

# 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<sup>9</sup>  $\Omega$  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.

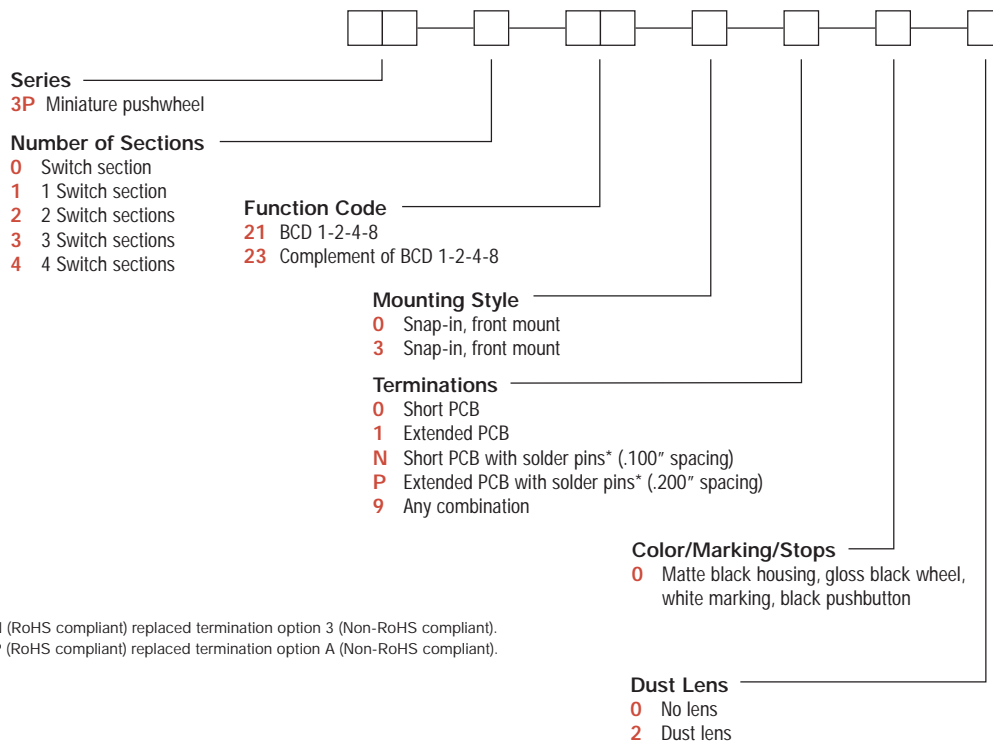
**NOTE:** Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

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 N-17 thru N-19. For additional options not shown in catalog, consult Customer Service Center. Consult factory for illumination availability.

Thumbwheel & Pushwheel



\* 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).

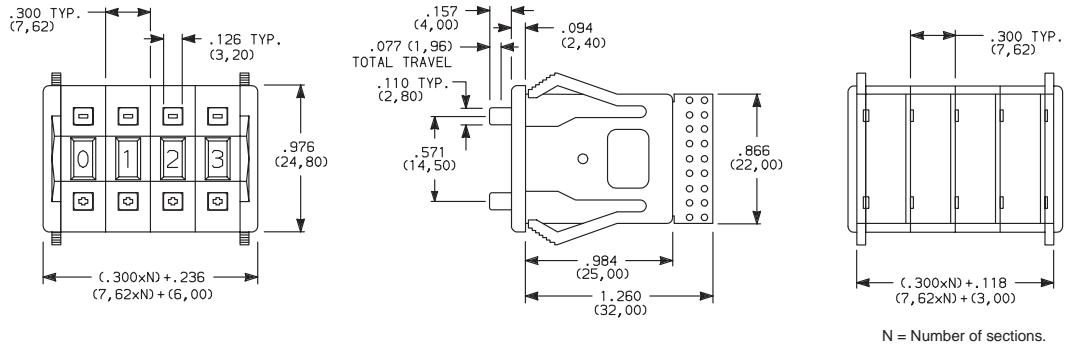


Dimensions are shown: Inch (mm)  
 Specifications and dimensions subject to change

# 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 N-20.

## FUNCTION CODE

**21** BCD 1-2-4-8, 10 POSITION

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

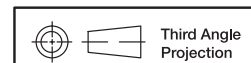
Available Terminations: P, 0, 1, N  
See figs. 2 & 3, page N-19.

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

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

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

NOTE: For terminal location diagrams, see page N-19.



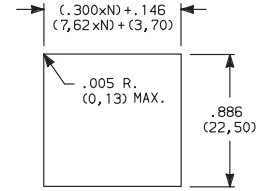
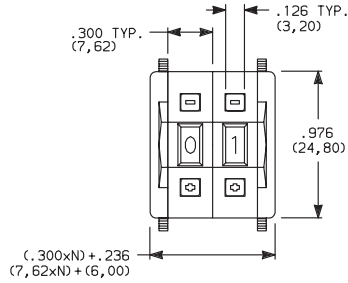
Dimensions are shown: Inch (mm)  
Specifications and dimensions subject to change



# 3P Series Miniature Pushwheel Switches

## MOUNTING STYLE

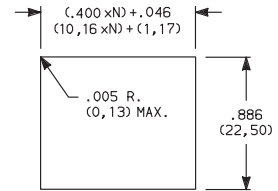
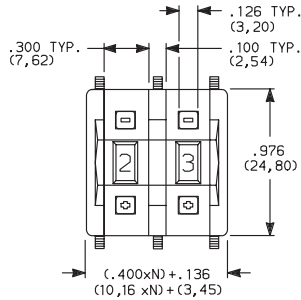
**0** SNAP-IN FRONT MOUNT,  
SECTION PITCH: .300 (7,62) EACH SECTION



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)

Thumbwheel & Pushwheel



N



Third Angle  
Projection

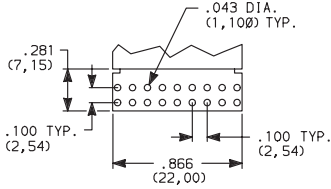
Dimensions are shown: Inch (mm)  
Specifications and dimensions subject to change

# 3P Series Miniature Pushwheel Switches

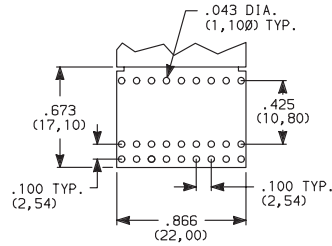
## TERMINATIONS



**0** SHORT PCB

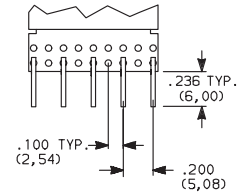


**1** EXTENDED PCB WITH PROVISION FOR COMPONENTS



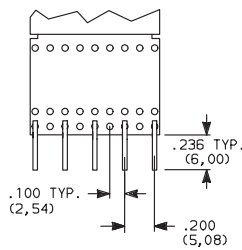
Signal traces cut, except for common(s).

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



For terminal location numbers, see next page.

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



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

Specify on configuration form, page N-21 and consult Customer Service Center.

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

\*\* 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).

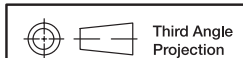
PC Board 1/32" (0,79) thick.

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

Thumbwheel & Pushwheel



N

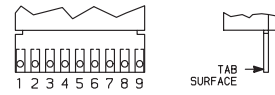
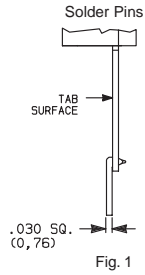


Dimensions are shown: Inch (mm)  
Specifications and dimensions subject to change

# 3P Series Miniature Pushwheel Switches

## TERMINATIONS

Terminal Location Numbers



## 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.)



Thumbwheel & Pushwheel



N



# 3P Series Miniature Pushwheel Switches

## 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**

Terminal connector



PART NO.  
**630000000**

Fits 0, 1  
terminations only.

Thumbwheel & Pushwheel



N

# 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 \_\_\_\_\_

CUSTOMER PRINT REVISION:

ADDRESS \_\_\_\_\_ TEL.# \_\_\_\_\_

CUSTOMER CONTACT \_\_\_\_\_ DATE \_\_\_\_\_

DETAILS:

ORIGINATED BY \_\_\_\_\_ SALES REP. \_\_\_\_\_

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
<input type="checkbox"/> <b>1</b> <input type="checkbox"/>	<b>1</b>	3 P - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	
<input type="checkbox"/> <b>2</b> <input type="checkbox"/>	<b>2</b>	3 P - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	
<input type="checkbox"/> <b>3</b> <input type="checkbox"/>	<b>3</b>	3 P - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	
<input type="checkbox"/> <b>4</b> <input type="checkbox"/>	<b>4</b>	3 P - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	
<input type="checkbox"/> <b>5</b> <input type="checkbox"/>	<b>5</b>	3 P - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	
<input type="checkbox"/> <b>6</b> <input type="checkbox"/>	<b>6</b>	3 P - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	
<input type="checkbox"/> <b>7</b> <input type="checkbox"/>	<b>7</b>	3 P - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	
<input type="checkbox"/> <b>8</b> <input type="checkbox"/>	<b>8</b>	3 P - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	
<input type="checkbox"/> <b>9</b> <input type="checkbox"/>	<b>9</b>	3 P - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	
<input type="checkbox"/> <b>0</b> <input type="checkbox"/>	<b>10</b>	3 P - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	
<input type="checkbox"/> <b>1</b> <input type="checkbox"/>	<b>11</b>	3 P - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	

Thumbwheel & Pushwheel



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 \_\_\_\_



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