RTA Series
1-4 Poles Coded Rotary Switches



Description

The RTA series are 1–4 pole coded rotary switches, found most often in appliances, off-road vehicles, medical building automation applications and HVAC air conditioning equipment. The RTA series are available in PCB or hand soldering versions, with bushing mounting and multiple poles.

Features & Benefits

- PCB or hand soldering versions
- Bushing mounting
- Multiple poles
- Decimal and hexadecimal codes
- Screwdriver slot or extended actuator
- RoHS Compliant

Applications

- Appliances
- Electronic alarm systems
- Medical
- Building automation
- HVAC air conditioning

Electrical Characteristics

	Silver	Gold
Switching Mode	Break-Before-Make	
Max. Switching Power	5 VA	0.5 VA
Max. Switching Current	150 mA	20 mA
Max. Carrying Current	5 A	1 A
Nominal Voltage at 50 Hz	60 V	25 V
Contact Resistance	< 150 mΩ	
Dielectric Strength at 50 Hz Between Contacts and Ground Terminals	500V rms	
Insulation Resistance Between Contacts or Contacts and Frame (500V =):	10^9 Ω	
No. of Indexations	10,000	
Bounce	< 5 ms	
Operating Temperature	-20°C to 70°C	
Storage Temperature	-40°C to 85°C	

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

Mechanical Characteristics

Max No. Of Banks	1
Operating Torque	5N cm. ± 20%
End Stop Torque	50N cm. minimum
Stop	With/without or adjustable
Mounting	By fixed index 9.5 mm (0.0374) of center, for bushing mount only

Materials

Housing & Bushing	PETP Thermoplastic
Stationary Contacts & Terminals	Nickel Plated Brass with additional plating of Gold or Silver
Rotor	Gold or Silver plated Brass or PCB
Coding Plate	PA thermoplastic
Actuator	Polysulfon thermoplastic
Hardware	Stop pin: Aluminum. Ball & Spring: Stainless steel. Washer: PA. Nut: Brass.

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Ordering Number

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

RTA - x - x - xxxx - x - xxx - x

Designation
RTA

Termination
P: With thru-hole PC pins
H: Horizontal with thru-hole PC pins

Indexing
3: 30° index (12 positions max.)
4: 36° index (10 positions max.)

Switch Function
1W12: SP, 30° Index, 12 pos. no stop
1W10: SP, 36° Index, 10 pos. no stop
1S02: SP, 30° /36° Index, 2 pos.
1S03: SP, 30° /36° Index, 3 pos.
1S04: SP, 30° /36° Index, 4 pos.
1S05: SP, 30° /36° Index, 5 pos.
1S06: SP, 30° /36° Index, 6 pos.
1S07: SP, 30° /36° Index, 7 pos.
1S08: SP, 30° /36° Index, 8 pos.
1S09: SP, 30° /36° Index, 9 pos.
1S10: SP, 30° /36° Index, 10 pos.
1S11: SP, 30° Index, 11 pos.
1S12: SP, 30° Index, 12 pos.
2S02: DP, 30° /36° Index, 2 pos.
2S03: DP, 30° /36° Index, 3 pos.
2S04: DP, 30° /36° Index, 4 pos.
2S05: DP, 30° /36° Index, 5 pos.
2S06: DP, 30° Index, 6 pos.
4S02: 4P, 30° /36° Index, 2 pos.
EW10: Direct + complement, 36° Index, no stop
EW12: Direct + complement, 30° Index, no stop
ES__: Direct + complement, 30°/36°Index, with stop (specify stop position)

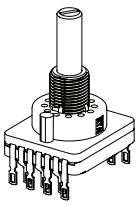
Actuator
25N: 0.984 (25,0) with screwdriver slot
50N: 1.97 (50,0) with screwdriver slot
FLS: Flush shaft with screwdriver slot and position indicator
25F: 0.984 (25,0) Shaft with flat
06F: 0.236 (6,0) Shaft with flat

Contact Material
S: Silver plated, matte-tin terminal
P: Gold plated, matte-tin terminal

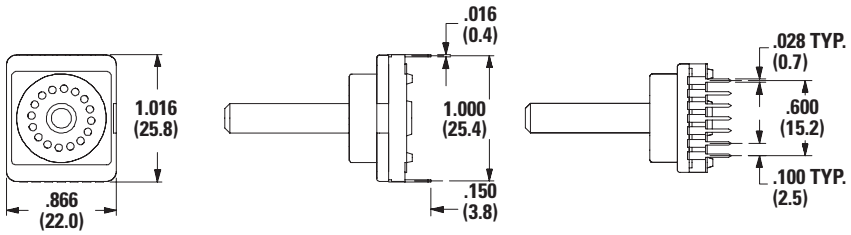
Mounting Style
W: Without bushing
R: 3/8-32 Threaded Bushing
M: M10x0.75 Metric Threaded Bushing
A: 3/8-32 Threaded Bushing with Offset Bracket
B: M10x0.75 Metric Threaded Bushing with Offset Bracket
C: 3/8-32 Threaded Bushing with Straight Bracket
D: M10x0.75 Metric Threaded Bushing with Straight Bracket

Designation

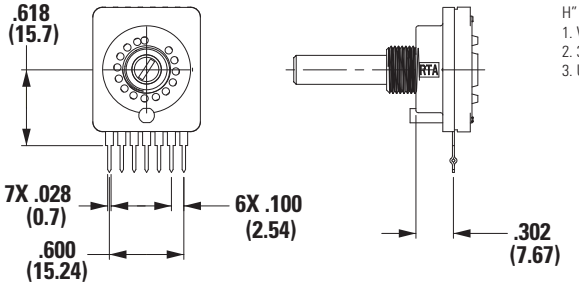
RTA



Termination P with Thru-hole PC pins



H Horizontal with PC Thru-hole



Notes:
H" termination only available with the following options:
1. With A or B mounting styles
2. 36° degree indexing
3. Up to 5 positions max

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Indexing

3 - 30° index, 12 positions max.
4 - 36° index, 10 positions max.
Both commons must be connected by user to ground

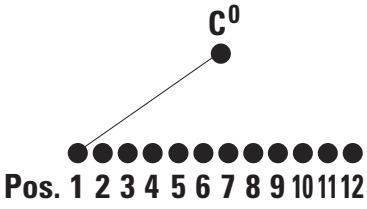
Switch Function

No. Poles	Model No.	Switch Function	Index
SP	1W12	12 Positions No Stops	30°
	1W10	10 Positions No Stops	36°
	1S02	2 Positions	30°/36°
	1S03	3 Positions	
	1S05	5 Positions	
	1S06	6 Positions	
	1S08	8 Positions	
	1S09	9 Positions	
	1S10	10 Positions	
	1S11	11 Positions	30°
	1S12	12 Positions	

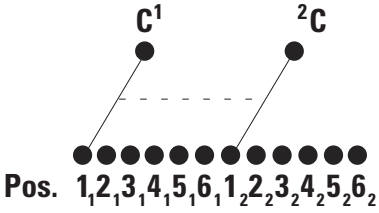
No. Poles	Model No.	Switch Function	Index
DP	2W05	5 Positions No Stops	30°/36°
	2W06	6 Positions No Stops	30°
	2S02	2 Positions	30°/36°
	2S03	3 Positions	
	2S04	4 Positions	
	2S05	5 Positions	
	2S06	6 Positions	30°
4P	4S02	2 Positions	30°/36°

Model No.	Switch Function	Index
EW10	Direct + complement, No stop	36°
EW12		30°
ES_ _	Direct + complement, With stop (specify stop position)	30°/ 36°

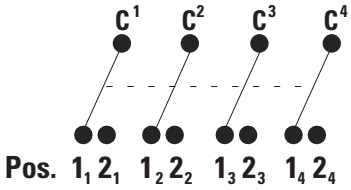
SP Models Schematic



DP Models Schematic



4P Models Schematic

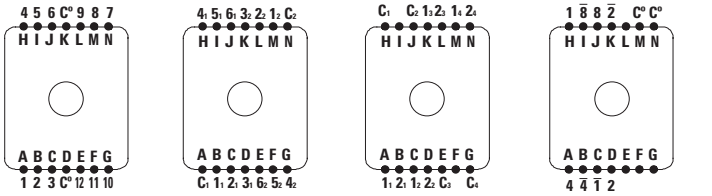


	30° Term.	36° Term.	Pos.	1	2	3	4	5	6	7	8	9	10	11	12
	M,N	L,N,	C	•	•	•	•	•	•	•	•	•	•	•	•
Direct	H	D	1		•		•		•		•		•		•
	D	B	2			•	•			•	•			•	•
	A	I	3					•	•	•	•				
	J	J	8									•	•	•	•
Compliment	C	K	1	•		•		•		•		•		•	
	K	H	2	•	•			•							
	B	A	4	•	•	•	•					•	•	•	•
	I	C	8	•	•	•	•	•	•	•	•				

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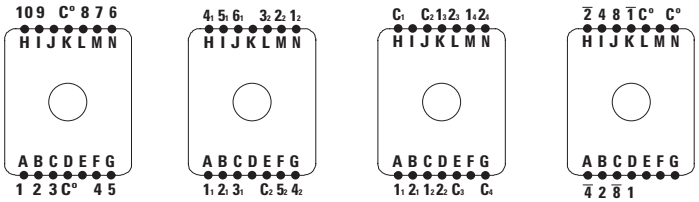
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Indexing Option Code 3, 30 Indexing Angle PCB Layout



1 Pole | 2 Poles | 4 Poles | BCD + Complements

Indexing Option Code 4, 36 Indexing Angle PCB Layout

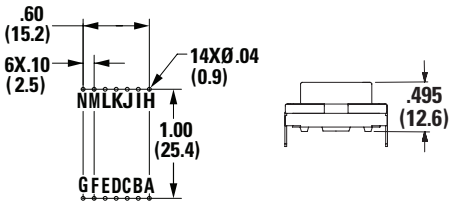


1 Pole | 2 Poles | 4 Poles | BCD + Compliments

Notes: Layout view from component side. Common terminals that are in locations A-G are not connected to common terminals that are in locations H-N. For 7-12 position output customer must tie these commons together.

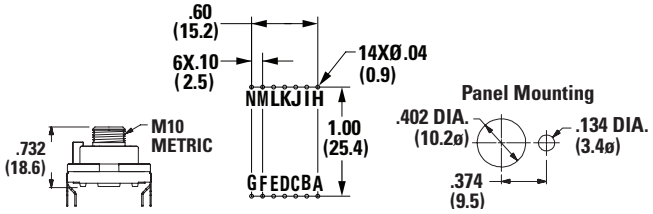
Mounting Style

W Without Bushing



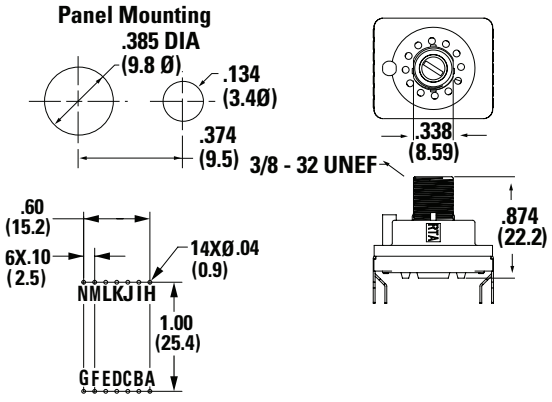
Note: W mounting style not available with H termination.

M M10 x 0.75 Metric Threaded Bushing



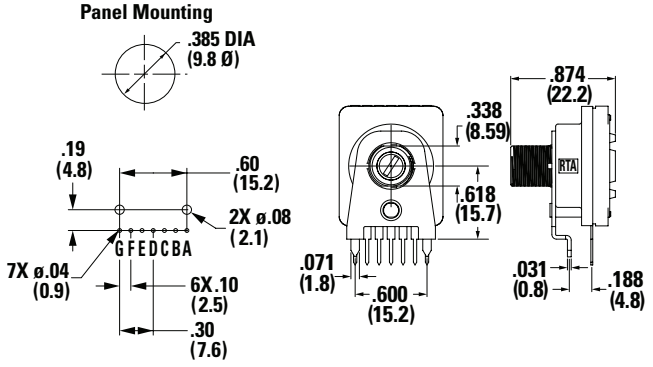
Note: M mounting style not available with H termination.

R 3/8-32 Threaded Bushing



Note: R mounting style not available with H termination.

A 3/8-32 Threaded Bushing With Bracket

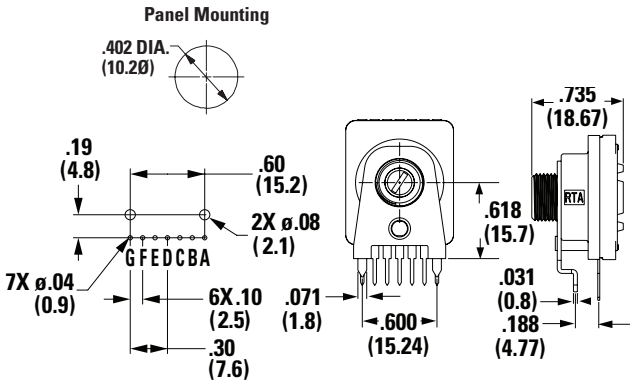


Note: A mounting style not available with H termination.

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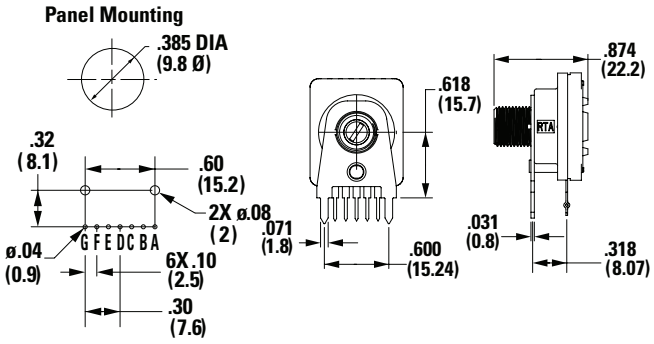
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B M10 x 0.75 Metric Threaded Bushing With Bracket



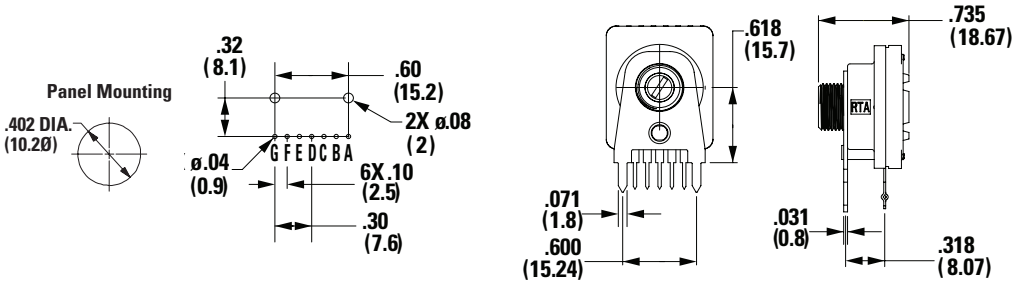
Note: R mounting style not available with H termination.

C 3/8-32 Threaded Bushing With Straight Bracket



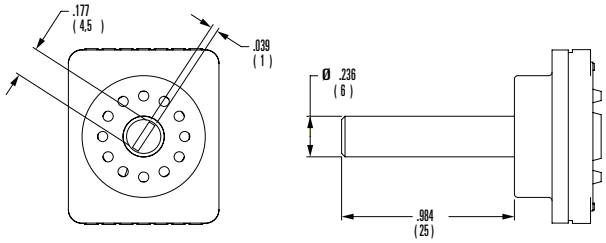
Note: A mounting style not available with H termination.

D M10 x 0.75 Metric Threaded Bushing With Straight Bracket

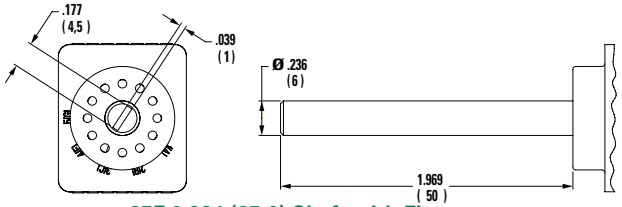


Actuator

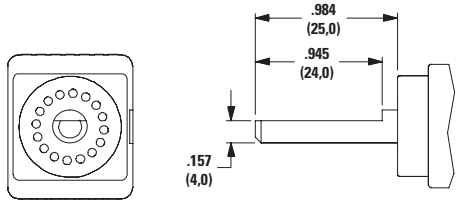
25N 0.984 (25.0) With Screwdriver Slot



50N 1.97 (50.0) With Screwdriver Slot

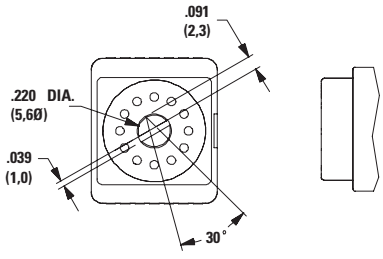


25F 0.984 (25.0) Shaft with Flat



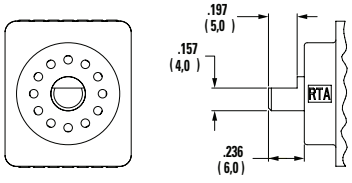
Notes: only available with "W" Mounting Style

FLS Flush Shaft With Screwdriver Slot and Position Indicator



Notes: only available with "W" Mounting Style

06F 0.236 (6.0) Shaft With Flat



Notes: only available with "W" Mounting Style

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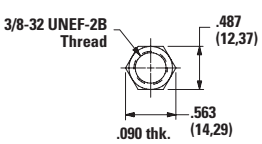
Contact Material

Option Code	Contact Material	Typical Usage	Rating
S	Silver	Low Level / Dry Circuit	Switch: 150 mA ,ax., 60 V nominal. Power: 5 VA ,ax. Carry-5 amps max.
P	Gold	Low Level / Dry Circuit or Power	Switch: 20 mA max., 25 V nominal. Power: 0.5 VA max. Carry-1 amp max.

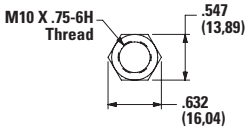
Notes: See Technical Data section of this catalog for RoHS compliant and compatible definition and specifications.

Available Hardware

Mounting Nuts



Part No. 472706201
Standard



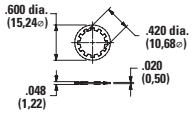
Part No. 205D00201CH
Metric

Stop pins



Part No. Y200300200PCH

Lockwasher



Part No. 472800A47CH

Notes: Additional nuts and lockwashers available separately, see section "Technical Data and Additional Hardware".

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