number	Conduit Size NPS — Inches	Accommodates Cable Diameter — Inches
<b>RPC-CG00</b>	3/4	.430 - .563
<b>RPC-CG0</b>	3/4	.560 - .687
<b>RPC-CG1</b>	1	.560 - .687
<b>RPC-CG2</b>	1	.625 - .750
<b>RPC-CG3</b>	1	.750 - .825
<b>RPC-CG4</b>	1-1/4	.625 - .750
<b>RPC-CG5</b>	1-1/4	.750 - .875
<b>RPC-CG6</b>	1-1/4	.875 - 1.000
<b>RPC-CG7</b>	1-1/4	1.000 - 1.125
<b>RPC-CG8</b>	1-1/4	1.125 - 1.250

### Contact the Duct-O-Wire Factory for:

- Shielded RFI Round Cables
- Round Cables with built-in strain relief

## Round Cable Conductor Color Coding

Green	18. Red with Blue Stripe	
1. Black	19. Orange with Blue Stripe	
2. Red	20. Yellow with Blue Stripe	
<u>RPC-414</u> 3. Blue	21. Brown with Blue Stripe	
4. Orange	22. Black with Orange Stripe	
5. Yellow	<u>23. Red with Orange Stripe</u> <u>RPC-2416</u>	
6. Brown	24. Blue with Orange Stripe	
<u>RPC-816</u> 7. Red with Black Stripe	25. Yellow with Orange Stripe	
8. Blue with Black Stripe	26. Brown with Orange Stripe	
9. Orange with Black Stripe	27. Black with Yellow Stripe	
10. Yellow with Black Stripe	28. Red with Yellow Stripe	
<u>RPC-1216</u> 11. Brown with Black Stripe	29. Blue with Yellow Stripe	
12. Black with Red Stripe	30. Orange with Yellow Stripe	
13. Blue with Red Stripe	31. Brown with Yellow Stripe	
14. Orange with Red Stripe	32. Black with Brown Stripe	
<u>RPC-1616</u> 15. Yellow with Red Stripe	33. Red with Brown Stripe	
16. Brown with Red Stripe	34. Blue with Brown Stripe	
17. Black with Blue Stripe	35. Orange with Brown Stripe	RPC-3616

The code numbering for the conductors in a round cable all follow the NEMA standards. The Green cable is always a ground and should never be used for any switching function. The numbers shown on the chart are so arranged that the various cable sizes always start with the Green and end with the last number in the cable. For example, the RPC-414 uses the Green, Black, Red, and Blue. The RPC-816 uses the Green and numbers 1 thru 7. The rest of the cable sizes are listed along the color coding chart.

The exception to the color coding chart is the RPC-316-S2. This special round cable is primarily for 2 button stations that need either an internal strain cable or a Ground. In this cable you have both in the Green wire. It is constructed of a heavy steel braid which will serve for either or both purposes. The other three colors are blue, yellow, and brown.



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