

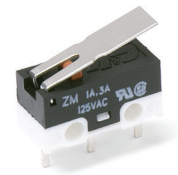
# ZM Series Subminiature Snap-acting Switches

## Features/Benefits

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

## Typical Applications

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



UL61058-1



## Specifications

CONTACT RATING: F7: 3A @ 125 VAC  
M9: 0.2A @ 60 VDC.  
ELECTRICAL LIFE: 10,000 Cycles. @ 3A  
INSULATION RESISTANCE: 100 M ohm min.  
DIELECTRIC STRENGTH: 1000 Vrms.  
OPERATING TEMPERATURE: -30°C to 85°C.  
OPERATING FORCE: CJ: 150 grams, CH: 90 grams.

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

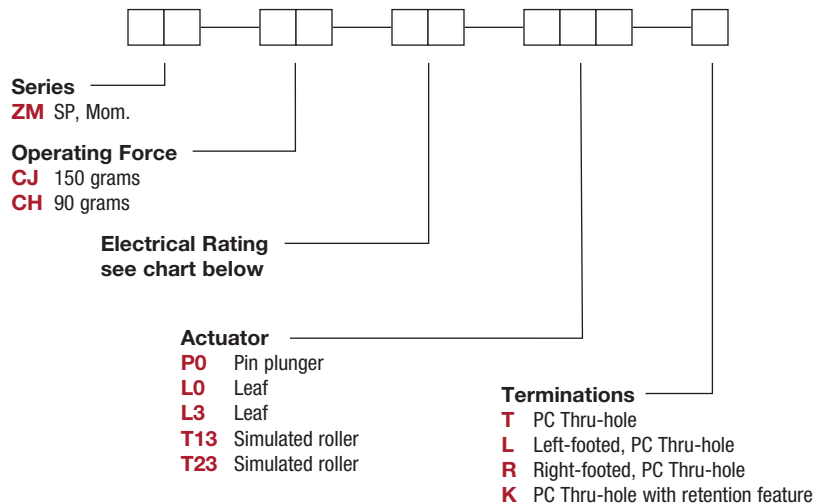
## Materials

COVER: Nylon 6/6  
ACTUATOR BUTTON: Nylon 6/6  
CASE: Nylon 6/6  
SPRING: SUS  
MOVABLE BLADE: BeCu  
MOVABLE CONTACT: Silver alloy (M9 option gold plated)  
FIXED CONTACTS: Silver alloy (M9 option gold plated)  
FIXED TERMINALS: Brass - Ag plated.  
ACTUATOR (Leaf / Roller options): SUS

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

## 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-48 and J-49. For additional options not shown in catalog, consult Customer Service Center.



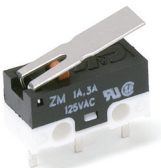
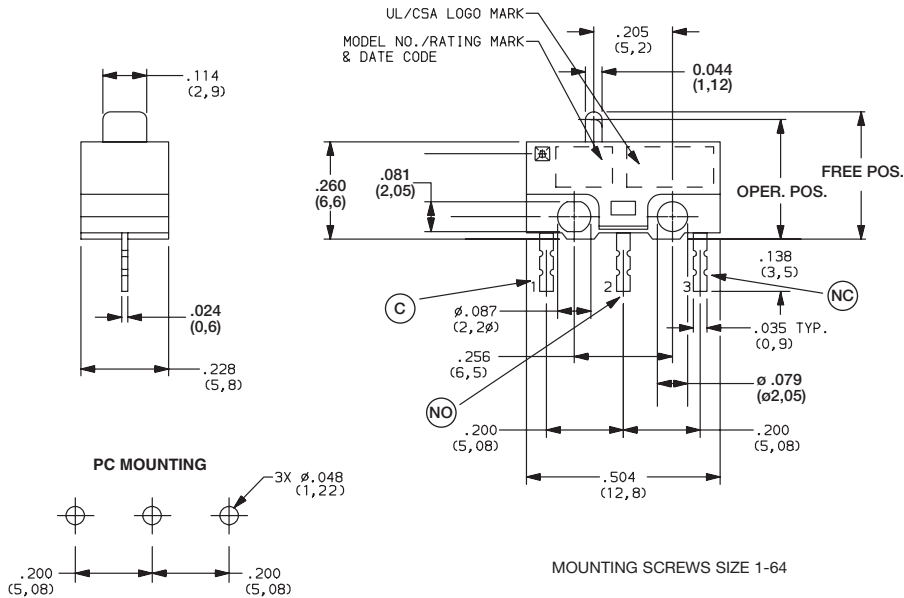
| Option Code | UL<br>cULus 1054                                 | UL<br>cULus 61058-1                              |                                                  |
|-------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| <b>F7</b>   | 3 A 125 V AC                                     | 3 A 125 V AC<br>3 A 30 V DC                      | 3 A 125 V AC                                     |
| <b>M9</b>   | 0.1 A 48 V DC<br>0.2 A 60 V DC<br>0.1 A 125 V AC | 0.1 A 48 V DC<br>0.2 A 60 V DC<br>0.1 A 125 V AC | 0.1 A 48 V DC<br>0.2 A 60 V DC<br>0.1 A 125 V AC |



ZM Series  
Subminiature Snap-acting Switches

SERIES Z M ■ ■ ■ ■ ■

ZM SUBMINIATURE SNAP-ACTING SWITCHES – SP MOMENTARY



ZMCJF7L0T  
SPDT

OPERATING FORCE ■ ■ ■ ■ ■

| OPTION CODE | BASIC SWITCH<br>OPERATING FORCE<br>(OZ./GRAMS) |
|-------------|------------------------------------------------|
| CJ          | 5.29<br>150                                    |
| CH          | 3.15<br>90                                     |

ELECTRICAL RATING ■ ■ ■ ■ ■

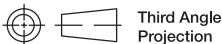
| OPTION CODE | RoHS COMPLIANT* | RoHS COMPATIBLE* | CONTACT MATERIAL             |                    | ELECTRICAL RATING |
|-------------|-----------------|------------------|------------------------------|--------------------|-------------------|
|             |                 |                  | MOVABLE CONTACT              | STATIONARY CONTACT |                   |
| F7          | Yes             | Yes              | Silver alloy                 |                    | see chart         |
| M9          | Yes             | Yes              | Gold plating or silver alloy |                    | see chart         |

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

All models cULus with all options.

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

| Option Code | cULus 1054                                       | cULus 61058-1                                    | UL4                                              |
|-------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| F7          | 3 A 125 V AC                                     | 3 A 125 V AC<br>3 A 30 V DC                      | 3 A 125 V AC                                     |
| M9          | 0.1 A 48 V DC<br>0.2 A 60 V DC<br>0.1 A 125 V AC | 0.1 A 48 V DC<br>0.2 A 60 V DC<br>0.1 A 125 V AC | 0.1 A 48 V DC<br>0.2 A 60 V DC<br>0.1 A 125 V AC |



Third Angle  
Projection

Dimensions are shown: Inch (mm)

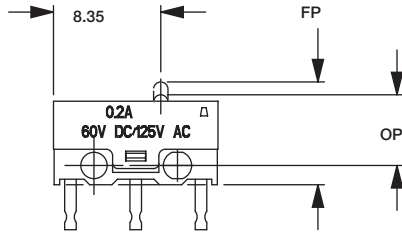
Specifications and dimensions subject to change



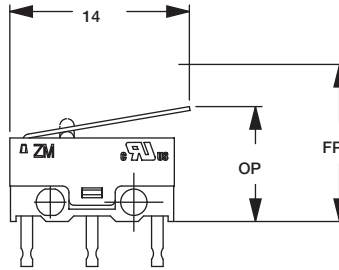
# ZM Series Subminiature Snap-acting Switches

## ACTUATOR

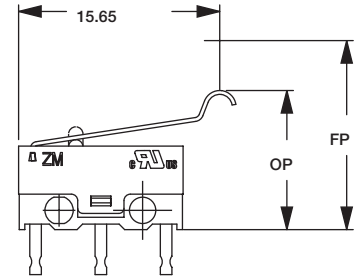
**P0** PIN PLUNGER



**L0** LEAF, 50 GRAMS (CJ ONLY)  
**L3** LEAF, 30 GRAMS (CH ONLY)



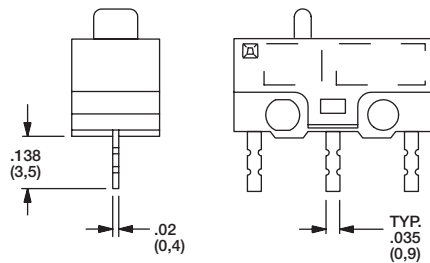
**T13** SIMULATED ROLLER, 40 GRAMS (CJ ONLY)  
**T23** SIMULATED ROLLER, 25 GRAMS (CH ONLY)



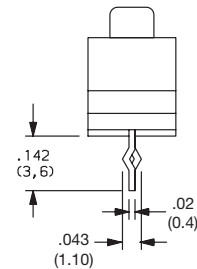
| ACTUATOR<br>OPTION CODE | A<br>(mm)             | B Ref<br>(mm)                         | C<br>(mm)             | D<br>(mm)             | E<br>(mm)               | DIFF.<br>MOTION<br>mm<br>MAX | OPER.<br>FORCE<br>grams<br>MAX |    | RELEASED<br>FORCE<br>Grams<br>MAX | OVER<br>TRAVEL<br>MIN |
|-------------------------|-----------------------|---------------------------------------|-----------------------|-----------------------|-------------------------|------------------------------|--------------------------------|----|-----------------------------------|-----------------------|
|                         | LENGTH<br>OF<br>LEVER | LEVER<br>LENGTH<br>MTG. HOLE<br>TO OP | PRE-<br>TRAVEL<br>MAX | OPERATING<br>POSITION | FREE<br>POSITION<br>MAX |                              | CJ                             | CH |                                   |                       |
| P0 PIN PLUNGER          | NA                    | NA                                    | 1.3                   | 7.0 $\pm 0.3$         | 8.0                     | 0.3                          | 150                            | 90 | 15-20                             | 0.2                   |
| L0 LEAF                 | 13.0                  | 4.03                                  | 3.4                   | 8.4 $\pm 0.8$         | 11.0                    | 1.3                          | 50                             | -  | 8                                 | 0.6                   |
| L3 LEAF                 | 13.0                  | 4.03                                  | 3.4                   | 8.4 $\pm 0.8$         | 11.0                    | 1.3                          | -                              | 30 | 5                                 | 0.6                   |
| T13 SIMULATED<br>ROLLER | 15.0                  | 5.36                                  | 3.8                   | 10.5 $\pm 0.8$        | 13.0                    | 1.5                          | 40                             | -  | 7                                 | 0.6                   |
| T23 SIMULATED<br>ROLLER | 15.0                  | 5.36                                  | 3.8                   | 10.5 $\pm 0.8$        | 13.0                    | 1.5                          | -                              | 25 | 4                                 | 0.6                   |

## TERMINATIONS

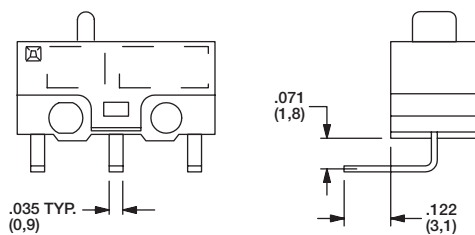
**T** (STD.) PC THRU-HOLE



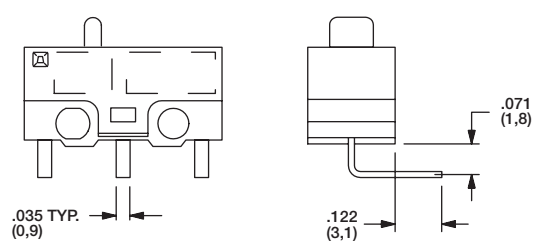
**K** PC THRU-HOLE WITH RETENTION FEATURE



**L** LEFT FOOTED, PC THRU-HOLE



**R** RIGHT FOOTED, PC THRU-HOLE



Third Angle  
Projection

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

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

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Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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