

# C&K RTBV Series 1-2 Pole Coded Rotary Switches



## Features/Benefits

- **Totally sealed**
- **Detent angles, 15 , 22.5 , 30 and 36**
- **Multi pole**
- **Coding functions**
- **Robust construction**

## Typical Applications

- **Telecommunications**
- **Military**
- **Instrumentation**
- **Heavy-duty industrial equipment**

## Specifications

CONTACT RATING: S Contact material: Switch: 250mA, 5VA resistive load, Carry: 5 AMPS  
 ELECTRICAL LIFE: Up to 25,000 operations.  
 OPERATING TORQUE: 5Ncm±30% (with 1 module).  
 MECHANICAL STOP RESISTANCE: > 70 Ncm.  
 BUSHING MOUNTING TORQUE: 100 Ncm.  
 CONTACT RESISTANCE: < 100 m Ω.  
 INSULATION RESISTANCE: > 10<sup>9</sup> Ω  
 DIELECTRIC STRENGTH: 500 V rms.

**NOTE:** For the latest information regarding RoHS compliance, please go to: [www.ittcannon.com/rohs](http://www.ittcannon.com/rohs).

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

## Materials

HOUSING: PBT thermoplastic and PC thermoplastic  
 STATIONARY CONTACTS & TERMINALS: Nickel alloy, gold or silver plated, insert molded in PBT thermoplastic.  
 ROTOR: Printed circuit, gold or silver plated.  
 ACTUATOR: Steel  
 BUSHING: Brass  
 HARDWARE: Stop pin and spring: Stainless steel  
 All models are RoHS compliant and compatible.

## 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 L-33 thru L-37. For additional options not shown in catalog, consult Customer Service Center.

Rotary

**Designation**  
RTBV

**Indexing**  
**15** 15°  
**22.5** 22.5°  
**30** 30°  
**36** 36°

**Number of Switch Functions\*\***  
**1** 1 Function  
**2** 2 Functions

**Switch Function**  
**Number of Poles (first digit)**  
**Number of Positions (second & third digit) or code**  
**116** SP, 16 positions  
**112** SP, 12 positions  
**206** DP, 6 positions  
**B** Binary code  
**C** Complement  
**BC** Direct + complement

**Stops**  
**B** Stop with number of positions  
**S** Without

**Mounting Style**  
**AD** Standard bushing for panel mount  
**DE** Sealed bushing for panel mount

**Shaft Diameter**  
**D6** 6 mm (.236)  
**D63** 6.35 mm (.250)

**Option of Shaft (NONE)**  
**M10X5** Shaft with flat

**Actuator Option Angle\* (NONE)**  
**K0** 0° angle  
**K60** 60° angle  
**K90** 90° angle  
**K120** 120° angle  
**K180** 180° angle  
**K270** 270° angle

**Actuator Length**  
**25** 25 mm (.984)

**Contact Material**  
**S** Silver plated  
**G** Gold plated

\* Other angles available by request

\*\* Several functions can be combined. For more information consult us.



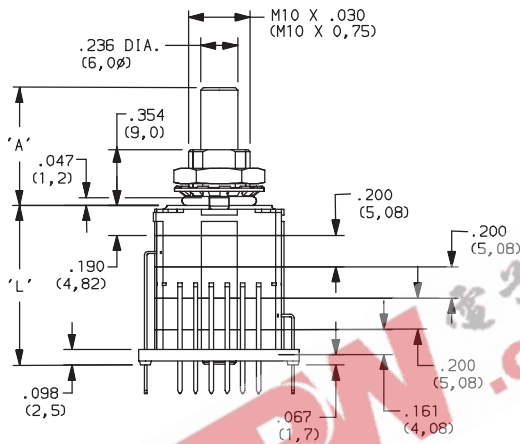
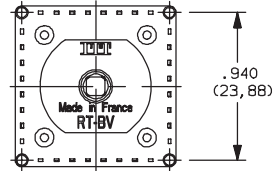
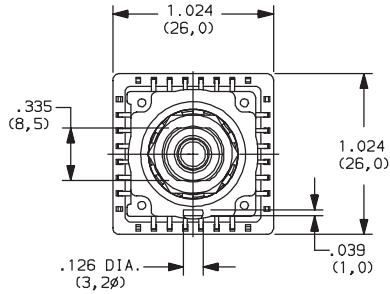
Dimensions are shown: Inch (mm)  
 Specifications and dimensions subject to change

# C&K RTBV Series 1-2 Pole Coded Rotary Switches

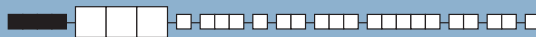
DESIGNATION



RTBV



INDEXING



**15** 15° index, 24 POSITIONS MAXIMUM

**22.5** 22.5° index, 16 POSITIONS MAXIMUM

**30** 30° index, 12 POSITIONS MAXIMUM

**36** 36° index, 10 POSITIONS MAXIMUM



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# C&K RTBV Series 1-2 Pole Coded Rotary Switches

## NUMBER OF SWITCH FUNCTIONS



- 1** 1 FUNCTION
- 2** 2 FUNCTIONS

**NOTE:** Several functions can be combined. For more information consult us.

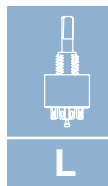
## NUMBER OF POLES / POSITIONS



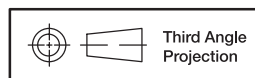
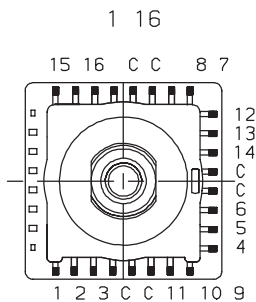
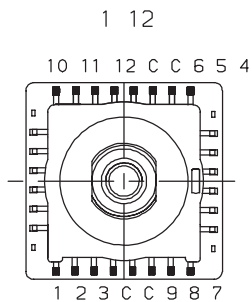
- 116** 22.5 INDEX, SP, 16 POSITIONS
- 112** 30 INDEX, SP, 12 POSITIONS
- 206** 30 INDEX, DP, 6 POSITIONS
- B** BINARY CODE, 15 /22.5 /30 /36
- C** COMPLEMENT, 15 /22.5 /30 /36
- BC** DIRECT + COMPLEMENT, 15 /22.5 /30 /36

SINGLE POLE FUNCTION

	C	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	●	●																							
2	●		●																						
3	●			●																					
4	●				●																				
5	●					●																			
6	●						●																		
7	●							●																	
8	●								●																
9	●									●															
10	●										●														
11	●											●													
12	●	●											●												
13	●		●											●											
14	●			●											●										
15	●				●											●									
16	●					●											●								
17	●						●											●							
18	●							●											●						
19	●								●											●					
20	●									●											●				
21	●										●											●			
22	●											●											●		
23	●												●											●	
24	●													●											●



Rotary



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

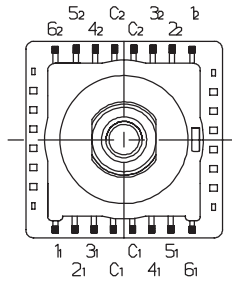
# C&K RTBV Series 1-2 Pole Coded Rotary Switches

## NUMBER OF POLES / POSITIONS



### DOUBLE POLE FUNCTION

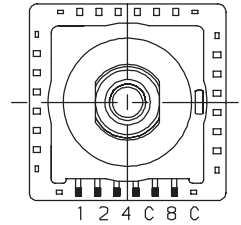
	C <sub>1</sub>	1 <sub>1</sub>	2 <sub>1</sub>	3 <sub>1</sub>	4 <sub>1</sub>	5 <sub>1</sub>	6 <sub>1</sub>	C <sub>2</sub>	1 <sub>2</sub>	2 <sub>2</sub>	3 <sub>2</sub>	4 <sub>2</sub>	5 <sub>2</sub>	6 <sub>2</sub>
1	●	●						●	●					
2	●		●					●		●				
3	●			●				●			●			
4	●				●			●				●		
5	●					●		●					●	
6	●						●	●						●



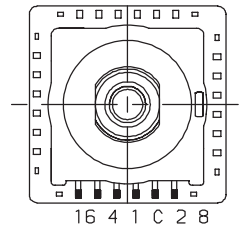
### BINARY DIRECT CODE

	C	1	2	4	8	16
0	●	●	●	●	●	●
1	●	●	●	●	●	●
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●	●	●
6	●	●	●	●	●	●
7	●	●	●	●	●	●
8	●	●	●	●	●	●
9	●	●	●	●	●	●
10	●	●	●	●	●	●
11	●	●	●	●	●	●
12	●	●	●	●	●	●
13	●	●	●	●	●	●
14	●	●	●	●	●	●
15	●	●	●	●	●	●
16	●	●	●	●	●	●
17	●	●	●	●	●	●
18	●	●	●	●	●	●
19	●	●	●	●	●	●
20	●	●	●	●	●	●
21	●	●	●	●	●	●
22	●	●	●	●	●	●
23	●	●	●	●	●	●

B10 B12 B16



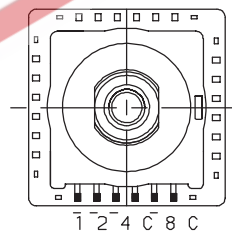
B24



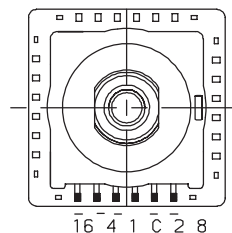
### COMPLEMENT BINARY CODE

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1	●	●	●	●	●	●
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●	●	●
6	●	●	●	●	●	●
7	●	●	●	●	●	●
8	●	●	●	●	●	●
9	●	●	●	●	●	●
10	●	●	●	●	●	●
11	●	●	●	●	●	●
12	●	●	●	●	●	●
13	●	●	●	●	●	●
14	●	●	●	●	●	●
15	●	●	●	●	●	●
16	●	●	●	●	●	●
17	●	●	●	●	●	●
18	●	●	●	●	●	●
19	●	●	●	●	●	●
20	●	●	●	●	●	●
21	●	●	●	●	●	●
22	●	●	●	●	●	●
23	●	●	●	●	●	●

C10 C12 C16



C24

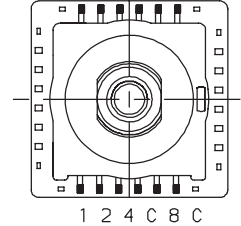


### DIRECT AND COMPLEMENT BINARY CODE

	C	1	2	4	8	16	C	1	2	4	8	16
0	●	●	●	●	●	●	●	●	●	●	●	●
1	●	●	●	●	●	●	●	●	●	●	●	●
2	●	●	●	●	●	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●	●	●	●	●	●
5	●	●	●	●	●	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●	●	●	●	●	●
7	●	●	●	●	●	●	●	●	●	●	●	●
8	●	●	●	●	●	●	●	●	●	●	●	●
9	●	●	●	●	●	●	●	●	●	●	●	●
10	●	●	●	●	●	●	●	●	●	●	●	●
11	●	●	●	●	●	●	●	●	●	●	●	●
12	●	●	●	●	●	●	●	●	●	●	●	●
13	●	●	●	●	●	●	●	●	●	●	●	●
14	●	●	●	●	●	●	●	●	●	●	●	●
15	●	●	●	●	●	●	●	●	●	●	●	●
16	●	●	●	●	●	●	●	●	●	●	●	●
17	●	●	●	●	●	●	●	●	●	●	●	●
18	●	●	●	●	●	●	●	●	●	●	●	●
19	●	●	●	●	●	●	●	●	●	●	●	●
20	●	●	●	●	●	●	●	●	●	●	●	●
21	●	●	●	●	●	●	●	●	●	●	●	●
22	●	●	●	●	●	●	●	●	●	●	●	●
23	●	●	●	●	●	●	●	●	●	●	●	●

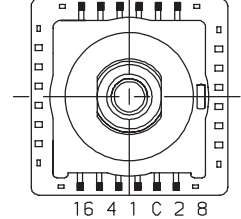
BC10 BC12 BC16

C 8 C 4 2 1



BC24

8 2 C 1 4 16



Third Angle Projection  
Specifications and dimensions subject to change



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## STOPS

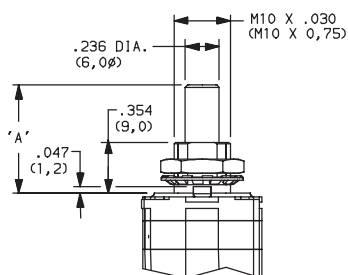
**B** STOP WITH NUMBER OF POSITIONS

**S** WITHOUT

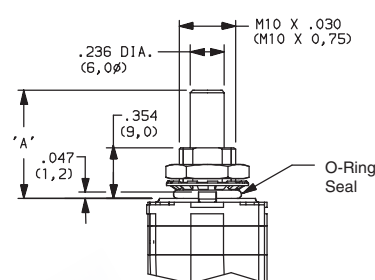
EXAMPLE: 108B08 STOP AT 8TH POSITION

## MOUNTING STYLE

**AD** STANDARD BUSHING FOR PANEL MOUNT

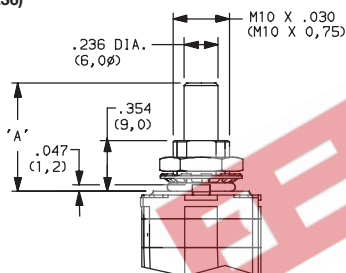


**DE** SEALED BUSHING FOR PANEL MOUNT

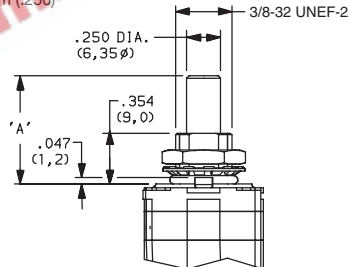


## SHAFT DIAMETER

**D6** 6 mm (.236)

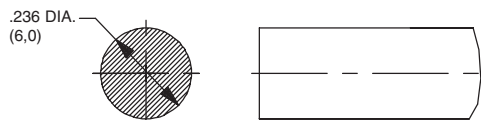


**D63** 6.35 mm (.250)

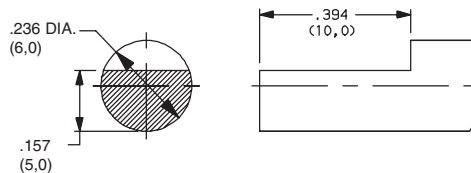


## OPTION OF SHAFT

**(NONE)**



**M10X5** FLAT



Rotary



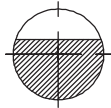
Dimensions are shown: Inch (mm)  
Specifications and dimensions subject to change

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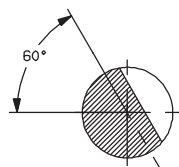
## ACTUATOR OPTION ANGLE



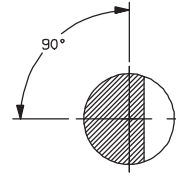
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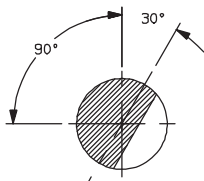
**K0** 0 ANGLE



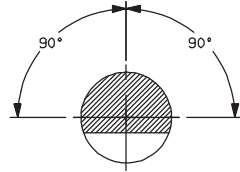
**K60** 60°



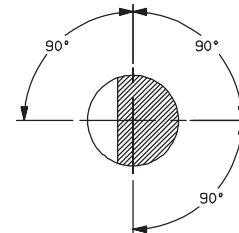
**K90** 90°



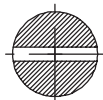
**K120** 120°



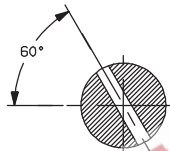
**K180** 210°



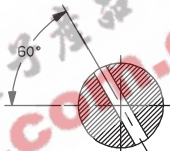
**K270** 300°



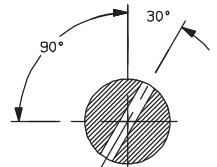
**K0** 0 ANGLE



**K60** 60°



**K90** 90°



**K120** 120°

## ACTUATOR LENGTH



**25** 0,25 mm (.984) STANDARD SHAFT

Other lengths available by request.

## CONTACT MATERIAL



OPTION CODE	RoHS COMPLIANT*	RoHS COMPATIBLE*	CONTACT AND TERMINAL MATERIAL	RATING	
				LOW LEVEL/DRY CIRCUIT	SWITCH: 250 mA, POWER: 5 VA; CARRY: 5 AMPS
<b>S</b>	YES	YES	SILVER	LOW LEVEL/DRY CIRCUIT	SWITCH: 250 mA, POWER: 5 VA; CARRY: 5 AMPS
<b>G</b>	YES	YES	GOLD	LOW LEVEL/DRY CIRCUIT OR POWER	SWITCH: 20 mA, POWER: 0.2 VA; CARRY: 1 AMP

\* Note: See Technical Data section of this catalog for RoHS compliant and compatible definition and specifications.



Dimensions are shown: Inch (mm)  
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