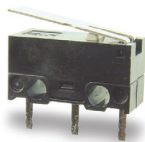


# ZMA Series Subminiature Snap-acting Switches



## Features/Benefits

- Reliable snap-acting mechanism
- Long electrical and mechanical life
- Compact size—Ideal when space is limited
- Various PCB terminals and actuators
- RoHS compatible & compliant

## Typical Applications

- PCB detection switch
- Communication devices
- Testing equipment
- Security/Alarm systems
- Consumer electronics

UL61058-1



## Specifications

CONTACT RATING: 3A @ 125 V AC 24 V DC  
 1 A @125 / 250 V AC 24 V DC  
 0.1A @ 125 V AC 60 V DC

ELECTRICAL LIFE: 300,000 cycles @ 0.1A / 10,000 cycles @ 3A.  
 MECHANICAL LIFE: 1,000,000 cycles.  
 INSULATION RESISTANCE: 100 M ohm min.  
 DIELECTRIC STRENGTH: 500 Vrms.  
 OPERATING TEMPERATURE: -40°C to 85°C  
 OPERATING FORCE: 80 or 150 grams.

## Materials

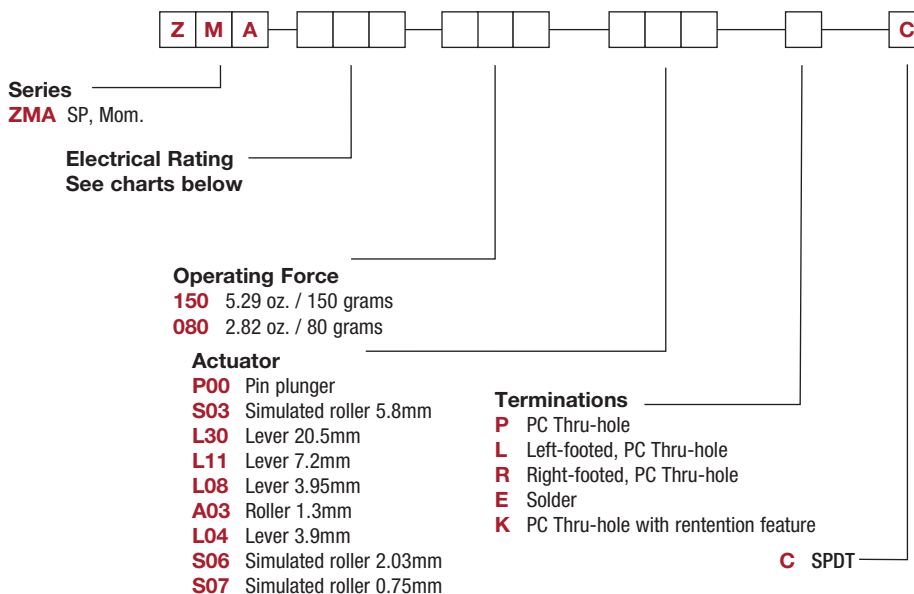
CASE/COVER: PBT  
 ACTUATOR: Button nylon 6/6  
 MOVABLE CONTACTS: Silver alloy or gold plated  
 STATIONARY CONTACTS: Silver alloy or gold plated  
 TERMINALS: Brass, silver plated.

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

\* Low Level—conditions where no arcing occurs during switching, i.e., 0.4 VA max.  
 @ 20 V AC or DC max.

## 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 J-51 and J-53. For additional options not shown in catalog, consult Customer Service Center.



### Silver Contacts

| Option Code | UL 1054                       | UL 61058-1                        | 4             | 15                                |
|-------------|-------------------------------|-----------------------------------|---------------|-----------------------------------|
| <b>00A</b>  | 0.1A 60 V DC<br>0.1A 125 V AC | 0.1A 60 V DC<br>0.1A 125 V AC     | 0.1A 125 V AC |                                   |
| <b>03A</b>  | 3 A 125 V AC                  | 3 A 125 V AC<br>3 A 24 V DC       | 3A 125 V AC   |                                   |
| <b>01A</b>  |                               | 1 A 24 V DC<br>1 A 125 / 250 V AC |               | 1 A 24 V DC<br>1 A 125 / 250 V AC |

### Gold Plated Contacts

| Option Code | UL 1054                       | UL 61058-1                        | 4             | 15                                |
|-------------|-------------------------------|-----------------------------------|---------------|-----------------------------------|
| <b>G00</b>  | 0.1A 60 V DC<br>0.1A 125 V AC | 0.1A 60 V DC<br>0.1A 125 V AC     | 0.1A 125 V AC |                                   |
| <b>G03</b>  | 3 A 125 V AC                  | 3 A 125 V AC<br>3 A 24 V DC       | 3A 125 V AC   |                                   |
| <b>G01</b>  |                               | 1 A 24 V DC<br>1 A 125 / 250 V AC |               | 1 A 24 V DC<br>1 A 125 / 250 V AC |



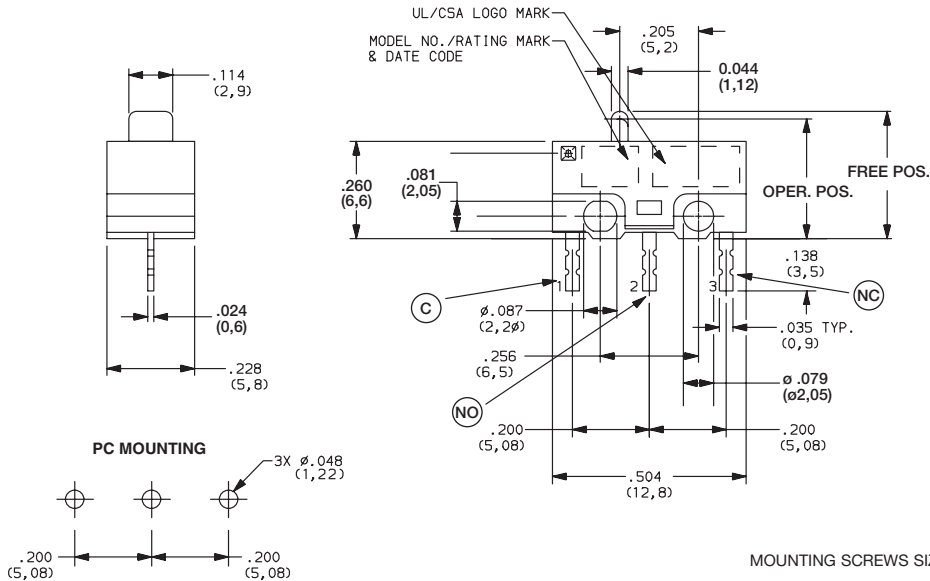
Dimensions are shown: Inch (mm)  
 Specifications and dimensions subject to change

Snap-acting

# ZMA Series Subminiature Snap-acting Switches

SERIES **Z M** ■ ■ ■ ■ ■ ■ ■ ■

**ZMA** SUBMINIATURE SNAP-ACTING SWITCHES – SP MOMENTARY



ZMA03A150L04PC  
SPDT

ELECTRICAL RATING ■ ■ ■ ■ ■ ■ ■ ■

### Silver Contacts

| Option Code | UL<br>c  US 1054              | UL<br>c  US 61058-1               |               |                                   |
|-------------|-------------------------------|-----------------------------------|---------------|-----------------------------------|
| 00A         | 0.1A 60 V DC<br>0.1A 125 V AC | 0.1A 60 V DC<br>0.1A 125 V AC     | 0.1A 125 V AC |                                   |
| 03A         | 3 A 125 V AC                  | 3 A 125 V AC<br>3 A 24 V DC       | 3A 125 V AC   |                                   |
| 01A         |                               | 1 A 24 V DC<br>1 A 125 / 250 V AC |               | 1 A 24 V DC<br>1 A 125 / 250 V AC |

### Gold Plated Contacts

| Option Code | UL<br>c  US 1054              | UL<br>c  US 61058-1               |               |                                   |
|-------------|-------------------------------|-----------------------------------|---------------|-----------------------------------|
| G00         | 0.1A 60 V DC<br>0.1A 125 V AC | 0.1A 60 V DC<br>0.1A 125 V AC     | 0.1A 125 V AC |                                   |
| G03         | 3 A 125 V AC                  | 3 A 125 V AC<br>3 A 24 V DC       | 3A 125 V AC   |                                   |
| G01         |                               | 1 A 24 V DC<br>1 A 125 / 250 V AC |               | 1 A 24 V DC<br>1 A 125 / 250 V AC |

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

All models US with all options.

Consult Customer Service center for availability and delivery of nonstandard ratings.

OPERATING FORCE ■ ■ ■ ■ ■ ■ ■ ■

| OPTION CODE | BASIC SWITCH<br>OPERATING FORCE<br>(OZ./GRAMS) |
|-------------|--|
| 150         | 5.29<br>150                                    |
| 080         | 2.82<br>80                                     |

Third Angle  
Projection  
Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change



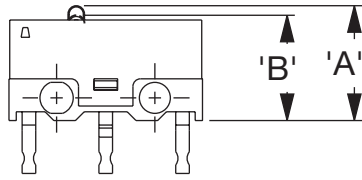
Snap-acting

# ZMA Series Subminiature Snap-acting Switches

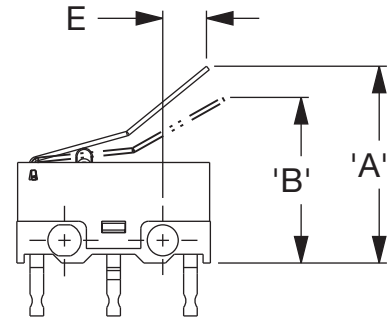
## ACTUATOR



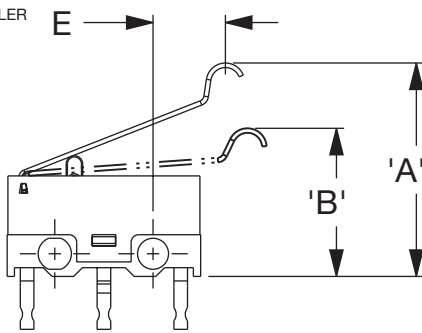
**P00** PIN PLUNGER



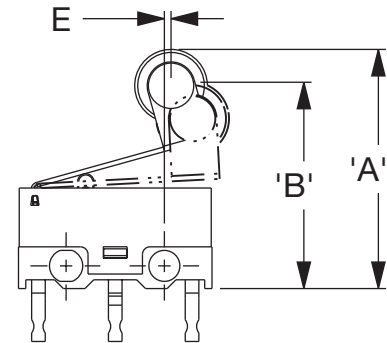
**L08** LEVER  
3.95MM



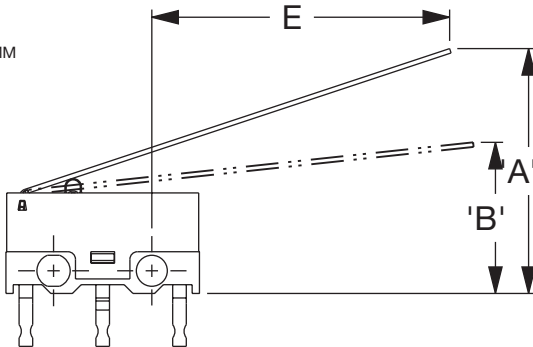
**S03** SIMULATED ROLLER  
5.8MM



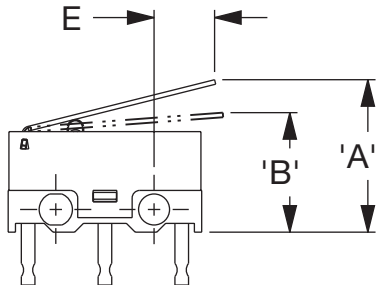
**A03** ROLLER  
1.3MM



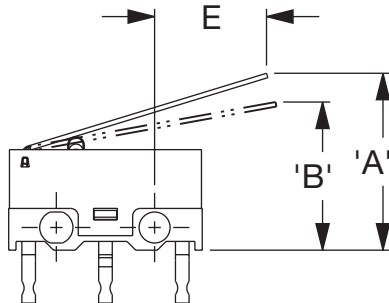
**L30** LEVER  
20.5MM



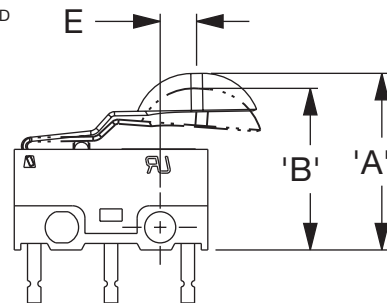
**L04** LEVER  
3.49MM



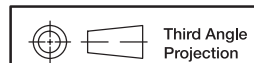
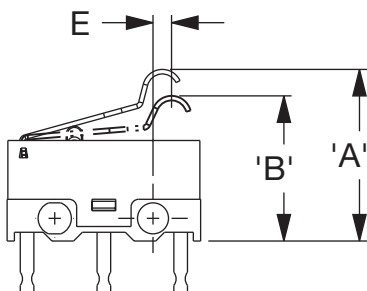
**L11** LEVER  
7.2MM



**S06** SIMULATED ROLLER  
2.03MM



**S07** SIMULATED ROLLER  
0.75MM



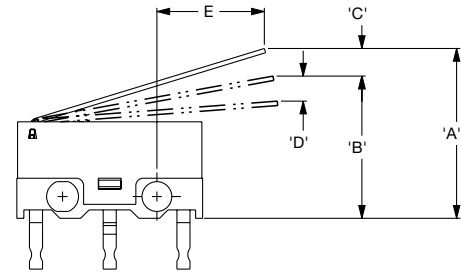
Dimensions are shown: Inch (mm)  
Specifications and dimensions subject to change



# ZMA Series Subminiature Snap-acting Switches

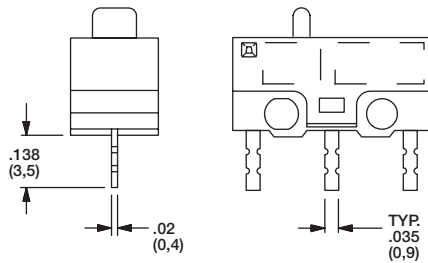
## SWITCH CHARACTERISTICS

| CODE         | OPER. FORCE<br>MAX. (GRAMS) |     | REL. FORCE<br>MIN. (GRAMS) |    | 'A'<br>FP MAX.<br>(MM) | 'B'<br>OP MAX.<br>(MM) | 'C'<br>PT MAX.<br>(MM) | 'D'<br>OT MIN.<br>(MM) | 'E'<br>MIN.<br>(MM) |
|--------------|-----------------------------|-----|----------------------------|----|------------------------|------------------------|------------------------|------------------------|---------------------|
|              |                             |     |                            |    |                        |                        |                        |                        |                     |
| P00          | 80                          | 150 | 21                         | 35 | 7.35                   | 6.9 ±0.3               | 0.62                   | 0.2                    |                     |
| S03          | 25                          | 43  | 5                          | 7  | 14.2                   | 9.8 ±0.9               | 3.5                    | 0.7                    | 5.41                |
| L30 (80gf)   | 13                          | 21  | 2                          | 3  | 16.8                   | 9.5 ±1.9               | 6.9                    | 0.55                   | 20.15               |
| L30 (150 gf) | 13                          | 21  | 2                          | 3  | 16.8                   | 9.75 ±1.9              | 6.9                    | 0.55                   | 20.15               |
| L11          | 25                          | 39  | 4                          | 6  | 11.7                   | 8.68 ±1                | 4.4                    | 0.6                    | 7.33                |
| L08          | 27                          | 48  | 3                          | 8  | 13.5                   | 10.75 ±0.8             | 3.5                    | 0.3                    | 3.82                |
| A03          | 34                          | 65  | 6                          | 10 | 16.55                  | 13.65 ±1               | 3.9                    | 0.5                    | 0.56                |
| L04          | 30                          | 50  | 5                          | 8  | 10.1                   | 7.9 ±0.8               | 3.0                    | 0.5                    | 3.49                |
| S06          | 33                          | 49  | 5                          | 11 | 12.43                  | 10.7 ±0.8              | 1.43                   | 1.25                   | 1.97                |
| S07          | 40                          | 65  | 2                          | 5  | 13.0                   | 9.7 ±1                 | 4.3                    | 0.5                    | 0.49                |

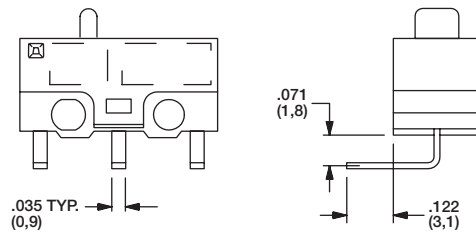


## TERMINATIONS

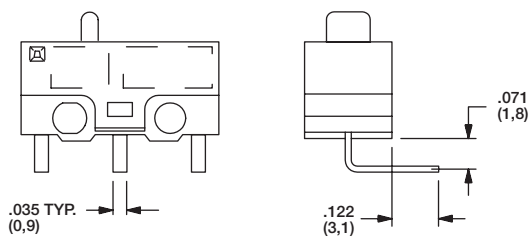
### P PC THRU-HOLE



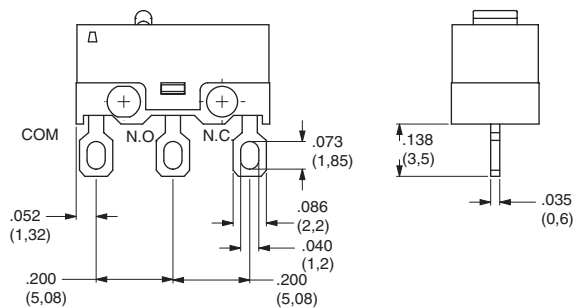
### L LEFT FOOTED, PC THRU-HOLE



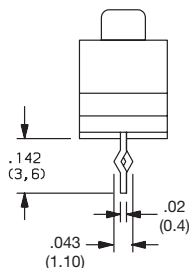
### R RIGHT FOOTED, PC THRU-HOLE



### E SOLDER



### K PC THRU-HOLE WITH RETENTION FEATURE



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