

# 5000M series

Miniature toggle switches •  
threaded bushing Ø 11.9 mm



## DISTINCTIVE FEATURES

Bushing Ø 11.9 (15/32)

Panel mounting and PCB terminal combination available

1 to 4 pole configurations

UL and CSA approved



## ELECTRICAL SPECIFICATIONS

- Current/voltage rating with resistive load :

| Contact                  | Maximum                                                   | Minimum                  | Level*     |
|--------------------------|-----------------------------------------------------------|--------------------------|------------|
| Silver (A)               | 4 A 30 VDC                                                | 50 mA 10 VDC             | III and IV |
| Silver, gold plated (AD) | 4 A 30 VDC<br>Gold plating withstands up to 100 mA 30 VDC | 10 mA 50 mV<br>10 µA 5 V | I to IV    |
| Brass, gold plated (CD)  | 0.4 VA at 20 VAC or DC                                    | 10 mA 50 mV<br>10 µA 5 V | I and II   |

\*For details, see Technical Information on website.

- For inductive, lamp or capacitive load, consult factory.
- Initial contact resistance : 10 mΩ max.
- Insulation resistance : 1,000 MΩ min. at 500 VDC
- Dielectric strength :  
1,000 Vrms 50 Hz min. between terminals  
1,500 Vrms 50 Hz min. between poles  
1,500 Vrms 50 Hz min. between terminals and frame
- Contact bounce : 2 ms max.
- Electrical life at full load :  
50,000 cycles for single and double pole  
40,000 cycles for 3 pole  
30,000 cycles for 4 pole
- Low level or mechanical life : 100,000 cycles



## GENERAL SPECIFICATIONS

- Torque : 1.25 Nm (.922 Ft.lb) max. applied to nut
- Panel thickness : up to 6 mm (.236)
- Operating temperature : -40 °C to +85 °C (-40 °F to +185 °F)

The company reserves the right to change specifications without notice.



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## MATERIALS

- Case : diallylphthalate (DAP) or high temperature plastic material (UL94-V0)
- Actuator : brass, nickel plated
- Bushing : brass, nickel plated
- Housing : stainless steel or steel tin plated
- Contacts
  - A : silver
  - AD : silver, gold plated
  - CD : brass, gold plated
  - X814 : for peak currents, see "Special options".
- Terminal seal : epoxy

## AGENCY APPROVALS



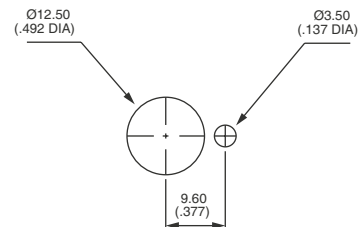
3 A 250 VAC, 6 A 125 VAC

**Availability** : consult factory for details of approved models.

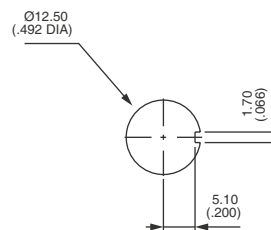
**Marking** : to order switches marked UL or CSA, complete appropriate box of ordering format. The preferential list does not appear on the switches.



## PANEL CUT-OUT



Standard

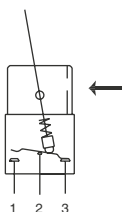


With K sealing option

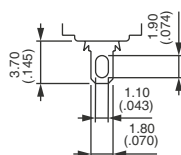


## ELECTRICAL FUNCTION

→ KEYWAY



## TERMINALS



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## BUILD YOUR PART NUMBER

| BASIC PART NUMBER                                                                                                                        |                                                                   |                 |             |            |           |                                         |                          |                                                                                                                           |                                  |
|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------|-------------|------------|-----------|-----------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| 5                                                                                                                                        |                                                                   |                 |             |            |           |                                         |                          |                                                                                                                           |                                  |
| SERIES                                                                                                                                   | TERMINALS                                                         | NUMBER OF POLES |             |            | TERMINALS |                                         | MOMENTARY FOR FUNCTION 4 |                                                                                                                           |                                  |
|                                                                                                                                          | 2                                                                 | 3               | 4           | 5          | 6         | M                                       | 1R                       | 2R                                                                                                                        |                                  |
|                                                                                                                                          | Straight PC terminals, 4.70 (.185) terminal spacing - On request. | Single pole     | Double pole | Three pole | Four pole | Solder lugs with Ø 11.9 (15/32) bushing | ON ON MOM                | MOM ON MOM                                                                                                                | Leave blank for other functions. |
|                                                                                                                                          | 6                                                                 |                 |             |            |           |                                         |                          |                                                                                                                           |                                  |
|                                                                                                                                          | Solder lug terminals                                              |                 |             |            |           |                                         |                          |                                                                                                                           |                                  |
| ELECTRICAL FUNCTIONS                                                                                                                     |                                                                   |                 |             |            |           |                                         |                          |                                                                                                                           |                                  |
| 6                                                                                                                                        | ON                                                                | -               | ON          | 8          | ON        | OFF                                     | MOM                      | TH                                                                                                                        | Standard                         |
| 9                                                                                                                                        | ON                                                                | OFF             | ON          | 2          | ON        | -                                       | MOM                      | CT                                                                                                                        | Reversed                         |
| 7                                                                                                                                        | MOM                                                               | OFF             | MOM         | 4          | ON        | ON                                      | ON                       | For functions 4, 4-1R, 4-2R (leave blank for all other functions). Wiring diagrams, see Technical information on website. |                                  |
|                                                                                                                                          |                                                                   |                 |             |            | MOM       | ON                                      | MOM ▲                    |                                                                                                                           |                                  |
| <p><b>Function 4</b></p> <p>▲ Must not have blank in «momentary» box.</p> <p>Wiring diagrams, see Technical information, on website.</p> |                                                                   |                 |             |            |           |                                         |                          |                                                                                                                           |                                  |

| OPTIONS             |                                                 |                                                      |                    |                                                                |
|---------------------|-------------------------------------------------|------------------------------------------------------|--------------------|----------------------------------------------------------------|
|                     |                                                 |                                                      |                    |                                                                |
| CONTACT MATERIALS   | FINISH                                          | SEALING                                              | LEVERS             | AGENCY APPROVALS                                               |
| A                   | Blank                                           | Blank                                                | Blank (std)        | UL, CSA                                                        |
| AD                  |                                                 | K                                                    | -27                |                                                                |
| CD                  | G                                               | B                                                    |                    |                                                                |
| Silver              | Nickel plated                                   | No sealing                                           | Length 17.5 (.688) | Availability : Consult factory for details of approved models. |
| Silver, gold plated |                                                 | Front panel sealing by one O-ring and sealing washer | Length 11.7 (.460) |                                                                |
| Brass, gold plated  | Black finish on bushing, actuator and hardware. | Epoxy sealed terminals                               |                    |                                                                |



## ABOUT THIS SERIES

On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.

⚠ **Notice:** please note that not all combinations of above numbers are available. Refer to the following pages for further information.

⚙ Mounting accessories : standard hardware supplied with all models : 2 hex nuts 14 mm (.551) across flats and 1 locking ring. Standard and special hardware is presented in the "Hardware" section of website.

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## SOLDER LUG TERMINALS SINGLE POLE



|       | III    | II  | I      |
|-------|--------|-----|--------|
| 5636M | 2-3 ON | -   | 1-2 ON |
| 5639M | ON     | OFF | ON     |
| 5637M | MOM    | OFF | MOM    |
| 5638M | ON     | OFF | MOM    |
| 5632M | ON     | -   | MOM    |

## SOLDER LUG TERMINALS DOUBLE POLE



|           | III    | II  | I      |
|-----------|--------|-----|--------|
| 5646M     | 2-3 ON | -   | 1-2 ON |
| 5649M     | ON     | OFF | ON     |
| 5647M     | MOM    | OFF | MOM    |
| 5648M     | ON     | OFF | MOM    |
| 5642M     | ON     | -   | MOM    |
| 5644 M*   | ON     | ON  | ON     |
| 5644M 1R* | ON     | ON  | MOM    |
| 5644M 2R* | MOM    | ON  | MOM    |

## SOLDER LUG TERMINALS THREE POLE



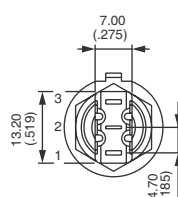
|       | III    | II  | I      |
|-------|--------|-----|--------|
| 5656M | 2-3 ON | -   | 1-2 ON |
| 5659M | ON     | OFF | ON     |
| 5657M | MOM    | OFF | MOM    |
| 5658M | ON     | OFF | MOM    |
| 5652M | ON     | -   | MOM    |

## SOLDER LUG TERMINALS FOUR POLE

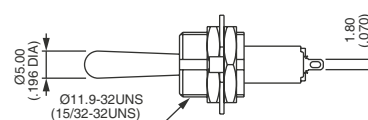
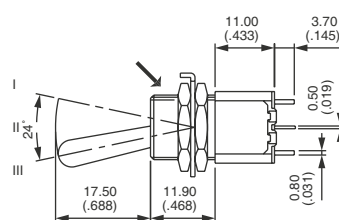


|           | III    | II  | I      |
|-----------|--------|-----|--------|
| 5666M     | 2-3 ON | -   | 1-2 ON |
| 5669M     | ON     | OFF | ON     |
| 5667M     | MOM    | OFF | MOM    |
| 5668M     | ON     | OFF | MOM    |
| 5662M     | ON     | -   | MOM    |
| 5664 M*   | ON     | ON  | ON     |
| 5664M 1R* | ON     | ON  | MOM    |
| 5664M 2R* | MOM    | ON  | MOM    |

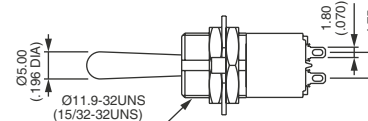
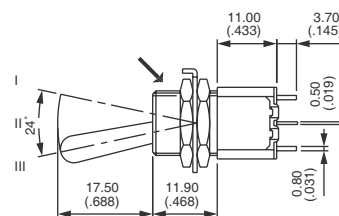
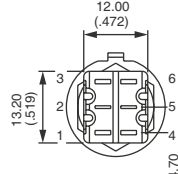
→ KEYWAY



Shown with standard lever

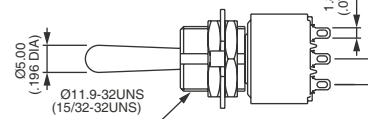
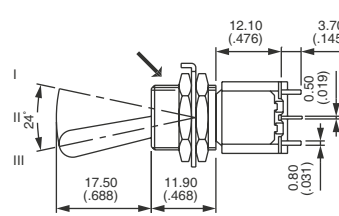
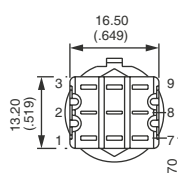


→ KEYWAY

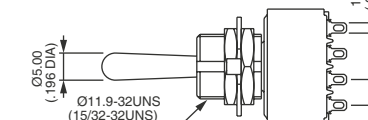
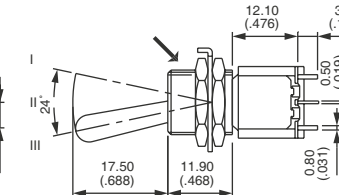
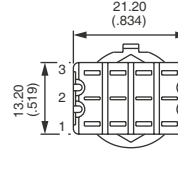


\*Function 4 : DP in 4P case - specify CT or TH connections, see "Technical information" on website.

→ KEYWAY



→ KEYWAY



\*Function 4 : DP in 4P case - specify CT or TH connections, see "Technical information" on website.

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## CONTACT MATERIAL



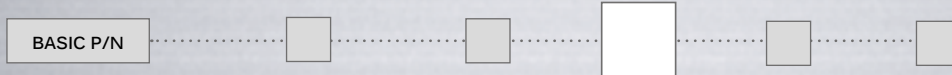
- A Silver
- AD Silver, gold plated
- CD Brass, gold plated

## FINISH

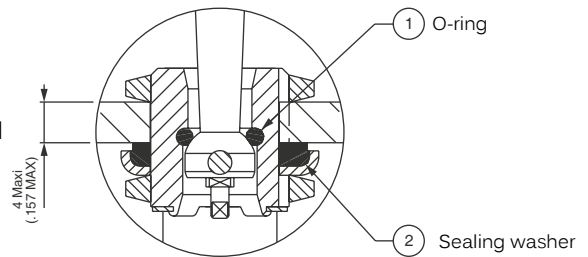


- Blank Nickel plated
- G Black finish on bushing, actuator and hardware

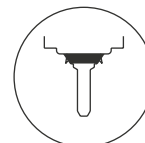
## SEALING



- Blank No sealing required
- K Keyway bushing, Includes washer **U60**  
Front panel sealing by one O-ring and sealing washer.  
Protects the switch against water and dust.  
Panel seal withstands 1 bar pressure and remains sealed even when switch is operated.
- B Epoxy sealed terminals
- KB Combined sealings

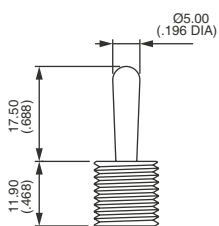


K

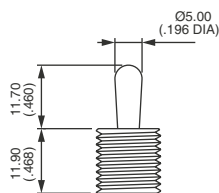


B

## LEVERS



Blank  
Standard



-27

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## AGENCY APPROVALS

|           |  |  |  |  |  |
|-----------|--|--|--|--|--|
| BASIC P/N |  |  |  |  |  |
|-----------|--|--|--|--|--|

UL

CSA

Blank No agency approval required.

**Availability** : consult factory for details of approved combinations or options.

**Marking** : to order switches marked UL or CSA, complete above box with desired approvals, in this order & without space (ex. : ULCSA).