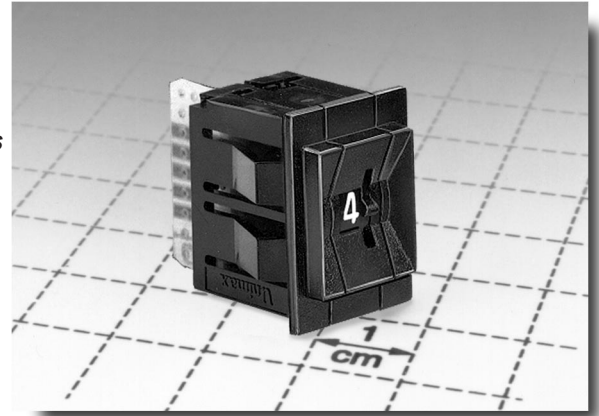


## Features/Benefits

- Front & rear mounting options available
- Variety of function codes
- Spacers available to fit most panel cutouts

## Typical Applications

- Test & measurement equipment
- Instrumentation
- Computer peripherals



## Build-A-Switch

Our easy Build-A-Switch concept allows you to mix and match options to create the switch you need. Below is a complete listing of options shown in catalog. To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages J-24 thru J-26. For additional options not shown in catalog, consult Customer Service Center.

Typical Example: **S 2 D** — **0 2 1** — **S** — **0** — **0**

### Mounting Style

- S2D** Switch section only, no endplates
- S2F** Snap-in front mount
- S2R** Rear mount
- S2S** Rear mount
- S2T** Rear mount

### Function Code

- 012** Decimal, SP, 10 position
- 018** Complement of BCD, 10 position
- 021** BCD, 10 position
- 054** Binary coded hexadecimal, SP, 16 position
- 057** Binary coded hexadecimal, SP, 16 position

### Terminations

- S** (STD.) PCB
- A** Extended PCB
- C** PCB with solder pins
- E** Extended PCB
- L** Right angle
- P** Right angle

### Color/Marking/Stops

- 0** (STD.) Black body & wheel, white marking
- 9** Special body colors, wheel colors, marking and/or stops

### Number of Sections

- 0** Switch section, no endplates
- 1** 1 Switch section
- 2** 2 Switch sections
- 3** 3 Switch sections
- 4** 4 Switch sections
- 5** 5 Switch sections
- 6** 6 Switch sections
- 7** 7 Switch sections
- 8** 8 Switch sections
- 9** More than 8 sections, specify on configuration form



# S2 Series Subminiature Thumbwheel Switches



## Specifications

### CONTACT RATING:

CARRY: 3 AMPS continuous.

SWITCH: 0.4 VA max., 50 mA max., 50 V AC or DC max.

OPERATING VOLTAGE: 50 mV to 50 V AC or DC.

CONTACT RESISTANCE: Below 100 milliohms typ. @  
2-4 V DC, 100 mA.

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

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

OPERATING TEMPERATURE:  $-40^{\circ}\text{C}$  to  $70^{\circ}\text{C}$ .

## Materials

HOUSING: Polycarbonate.

THUMBWHEEL: Acetal.

ROTOR CONTACTS: Precious metal on copper alloy.

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

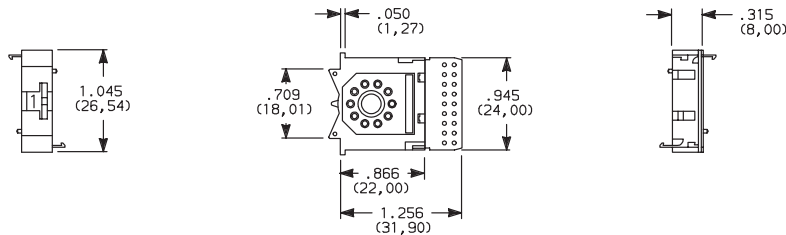
**NOTE:** Specifications and materials listed above are general specifications for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

## MOUNTING STYLE

### S2D SWITCH SECTION ONLY (ENDPLATES NOT SUPPLIED)



S2D021S00

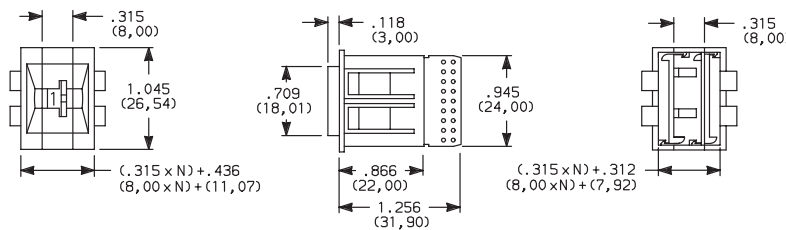


Must be ordered with 0 number of sections option, see page J-26.

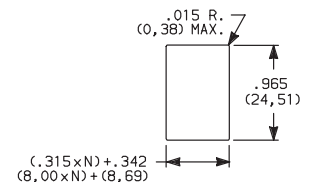
### S2F SNAP-IN FRONT MOUNT



S2F021S01



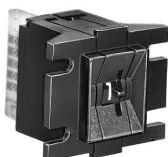
#### PANEL MOUNTING



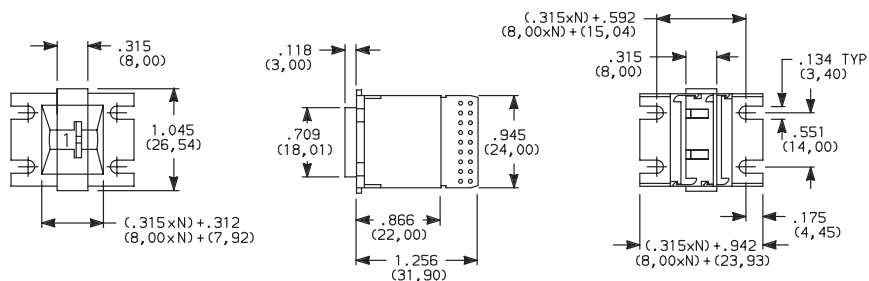
N = Number of sections.

Recommended panel thickness:  
.046 - .125  
(1,16 - 3,18)

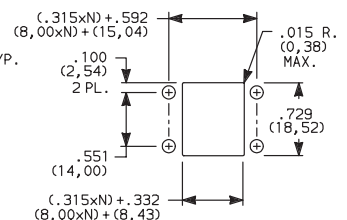
### S2R REAR MOUNT (8MM FLANGE)



S2R021S01



#### PANEL MOUNTING



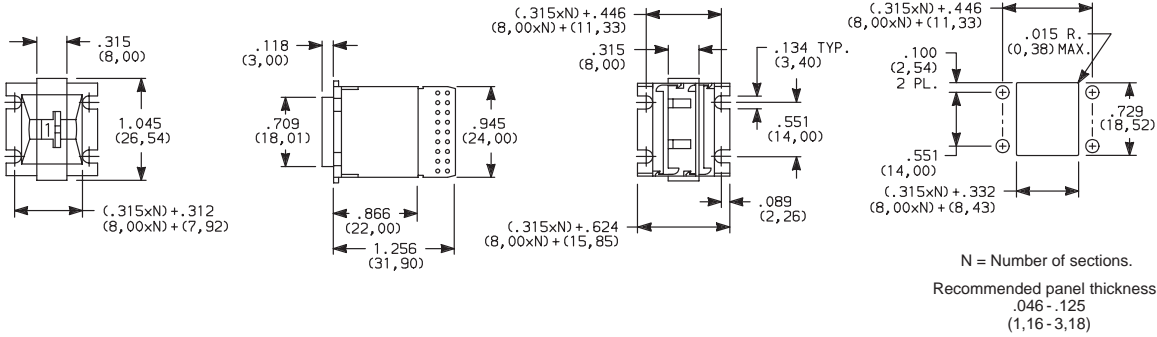
N = Number of sections.

Recommended panel thickness:  
.046 - .125  
(1,16 - 3,18)

Thumbwheel & Pushwheel

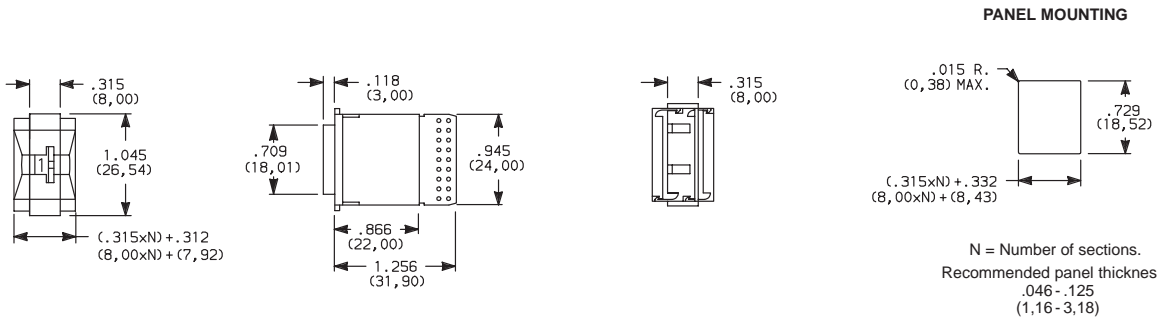
## MOUNTING STYLE

### S2S REAR MOUNT (4MM FLANGE)



S2S021S01

### S2T REAR MOUNT (NO FLANGE)



S2T021S01

## FUNCTION CODE

### 012 DECIMAL SP, 10 POSITION

WHEEL	SIGNALS CONNECTED TO COMMON SIGNAL C										
	0	1	2	3	4	5	6	7	8	9	C
0	●										●
1		●									●
2			●								●
3				●							●
4					●						●
5						●					●
6							●				●
7								●			●
8									●		●
9										●	●
	1	2	3	4	5	7	8	9	10	11	6

TERM. LOCATION

Available Terminations: E, S  
See fig. 2, page J-26.

### 018 COMPLEMENT OF BCD, 1-2-4-8, 10 POSITION

WHEEL	SIGNALS CONN. TO COMM. SIG. C				
	1	2	4	8	C
0	●	●	●	●	●
1	●	●	●	●	●
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●
6	●	●	●	●	●
7	●	●	●	●	●
8	●	●	●	●	●
9	●	●	●	●	●
	4	5	6	7	3

TERM. LOCATION

Terminal locations for L or P termination options only.

Available Terminations: C, E, L, P, S  
See figs. 1 & 3, page J-26.

### 021 BCD 1-2-4-8, 10 POSITION

WHEEL	SIGNALS CONN. TO COMM. SIG. C				
	1	2	4	8	C
0					●
1	●				●
2	●	●			●
3	●	●	●		●
4	●	●	●	●	●
5	●	●	●	●	●
6	●	●	●	●	●
7	●	●	●	●	●
8	●	●	●	●	●
9	●	●	●	●	●
	4	5	6	7	3

TERM. LOCATION

Terminal locations for L or P termination options only.

Available Terminations: A, C, E, L, P, S  
See figs. 1 & 3, page J-26.

### 054 BINARY CODED HEXADECIMAL, SP, 16 POSITION, 0-9, A-F

WHEEL	054	057	SIGNALS CONN. TO COMMON SIG. C				
			1	2	4	8	C
0	0					●	
1	1		●			●	
2	2		●	●		●	
3	3		●	●	●	●	
4	4		●	●	●	●	
5	5		●	●	●	●	
6	6		●	●	●	●	
7	7		●	●	●	●	
8	8		●	●	●	●	
9	9		●	●	●	●	
A	10		●	●	●	●	
B	11		●	●	●	●	
C	12		●	●	●	●	
D	13		●	●	●	●	
E	14		●	●	●	●	
F	15		●	●	●	●	
			4	5	6	7	3

TERM. LOCATION

Available Terminations: A, C, E, S  
See fig. 1, page J-26.

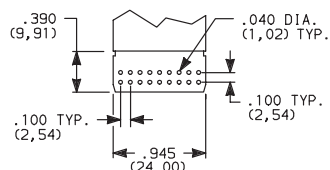
NOTE: For terminal location diagram, see page J-26.

# S2 Series Subminiature Thumbwheel Switches

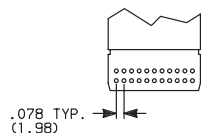


## TERMINATIONS

### S (STD.) PCB

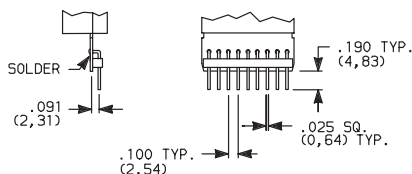


For all function codes except 012.

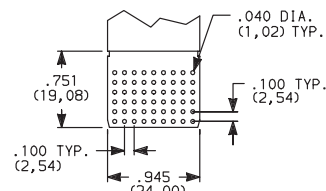


For function code 012.

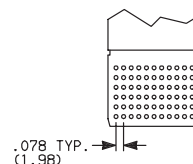
### C PCB WITH SOLDER PINS (HEADER)



### E EXTENDED PCB

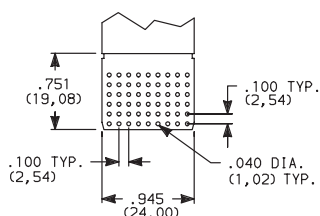


For all function codes except 012.



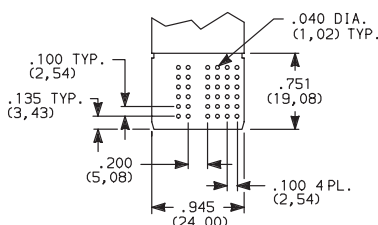
For function code 012.

### A EXTENDED PCB WITH PROVISIONS FOR COMPONENTS



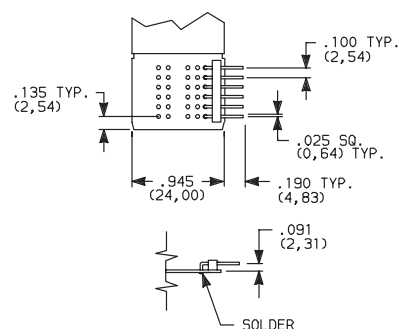
Signal traces cut except for common(s).

### L RIGHT ANGLE



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

### P RIGHT ANGLE WITH SOLDER PINS (HEADER)



Unsuitable for panel mounting.

## Terminal Location Numbers

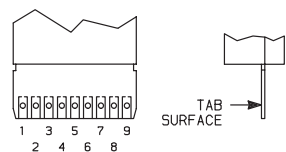


Fig. 1

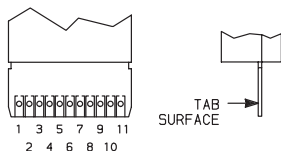


Fig. 2

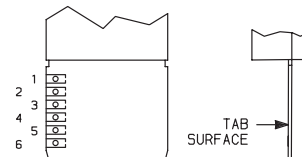


Fig. 3

NOTE: See function codes, pages J-25, for signal locations.

## COLOR/MARKING/STOPS

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

**9** SPECIAL COLORS, MARKINGS FOR HOUSING OR WHEEL, STOPS (Specify on CONFIGURATION FORM, page J-27 and consult Customer Service Center.)

## NUMBER OF SECTIONS

**0** SWITCH SECTION ONLY no endplates (must be ordered with S2D mounting style, see page J-25.)

**1-8** NUMBER OF SWITCH SECTIONS IN ASSEMBLY, includes endplates.

**9** MORE THAN 8 SWITCH SECTIONS, specify on CONFIGURATION FORM, page J-27 and consult Customer Service Center.

NOTE: Endplates and blank sections available separately, see section L.





# S2 Series Subminiature Thumbwheel Switches

## Configuration Form

GRAY SHADED AREAS TO BE FILLED IN BY C&K.

C&K CATALOG PART NO.

**S 2**

C&K PART NUMBER

C&K PART NUMBER

COMPANY NAME \_\_\_\_\_

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

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

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

CUSTOMER  
PRINT  
REVISION:

DETAILS:

THUMBWHEEL SECTIONS	NO. OF SEC.	FUNCTION CODE — TERMINATIONS — COLOR/MARKING/STOPS/SEAL	DESCRIBE IN APPROPRIATE ROW
	1	S 2 - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -	
	2	S 2 - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -	
	3	S 2 - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -	
	4	S 2 - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -	
	5	S 2 - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -	
	6	S 2 - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -	
	7	S 2 - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -	
	8	S 2 - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -	
	9	S 2 - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -	
	10	S 2 - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -	
	11	S 2 - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -	

ENTER OPTION CODES IN APPROPRIATE BOXES. FUNCTION CODES INCLUDE BLANK SECTIONS (SEE CATALOG PAGE F-17).

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 \_\_\_\_

