#### Features/Benefits

- Multi-pole and multi-position
- Positive detent
- Shorting & non-shorting contacts
- Panel and PCB mounting
- RoHS Compliant



Models Available

#### Typical Applications

- Automotive
- Major and small appliances
- Industrial equipment



#### **Specifications**

CONTACT RATING: Q contact material: Switch - 2.5 AMPS @ 125 V AC; 350 mA @ 125 V DC (UL/CSA). Carry - 5 AMPS continuous. See page K-6 for additional ratings.

ELECTRICAL LIFE: 15,000 make-and-break cycles at full load up to 300,000 detent operations.

CONTACT RESISTANCE: Below 20 m  $\Omega$  typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts. INSULATION RESISTANCE: 10  $^9$   $\Omega$  min.

DIELECTRIC STRENGTH: 1,000 Vrms min. @ sea level. Operating and storage temp: -30° to 85°C

OPERATING & STORAGE TEMPERATURE: -30°C to 85°C

NOTE: Any models supplied with Q, B or G contact material are RoHS compliant

**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 & BUSHING: Glass filled 6/6 nylon (UL 94V-0).

ACTUATOR: Glass filled 6/6 nylon (UL 94V-0).

MOVABLE CONTACTS: Q contact material: Coin silver, silver plated. See page K-6 for additional contact materials.

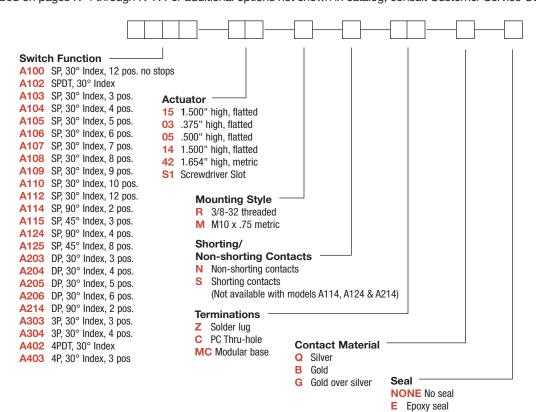
STATIONARY CONTACTS & TERMINALS: Q contact material: Brass, silver plated. See page K-6 for additional contact materials.

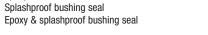
HARDWARE: Nut - zinc, nickel plated. Lockwasher — steel, bright zinc plated. Stop Ring - brass, nickel plated.

TERMINAL SEAL: Epoxy.

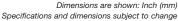
#### **Build-A-Switch**

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages K–4 through K–7. For additional options not shown in catalog, consult Customer Service Center.









K-3

# 1-4 Pole Rotary Switches

## **SWITCH FUNCTION**

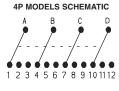
30° INDEXING				
NO. POLES	MODEL NO.	SWITCH FUNCTION	TERMINALS	
	A100	12 Position No Stops	A,1-12	
	A102	SPDT	A,1,2*	
	A103	3 Position	A,1-3*	
	A104	4 Position	A,1-4*	
	A105	5 Position	A,1-5*	
SP	A106	6 Position	A,1-6*	
	A107	7 Position	A,1-7	
	A108	8 Position	A,1-8	
	A109	9 Position	A,1-9	
	A110	10 Position	A,1-10	
	A112	12 Position	A,1-12	
	A203	3 Position	A,C,1-3,7-9	
DP	A204	4 Position	A,C,1-4,7-10	
	A205	5 Position	A,C,1-5,7-11	
	A206	6 Position	A,C,1-12	
3P	A303	3 Position	A,B,C,1-3,5-7 9-11	
JF.	A304	4 Position	A,B,C,1-12	

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		/	/	/	ار							
-	_	-	-	_	-	-	-	_	10	-	_	

SD MODELS SCHEMATIC

A	B	C •
		9 10 11 12
4P MODI	EI 6 60U	EMATIC

3P MODELS SCHEMATIC



30° INDEXING				
NO. POLES			TERMINALS	
<b>A402</b>		4PDT	A,B,C,D,1,2,4,5,7, 8,10,11	
4P	A403	3 Position	All Terminals	

45° INDEXING				
NO. POLES			TERMINALS	
SP ·	A115	3 Position	A,1,2,4*	
	A125	8 Position	A,1,2,4,5,7,8,10,11	

90° INDEXING				
NO. POLES			TERMINALS	
SP	A114	2 Position	A,1,4*	
SP	A124	4 Position	A,1,4,7,10	
DP	A214	2 Position	A,C,1,4,7,10	

# TERMINAL NUMBERS

**NOTE:** \* These models with 'C' or 'MC' terminations have additional terminal no. 9 as switch support only. This terminal is not connected electrically inside switch.



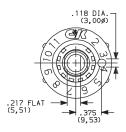
<del>-----</del>

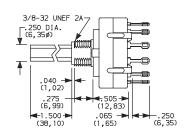
Terminal numbers molded on bottom of housing.

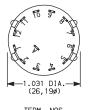


4P MODELS SP MODELS (omit terminals B, C & D) DP MODELS (omit terminals B & D)

3P MODELS







TERM. NOS. MOLDED ON HOUSING



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



Rotary X

100000

























NOTE: Actuators shown in position 1, fully CCW.

## **MOUNTING STYLE**

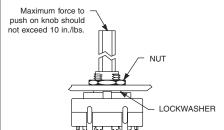
3/8-32 THREAD

.386 DIA. (9,80ø)

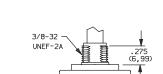
M10 x .75 METRIC

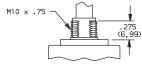


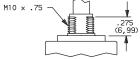




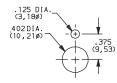
TYPICAL INSTALLATION







PANEL MOUNTING



METRIC BUSHING

Install switch with stop ring (if used) and lockwasher in back of panel. Tighten hex nut from front of panel.

On PC mounted switches, use hex nut and lockwasher to hold stop ring in place.

Actuation torque: 8-16 oz./in. Maximum torque: 30 oz./in.

## SHORTING/NON-SHORTING CONTACTS

NON-SHORTING CONTACTS (break-before-make)

SHORTING CONTACTS (make-before-break)

PANEL MOUNTING

3/8 IN. BUSHING

NOTE: 'S' shorting contacts are not available with A114, A124 and A214 models.



Third Angle Projection

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

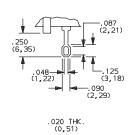


www.ck-components.com

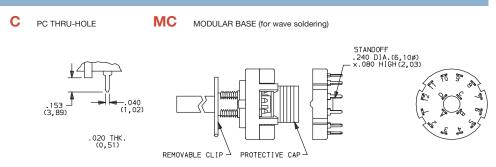
# A Series

# 1-4 Pole Rotary Switches

# Z SOLDER LUG



## TERMINATIONS ---



**NOTE:** Switches with 'C' or 'MC' terminations have additional terminal no. 9 as switch support only. This terminal is not connected electrically inside switch. Solder and clean switch base on PC board with other components, then snap on housing/actuator assembly. See page K-7 for installation instructions.

# 

# CONTACT MATERIAL

OPTION CODE	CONTACT AND TERMINAL MATERIAL	RATING	
Q	SILVER <sup>2</sup>	POWER	SWITCH-2.5 AMPS @ 125 V AC; 350 mA @ 125V DC (UL/CSA). CARRY-5 AMPS CONTINUOUS.
В	GOLD <sup>1</sup>	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC or DC MAX
G	GOLD OVER SILVER <sup>3</sup>	LOW LEVEL/DRY CIRCUIT OR POWER	0.4 VA MAX. @ 20 V AC or DC MAX. or SWITCH-2.5 AMPS @ 125 V AC; 350 mA @ 125 V DC (UL/CSA). CARRY-5 AMPS CONTINUOUS.

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

<sup>1</sup> MOVABLE CONTACTS: Copper alloy, with gold plate over nickel plate. STATIONARY CONTACTS & TERMINALS: Brass, with gold plate over nickel plate.
<sup>2</sup> MOVABLE CONTACTS: Coin silver, silver plated.

2 MOVABLE CONTACTS: Coin silver, silver plated. STATIONARY CONTACTS & TERMINALS: Brass, silver plated (standard with all termination options).

<sup>3</sup> MOVABLE CONTACTS: Coin silver, with gold plate over nickel plate over silver plate. STATIONARY CONTACTS & TERMINALS: Brass, with gold plate over nickel plate over silver plate. **NOTE:** Any models supplied with Q, B or G contact material are RoHS compliant.

All models c with all options when ordered with 'G' or 'Q' contact material.

NOTE: 'G' contact material is equivalent to both 'B' and 'Q" contact materials.



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



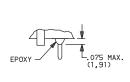
# FUNCTION ----

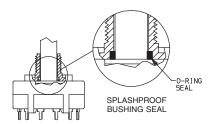












#### Setting Stops on A112 and A125 Models

The number of switch positions is adjustable on A112 and A125 models only by means of a stop ring provided with each switch. The number of positions is pre-set on all other models and the stop ring is factory installed.

To set stops: Turn shaft fully counter-clockwise and insert stop ring tab in desired hole. Install lockwasher and nut to retain stop ring for both PC and panel mounting. Switch without stop ring has 12 positions.

#### Soldering, Cleaning and Assembly Instructions for 'MC' Termination Option

#### **Soldering**

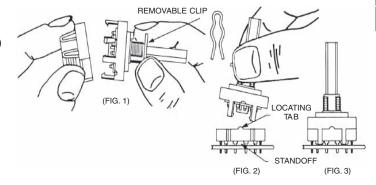
- 1. Insert switch base only into PC board.
- 2. Do not bend terminals.
- 3. Wave soldering recommended at 500F solder temperature.
- 4. Hand solder at 500F, 10 sec. max./terminal.

### Switch Assembly

- Hold housing/shaft assembly by housing. Remove protective cap by squeezing tabs and discard. (FIG. 1)
- 2. Do not push on switch shaft. Detent mechanism will come apart.
- 3. While holding switch housing, align locating tab on base with notch on housing and engage 4 housing latches in slots on base. (FIG. 2)
- 4. Push firmly on housing until latches snap in place.
- 5. Remove clip from shaft and discard. Assembly is complete. (FIG. 3)

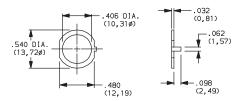
#### Cleaning

- 1. Flux clean using vapor degreaser and forced rinse or triple bath method.
- 2. Do not allow switch base to 'trap' fluids.
- Freon TMC, TF or Methylene Chloride give excellent results.



## **AVAILABLE HARDWARE**

Stop ring



PART NO. 767B00201

Material: Brass Finish: Nickel plated



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



# **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

# **C&K Components:**

A20605RNZGF A11215RNCQ A11405RNZGK A403-03-R-S-C-B-K A40203RNZQ A20615RNCQE A10615RSZQ
A10015RSCQ A114-05-R-N-Z-Q A11215RNCQE A20615RNCQ A12515RNZQ A30415RNZB A11215RNZQ
A20605RNZQ A20403RNZQ A30403RNZQ A11205RNCQ A104S1RNZQ A10315RSZQ A20615RNZQ
A30415RNZQ A112-03-R-S-C-Q A40303RNCQK A40305RNCQ A10205RNZQ A102S1RNZQ A10305RNCG
A10305RNCQ A10403RSZGE A10603RNCQ A10905RNCQ A11015RNZQ A112S1RNCQ A11503RNCB
A12542MNCQ A20314RNCQ A20403RNCQ A20505RNZGK A30405MNZQ A30405RNZQ A30415RNZQE
A40203RSZQ A402S1RNZQ A40303MNCQF A40331RNCQ A40315RNCQ A40315RNZQ A10003MNCQK
A10003MNZBE A10003MNZGE A10003RNCQ A10005RNZQ A10015RSZQ A10042MNCB A10051RNCQ
A10205RNCB A10303RSZQ A10305RNCGF A10351RNCG A10405RNCQ A10415RSZQ A10442RNZG
A10515RSZQ A10615MNCQE A10615MNZQE A10615RNZQ A106S1RNMCB A106S1RNMCG A10703MNCQK
A11205RSCB A11215MNCBK A11215MNCQE A11215MNZQE A11215MSCBK A11242MNZQE A11242MNZQE A11242MNZQE A11403RNZQK A11405RNZQK A11451RNZQ A11505RNZQK A12403MNZB A12405MNCQE
A12405MNZB A12405MNZQ A12415MNZQK A11451RNZQ A12515MNCQE A12542MNZQ A12542MSZQ
A20305RNCB A20315RNCG