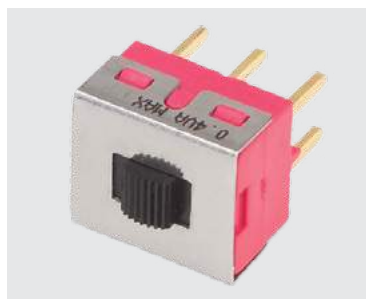
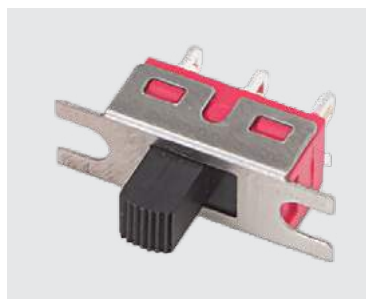
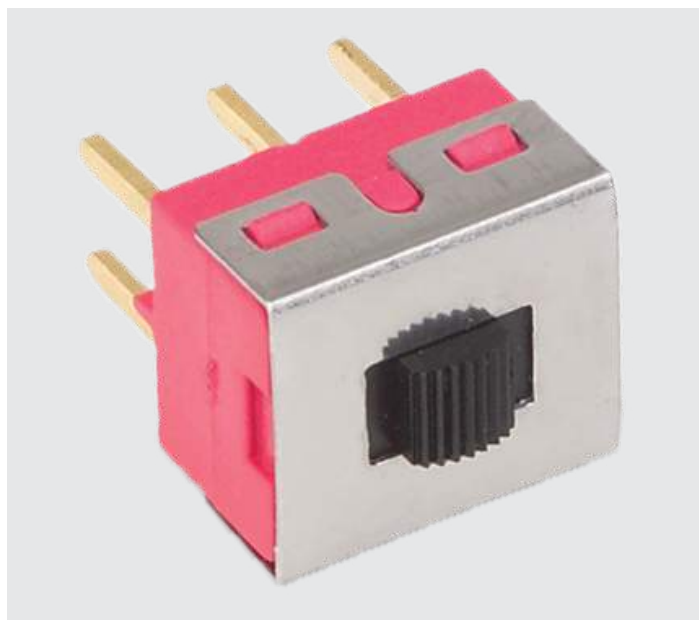


# 4M-Series

## MINIATURE SLIDE SWITCHES

The 4M-Series miniature slide switches offer a variety of ratings, circuits, contact materials, and terminal platings. With 14 termination choices and 8 actuator styles, this versatile switch adapts to a variety of applications, and is able to withstand temperatures from -30°C to +85°C.



### Product Highlights:

- ♦ Two or Three Position Circuitry
- ♦ 125/250VAC or up to 28VDC
- ♦ Available in Silver, Gold or Tin Plating
- ♦ Supplied in Bulk or Tape Reel
- ♦ UL and CSA Approvals Available

### Typical Applications:

- ♦ Consumer Electronics
- ♦ Instrumentation
- ♦ Computer Servers / Peripherals
- ♦ Test / Measurement

### Resources:

*Download 3D CAD Files*

**IGS >** **STP >**



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60 Johnson Avenue, Plainville, CT 06062  
Email: [sales@carlingtech.com](mailto:sales@carlingtech.com)  
Application Support: [team2@carlingtech.com](mailto:team2@carlingtech.com)  
Phone: 860.793.9281 Fax: 860.793.9231

[www.carlingtech.com](http://www.carlingtech.com)

## Electrical

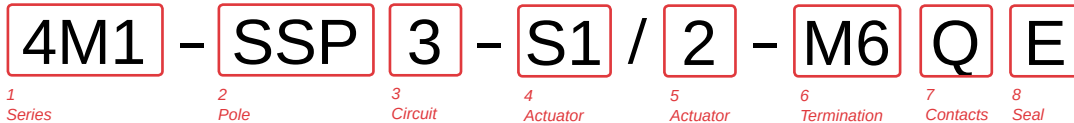
|                       |                                                                              |
|-----------------------|------------------------------------------------------------------------------|
| Contact Rating        | refer to ordering scheme                                                     |
| Electrical Life       | 30,000 make & break cycles @ full load                                       |
| Contact Resistance    | 10 mΩ max. initial @ 2-4 VDC<br>100mA for both silver & gold plated contacts |
| Insulation Resistance | 1000 MΩ min.                                                                 |
| Dielectric Strength   | 1500 Volts RMS @ sea level                                                   |

## Physical

|                        |                         |
|------------------------|-------------------------|
| Operating Temperature  | -30°C to +85°C          |
| Solder Heat Resistance | MIL-STD-202, Method 210 |

## Material

|               |                                   |
|---------------|-----------------------------------|
| Case          | Dially phthalate (DAP) (UL 94V-0) |
| Slide Handle  | Nylon                             |
| Housing       | Stainless Steel                   |
| Terminal Seal | Epoxy                             |



### 1 SERIES

**4M1** Miniature Slide Switch

### 2 POLES

**SSP** Single Pole **SDP** Double Pole

### 3 CIRCUIT

|                            |  |          |                     |          |
|----------------------------|--|----------|---------------------|----------|
| ( ) - momentary            |  |          |                     |          |
| <b>Switching Position:</b> |  | <b>1</b> | <b>2</b>            | <b>3</b> |
|                            |  | 2-1, 5-4 | Connected Terminals | 2-3, 5,6 |
| 1                          |  | ON       | NONE                | ON       |
| 3                          |  | ON       | OFF                 | ON       |

### 4 ACTUATOR

|                        |                                        |
|------------------------|----------------------------------------|
| <b>S1</b> .201" height | <b>S5</b> .053" height (for DPDT only) |
| <b>S2</b> .301" height | <b>S6</b> .488" height                 |
| <b>S3</b> .370" height | <b>S7</b> .311" height                 |
| <b>S4</b> .140" height | <b>T1</b> .209" height (for DPDT only) |

### 5 ACTUATOR COLORS

|                 |                |
|-----------------|----------------|
| <b>1</b> White  | <b>6</b> Green |
| <b>2</b> Black  | <b>7</b> Blue  |
| <b>3</b> Red    | <b>8</b> Brown |
| <b>4</b> Orange | <b>9</b> Gray  |
| <b>5</b> Yellow |                |

### 6 TERMINATION

|                                    |                                             |
|------------------------------------|---------------------------------------------|
| <b>M1</b> Solder Lug               | <b>M61</b> Snap-In, 90°                     |
| <b>M2</b> PCB                      | <b>M7</b> PC Mount, 90° vertical            |
| <b>M3</b> Quick Connect            | <b>M71</b> Snap-In, 90°                     |
| <b>M5-1</b> Wire Wrap .750         | <b>VS2</b> PC Mount, U bracket, .350 height |
| <b>M5-2</b> Wire Wrap .964         | <b>VS3</b> PC Mount, U bracket, .575 height |
| <b>M5-3</b> Wire Wrap .425         | <b>N1</b> Solder Lug without mounting tabs  |
| <b>M5-4</b> Wire Wrap 1.062        |                                             |
| <b>M6</b> PC Mount, 90° horizontal |                                             |

### 7 CONTACTS / TERMINALS

| Contact  | Material            | Terminal Plating    | Rating                          | Approvals |
|----------|---------------------|---------------------|---------------------------------|-----------|
| <b>G</b> | silver <sup>1</sup> | gold over silver    | 5A 125VAC or 28VDC<br>2A 250VAC | UL, CE    |
| <b>K</b> | gold <sup>2</sup>   | tin <sup>3,5</sup>  | 0.4VA max 20V max (AC/DC)       | N/A       |
| <b>P</b> | silver <sup>1</sup> | tin <sup>3,5</sup>  | 5A 125VAC or 28VDC<br>2A 250VAC | UL, CE    |
| <b>Q</b> | silver <sup>1</sup> | silver <sup>1</sup> | 5A 125VAC or 28VDC<br>2A 250VAC | UL, CE    |
| <b>R</b> | gold <sup>2</sup>   | gold <sup>2</sup>   | 0.4VA max 20V max (AC/DC)       | N/A       |

### 8 EPOXY SEAL

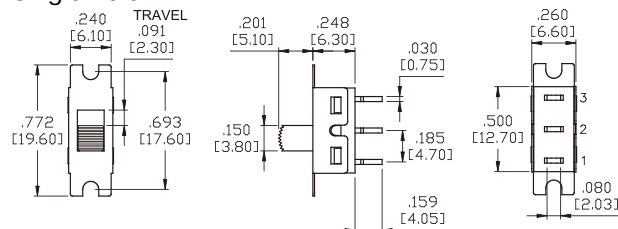
|                     |                             |
|---------------------|-----------------------------|
| <b>E</b> Epoxy Seal | <b>0</b> without Epoxy Seal |
|---------------------|-----------------------------|

#### Notes:

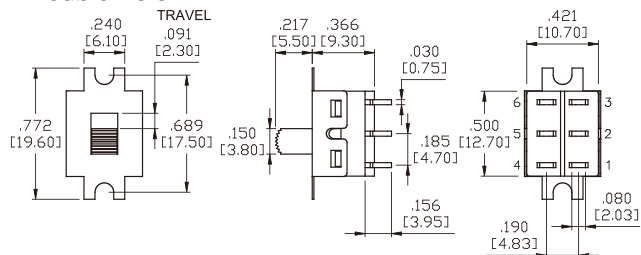
- Movable contact & terminal platings: silver over copper alloy
- Movable contact & terminal platings: gold over nickel over copper alloy
- Terminals platings: tin over nickel over copper alloy, available with PC terminations only
- Non-Black, white and red colors require a minimum order of 2500 pieces
- Tin option available with PC type terminations only

## 4M1-Series Dimensional Specifications: in. [mm]

### Single Pole



### Double Pole



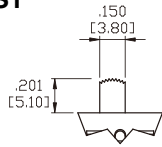
\*Manufacturer reserves the right to change product specification without prior notice.

## 4M1-Series Dimensional Specifications: in. [mm]

### Actuator Options

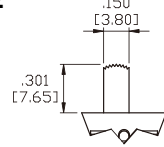
\* All actuator length shown is SPDT model with M1 and M2 terminals.

**S1**



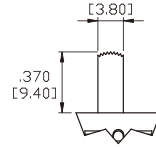
\* Add 0.40 (.016) from actuator height for DPDT-M1 and M2 model.

**S2**



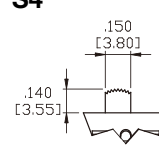
\* Add 0.20 (.008) from actuator height for DPDT-M1 and M2 model.

**S3**



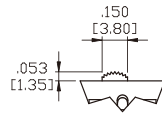
\* Add 0.30 (.012) from actuator height for DPDT-M1 and M2 model.

**S4**

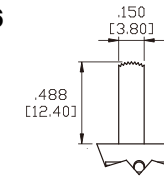


\* Add 0.40 (.016) from actuator height for DPDT-M1 and M2 model.

**S5**

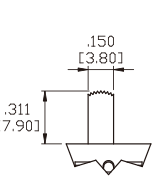


**S6**



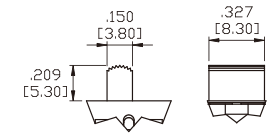
\* Add 0.70 (.028) from actuator height for DPDT-M1 and M2 model.

**S7**



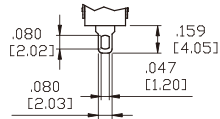
\* Add 0.40 (.016) from actuator height for DPDT model.

**T1 for DPDT only**



### Termination Options

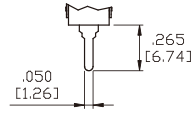
**M1 Standard Solder Lug**



THK .030 [0.75]

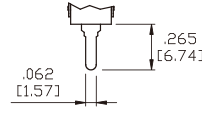
\* Standard with Mounting Tabs.

**M2 PC Thru-Hole**



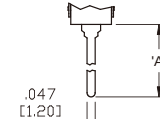
THK .030 [0.75]

**M3 Quick Connect**



THK .030 [0.75]

**M5 Wire Wrap**

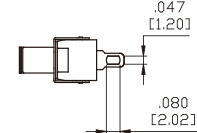
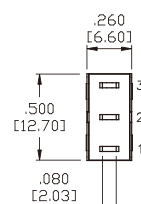
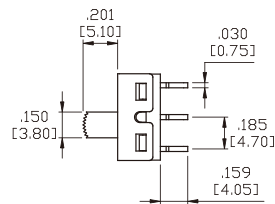
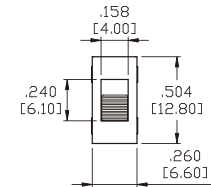


THK .030 [0.75]

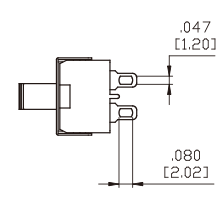
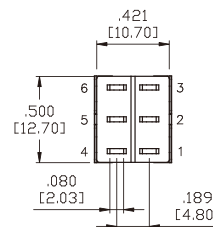
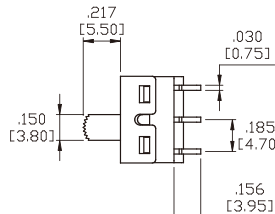
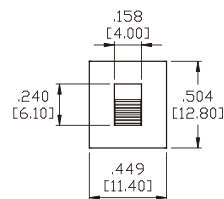
| OPTION CODE | DIM.'A'       |
|-------------|---------------|
| <b>M5-1</b> | .750 [19.05]  |
| <b>M5-2</b> | .964 [24.48]  |
| <b>M5-3</b> | .425 [10.80]  |
| <b>M5-4</b> | 1.062 [26.97] |

### Termination Options without Mounting Tabs

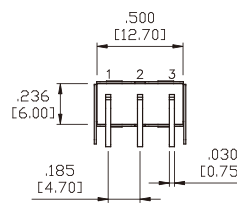
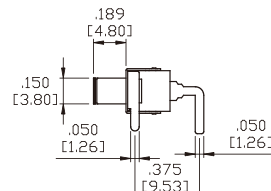
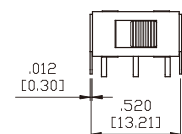
**N1 Single Pole**



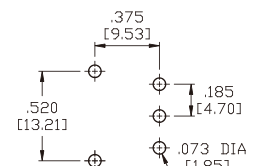
**N1 Double Pole**



**M6 Single Pole**



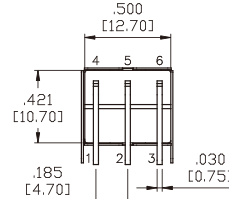
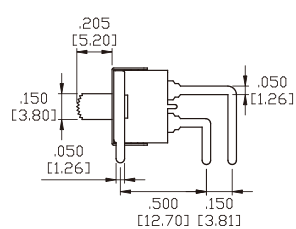
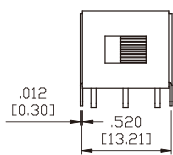
**P.C. MOUNTING**



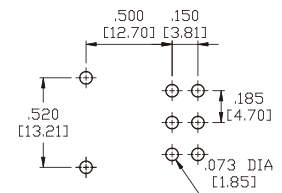
## 4M1-Series Dimensional Specifications: in. [mm]

### Termination Options

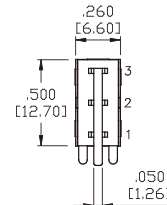
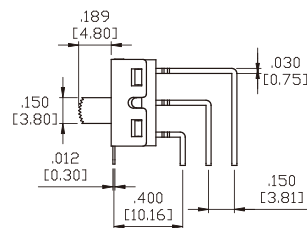
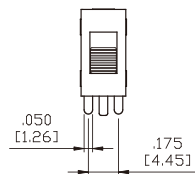
#### M6 Double Pole



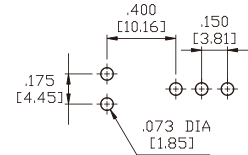
#### P.C.MOUNTING



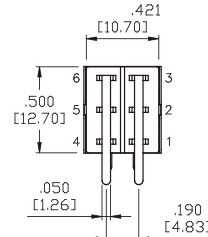
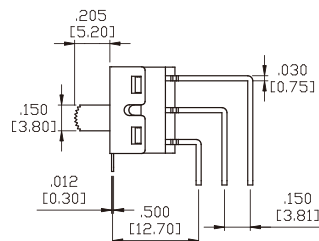
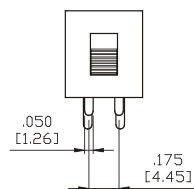
#### M7 Single Pole



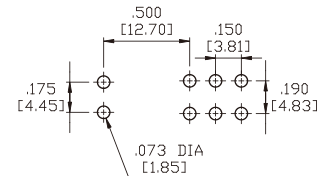
#### P.C.MOUNTING



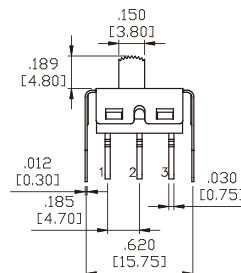
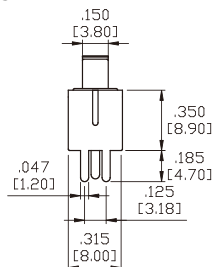
#### M7 Double Pole



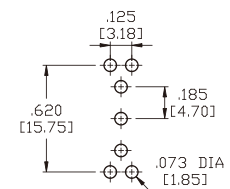
#### P.C.MOUNTING



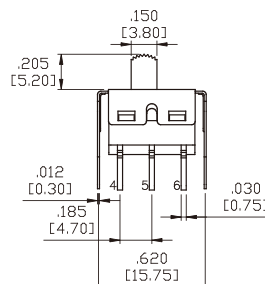
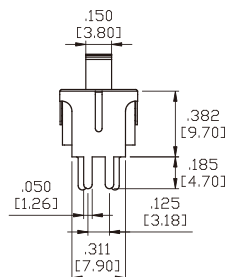
#### VS2 Single Pole



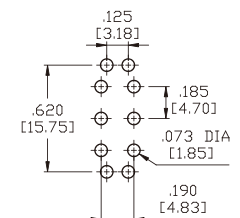
#### P.C.MOUNTING



#### VS2 Double Pole



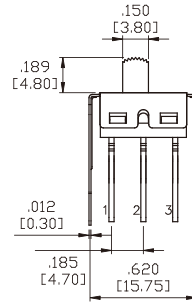
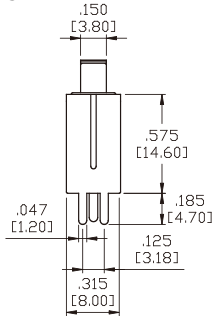
#### P.C.MOUNTING



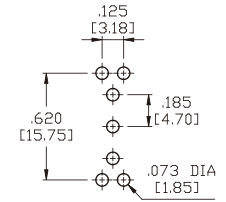
## 4M1-Series Dimensional Specifications: in. [mm]

### Termination Options

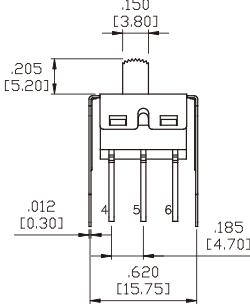
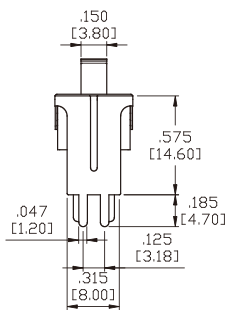
#### VS3 Single Pole



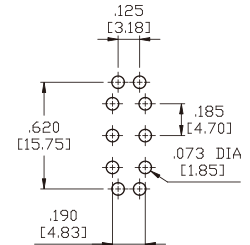
#### P.C.MOUNTING



#### VS3 Double Pole



#### P.C.MOUNTING





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### **Worldwide Headquarters**

Carling Technologies, Inc.  
60 Johnson Avenue, Plainville, CT 06062  
**Phone:** 860.793.9281 **Fax:** 860.793.9231  
**Email:** sales@carlingtech.com

**Northern Region Sales Office:** nrsm@carlingtech.com  
**Southeast Region Sales Office:** sersm@carlingtech.com  
**Midwest Region Sales Office:** mrsm@carlingtech.com  
**West Region Sales Office:** wrsm@carlingtech.com  
**Latin America Sales Office:** larsm@carlingtech.com

### **Asia-Pacific Headquarters**

Carling Technologies, Asia-Pacific Ltd.,  
Kowloon, Hong Kong  
**Phone:** Int + 852-2737-2277 **Fax:** Int + 852-2736-9332  
**Email:** sales@carlingtech.com.hk

**Shenzhen, China:** shenzhen@carlingtech.com  
**Shanghai, China:** shanghai@carlingtech.com  
**Pune, India:** india@carlingtech.com  
**Kaohsiung, Taiwan:** taiwan@carlingtech.com  
**Yokohama, Japan:** japan@carlingtech.com

### **Europe | Middle East | Africa Headquarters**

Carling Technologies LTD  
4 Airport Business Park, Exeter Airport,  
Clyst Honiton, Exeter, Devon, EX5 2UL, UK  
**Phone:** Int + 44 1392.364422 **Fax:** Int + 44 1392.364477  
**Email:** ltd.sales@carlingtech.com

**Germany:** gmbh@carlingtech.com  
**France:** sas@carlingtech.com



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