

# 3P Series Miniature Pushwheel Switches



## Features/Benefits

- Snap-in front mount design for easy assembly
- 10 position models available

## Typical Applications

- Test & measurement equipment
- Industrial machinery
- Computer peripherals

## Specifications

### CONTACT RATING:

CARRY: 1 AMP continuous.

SWITCH: 0.4 VA max., 100 mA max., 28 V DC max.

OPERATING VOLTAGE: 50 mV to 28 V DC.

ELECTRICAL LIFE: 100,000 actuations.

CONTACT RESISTANCE: Below 300 m  $\Omega$  typ. @  
2-4 V DC, 100 mA.

INSULATION RESISTANCE:  $10^9 \Omega$  min. (dry).

DIELECTRIC STRENGTH: 500 Vrms min. @ sea level  
between common terminal and any output.

OPERATING TEMPERATURE: -10°C to 65°C.

## Materials

HOUSING: Polycarbonate (UL 94V-0).

PUSHWHEEL: Polycarbonate (UL 94V-0).

PUSHBUTTON: Polycarbonate (UL 94V-0).

ROTOR CONTACTS: Gold over nickel over copper alloy.

STATOR CONTACTS: Hard gold over nickel over copper  
on epoxy fiberglass.

**NOTE:** Specifications and materials listed above are for switches with standard options.  
For information on specific and custom switches, consult Customer Service Center.

Note: All models listed are RoHS compliant. See Technical Data section of this catalog for  
RoHS compliant and compatible definitions and specifications.

## Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages M-12 thru M-15. For additional options not shown in catalog, consult Customer Service Center.

Consult factory for illumination availability.

<b>Series</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3P</b> Miniature pushwheel								
<b>Number of Sections</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>0</b> Switch section								
<b>1</b> 1 Switch section								
<b>2</b> 2 Switch sections								
<b>3</b> 3 Switch sections								
<b>4</b> 4 Switch sections								
<b>Function Code</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>21</b> BCD 1-2-4-8								
<b>23</b> Complement of BCD 1-2-4-8								
<b>Mounting Style</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>0</b> Snap-in, front mount								
<b>3</b> Snap-in, front mount								
<b>Terminations</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>0</b> Short PCB								
<b>1</b> Extended PCB								
<b>N</b> Short PCB with solder pins* (.100" spacing)								
<b>P</b> Extended PCB with solder pins* (.200" spacing)								
<b>9</b> Any combination								
<b>Color/Marking/Stops</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>0</b> Matte black housing, gloss black wheel, white marking, black pushbutton								
<b>Dust Lens</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>0</b> No lens								
<b>2</b> Dust lens								

\* Note: Termination option N (RoHS compliant) replaced termination option 3 (Non-RoHS compliant).  
Termination option P (RoHS compliant) replaced termination option A (Non-RoHS compliant).

Thumbwheel & Pushwheel



M

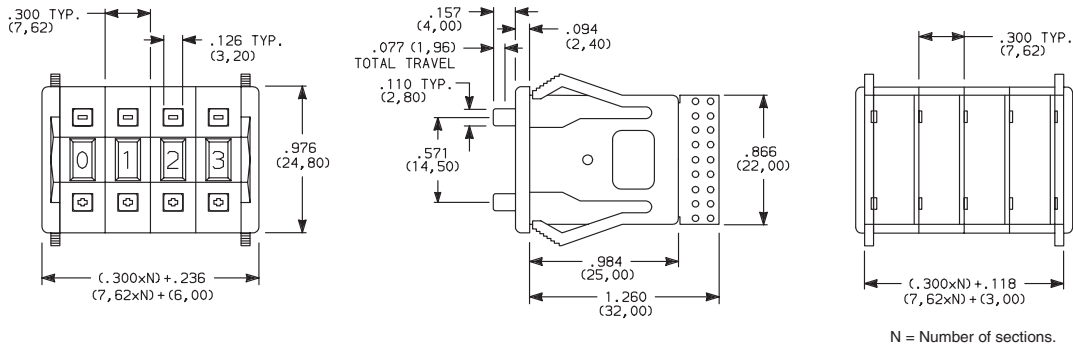


Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change

# 3P Series Miniature Pushwheel Switches

SERIES

3P MINIATURE PUSHWHEEL SWITCH



NUMBER OF SECTIONS

- 0 Switch section only, no endplates.
- 1-4 Number of switch sections in assembly, includes endplates.

NOTE: Endplates and blank sections available separately, see page M-14.

FUNCTION CODE

- 21 BCD 1-2-4-8, 10 POSITION
- 23 COMPLEMENT OF BCD 1-2-4-8, 10 POSITION

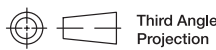
W H E E L	SIGNALS CONN. TO COMM. SIG. C				
	1	2	4	8	C
0					
1	●				●
2		●			●
3	●	●			●
4			●		●
5	●			●	●
6		●			●
7	●	●			●
8				●	●
9	●				●
TERM. LOCATION					
	1	3	5	7	9

Available Terminations: P, 0, 1, N  
See figs. 2 & 3, page N-19.

W H E E L	SIGNALS CONN. TO COMM. SIG. C				
	1	2	4	8	C
0	●	●	●	●	●
1	●	●	●	●	●
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●
6	●	●	●	●	●
7	●	●	●	●	●
8	●	●	●	●	●
9	●	●	●	●	●
TERM. LOCATION					
	1	7	9	3	5

Available Terminations: 0, 1, N  
See figs. 2 & 3, page N-19.

NOTE: For terminal location diagrams, see page M-14.



Third Angle  
Projection

Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change

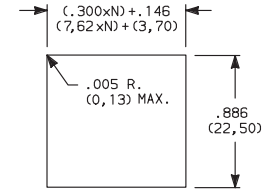
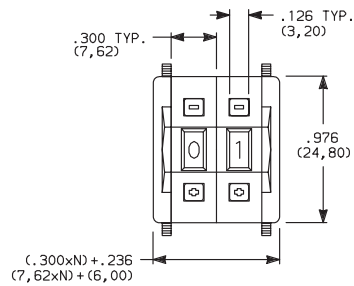
[www.ck-components.com](http://www.ck-components.com)

# 3P Series Miniature Pushwheel Switches

## MOUNTING STYLE



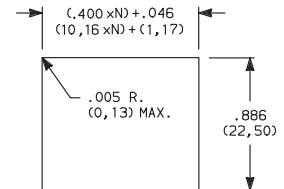
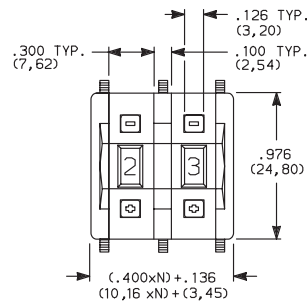
- 0** SNAP-IN FRONT MOUNT,  
SECTION PITCH: .300 (7,62) EACH SECTION



N = Number of sections.

Recommended panel thickness:  
.039-.156  
(0,99-3,95)

- 3** SNAP-IN FRONT MOUNT WITH SPACER,  
SECTION PITCH: .400 (70,16) EACH SECTION, LAST SECTION .300 (7,62)



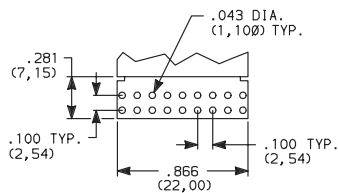
N = Number of sections.

Recommended panel thickness:  
.039-.156  
(0,99-3,95)

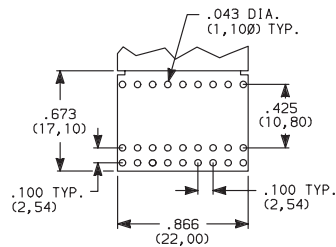
## TERMINATIONS



- 0** SHORT PCB

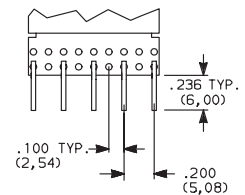


- 1** EXTENDED PCB WITH PROVISION  
FOR COMPONENTS



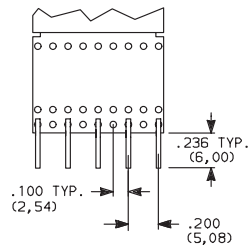
Signal traces cut, except for common(s).

- N** SHORT PCB, TYPE 0 WITH SOLDER PINS



For terminal location numbers, see next page.

- P** EXTENDED PCB, TYPE 1 WITH  
SOLDER PINS



For terminal location numbers, see next page.  
Signal traces cut, except for common(s).

- 9** ANY COMBINATION OF TERMINATION  
CONFIGURATIONS OR SPECIAL TERMINATIONS

Specify on configuration form, page M-15  
and consult Customer Service Center.

\*\* Note: Termination option N (RoHS compliant) replaced termination option 3 (Non-RoHS compliant).  
Termination option P (RoHS compliant) replaced termination option A (Non-RoHS compliant).

PC Board 1/32" (0,79) thick.

**NOTE:** All terminal holes shown may not be present for all function codes,  
consult Customer Service Center.



Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change

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# 3P Series Miniature Pushwheel Switches

## TERMINATIONS



### Terminal Location Numbers

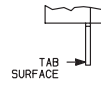
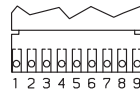
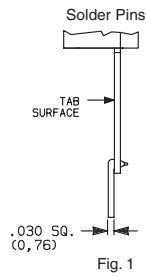


Fig. 2

## COLOR/MARKING/STOPS



- 0** MATTE BLACK HOUSING (Gloss black wheel with white characters, black pushbuttons, no stops.)

## DUST LENS



- 0** NO LENS
- 2** DUST LENS (Protects character face of the wheel from abrasion and dust.)



## AVAILABLE HARDWARE

Blank sections, .300 THK.



**PART NO.**  
**663702000** BLACK

End plates



LEFT-with hole



RIGHT-with pin

**PART NO.**  
**623502000** LEFT-BLACK  
**623602000** RIGHT-BLACK

One left and one right  
piece required for  
complete assembly.

Spacers, .100 THK.  
(Makes section pitch .400)



**PART NO.**  
**663602000** BLACK

Stop pins



**PART NO.**  
**657800000**



Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change

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# 3P Series Miniature Pushwheel Switches

## Configuration Form

GRAY SHADED AREAS TO BE FILLED IN BY CUSTOMER SERVICE.

CATALOG PART NO.

**3** **P**

C&K PART NUMBER

C&K PART NUMBER

COMPANY NAME























ADDRESS  TEL.#

CUSTOMER CONTACT  DATE

ORIGINATED BY  SALES REP.

CUSTOMER  
PRINT  
REVISION:

DETAILS:

PUSHWHEEL SECTIONS	NO. OF SEC.	FUNCTION CODE – TERMINATIONS – COLOR/MARKING/STOPS/SEAL – ILLUMINATION <small>ENTER OPTION CODES IN APPROPRIATE BOXES. FUNCTION CODES INCLUDE BLANK SECTIONS (SEE PAGE M-17).</small>	DESCRIBE IN APPROPRIATE ROW
 <b>1</b> 	<b>1</b>	<input type="text"/> <b>3</b> <input type="text"/> <b>P</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
 <b>2</b> 	<b>2</b>	<input type="text"/> <b>3</b> <input type="text"/> <b>P</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
 <b>3</b> 	<b>3</b>	<input type="text"/> <b>3</b> <input type="text"/> <b>P</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
 <b>4</b> 	<b>4</b>	<input type="text"/> <b>3</b> <input type="text"/> <b>P</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
 <b>5</b> 	<b>5</b>	<input type="text"/> <b>3</b> <input type="text"/> <b>P</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
 <b>6</b> 	<b>6</b>	<input type="text"/> <b>3</b> <input type="text"/> <b>P</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
 <b>7</b> 	<b>7</b>	<input type="text"/> <b>3</b> <input type="text"/> <b>P</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
 <b>8</b> 	<b>8</b>	<input type="text"/> <b>3</b> <input type="text"/> <b>P</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
 <b>9</b> 	<b>9</b>	<input type="text"/> <b>3</b> <input type="text"/> <b>P</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
 <b>0</b> 	<b>10</b>	<input type="text"/> <b>3</b> <input type="text"/> <b>P</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
 <b>1</b> 	<b>11</b>	<input type="text"/> <b>3</b> <input type="text"/> <b>P</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	

QUALITY CONTROL INSTRUCTIONS

PRODUCTION APPROVAL DATE

Q.C. APPROVAL DATE

REV. INITIALS DATE

FOR SWITCHES WITH MORE THAN 11 SECTIONS, CONTINUE ON ADDITIONAL SHEETS.

SPECIAL INSTRUCTIONS OR SPECIFICATIONS:

SHEET \_\_\_\_ OF \_\_\_\_

Thumbwheel & Pushwheel



M

