

# C&K 3U Series Tiny Pushwheel Switches

## Features/Benefits

- *Tiny size saves space*
- *10 and 16 position models available*
- *ESD clip available on select models*
- *Snap-in front mount saves assembly time*
- *Illuminated backlighting available*

## Typical Applications

- *Computer peripherals*
- *Test equipment*
- *Instrumentation*



## 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: 1,000,000 actuations.  
 CONTACT RESISTANCE: Below 300 m Ω typ. @  
 2-4 V DC, 100 mA.  
 INSULATION RESISTANCE: 10<sup>9</sup> Ω min. (dry).  
 DIELECTRIC STRENGTH: 500 Vrms min. @ sea level  
 between common terminal and any output.  
 OPERATING TEMPERATURE: -10°C to 65°C.

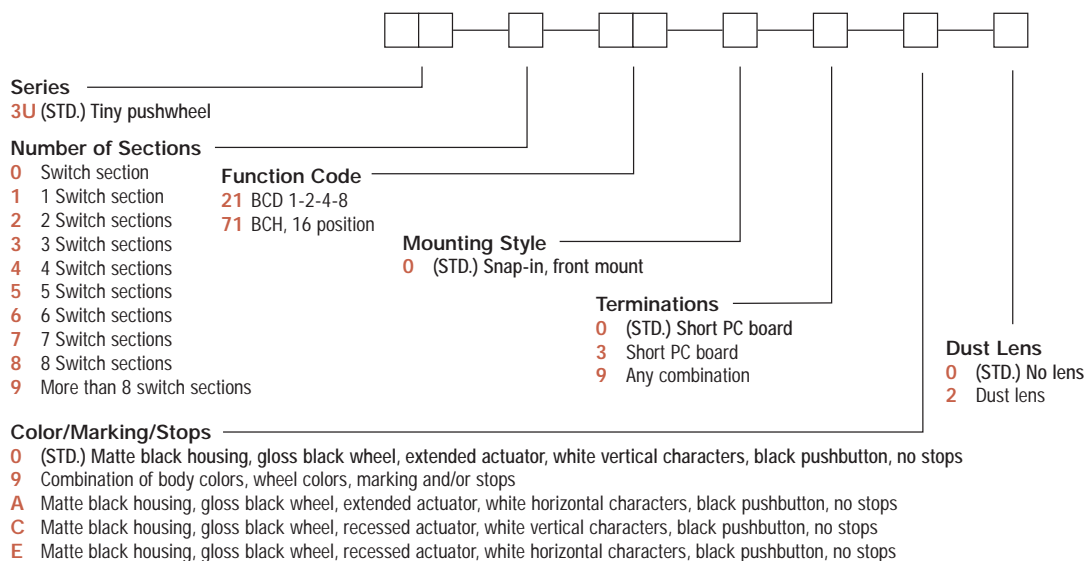
## Materials

HOUSING: Polyester (UL 94V-0).  
 PUSHWHEEL: Polycarbonate.  
 PUSHBUTTON: Polyester (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.

## 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-4 thru M-6. For additional options not shown in catalog, consult Customer Service Center. Consult factory for illumination availability.



Thumbwheel & Pushwheel

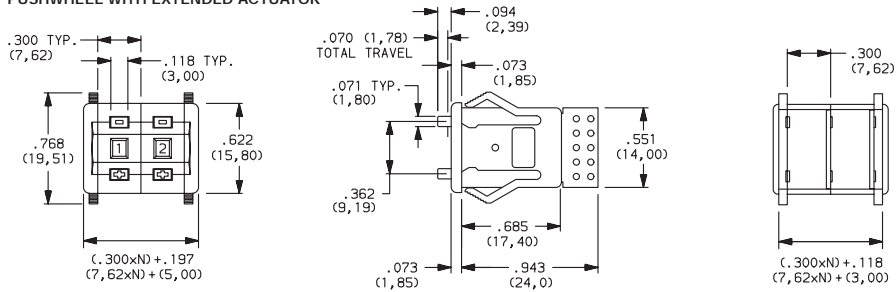


M

# C&K 3U Series Tiny Pushwheel Switches

## SERIES

### 3U (STD.) 1/2" TINY PUSHWHEEL WITH EXTENDED ACTUATOR



N = Number of sections.

## NUMBER OF SECTIONS

- 0** Switch section only, no endplates.
- 1-8** Number of switch sections in assembly, includes endplates.
- 9** More than 8 switch sections, specify on CONFIGURATION FORM, page M-7 and consult Customer Service Center.

NOTE: Endplates and blank sections available separately, see page M-6.

## FUNCTION CODE

**21** 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	●				●
	1	2	3	4	5
	TERM. LOCATION				

Available Terminations: 0, 3  
See figs. 2 & 3, page M-5.

**71** BINARY CODED HEXADECIMAL,  
16 POSITION

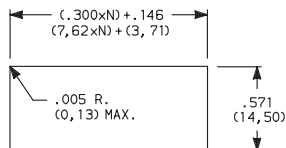
W H E E L	SIGNALS CONN. TO COMM. SIG. C				
	1	2	4	8	C
0					●
1	●				●
2		●			●
3	●	●			●
4			●		●
5	●			●	●
6		●	●		●
7	●	●	●		●
8				●	●
9	●				●
A		●			●
B			●		●
C				●	●
D	●	●	●		●
E		●	●		●
F	●	●	●		●
	2	3	4	5	1
	TERM. LOCATION				

Available Terminations: 0, 3  
See fig. 2, page M-5.

NOTE: ESD pin available, consult Customer Service Center.  
For terminal location diagrams, see page M-5.

## MOUNTING STYLE

**0** (STD.) SNAP-IN FRONT MOUNTING



N = Number of sections

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

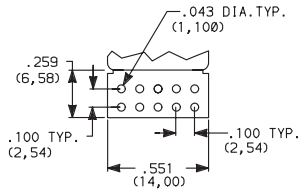


Dimensions are shown: IN (mm)  
Dimensions subject to change

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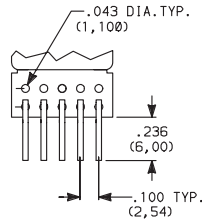
## TERMINATIONS

### 0 (STD.) SHORT PC BOARD



Not available with illuminated models.

### 3 SHORT PC BOARD, TYPE 0 WITH SOLDER PINS



Not available with illuminated models.

### 9 ANY COMBINATION OF TERMINATION CONFIGURATION OR SPECIAL TERMINATIONS.

Specify on configuration form, page M-7 and consult Customer Service Center.

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

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

## Terminal Location Numbers

### SOLDER PINS

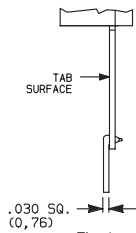


Fig. 1



Fig. 2

**NOTE:** See function codes, page M-4 for signal locations.

## COLOR/MARKING/STOPS

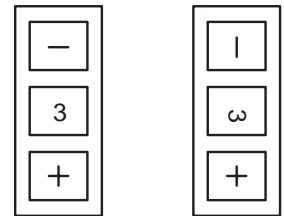
### 0 (STD.) MATTE BLACK HOUSING (Gloss black wheel with extended actuator, white vertical characters, black pushbuttons, no stops.)

### 9 SPECIAL COLORS, MARKINGS FOR HOUSING OR WHEEL, STOPS (Specify on CONFIGURATION FORM, page M-7 and consult Customer Service Center.)

### A MATTE BLACK HOUSING (Gloss black wheel with white horizontal characters, extended actuator, black pushbuttons, no stops.)

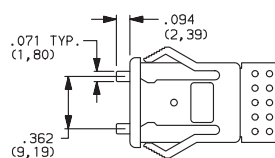
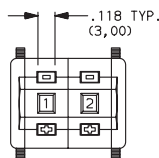
### C MATTE BLACK HOUSING (Gloss black wheel with white vertical characters, recessed actuator, black pushbuttons, no stops.)

### E MATTE BLACK HOUSING (Gloss black wheel with white horizontal characters, recessed actuator, black pushbuttons, no stops.)

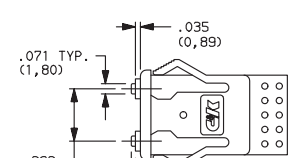
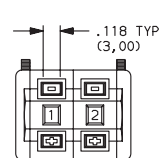


Vertical Characters

Horizontal Characters



Extended Actuator



Recessed Actuator



Third Angle  
Projection

Dimensions are shown: IN (mm)  
Dimensions subject to change

# C&K 3U Series Tiny Pushwheel Switches

## DUST LENS

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

## AVAILABLE HARDWARE

Blank section, .302 THK.  
(Replaces active section.)



PART NO.  
123B02000 BLACK  
123B09000 GRAY

End plates



LEFT-with hole



RIGHT-with pin

PART NO.  
113B02000 LEFT-BLACK  
113B09000 LEFT-GRAY  
114B02000 RIGHT-BLACK  
114B09000 RIGHT-GRAY

One left and one right  
piece required for  
complete assembly.

Thumbwheel & Pushwheel



# C&K 3U Series Tiny Pushwheel Switches

## Configuration Form

GRAY SHADED AREAS TO BE FILLED IN BY CUSTOMER SERVICE.

CATALOG PART NO.

**3 U**

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-4).</small>	DESCRIBE IN APPROPRIATE ROW
<b>1</b>	<b>1</b>	3 U - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
<b>2</b>	<b>2</b>	3 U - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
<b>3</b>	<b>3</b>	3 U - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
<b>4</b>	<b>4</b>	3 U - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
<b>5</b>	<b>5</b>	3 U - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
<b>6</b>	<b>6</b>	3 U - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
<b>7</b>	<b>7</b>	3 U - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
<b>8</b>	<b>8</b>	3 U - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
<b>9</b>	<b>9</b>	3 U - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
<b>0</b>	<b>10</b>	3 U - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
<b>1</b>	<b>11</b>	3 U - <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 \_\_\_\_

