

# ZMS Series Subminiature Snap-acting Switches (IP65)

## 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**
- **IP67 with potted wires only**

## Typical Applications

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



UL61058-1  
UL1054



## Specifications

CONTACT RATING: 3A@ 125 V AC/ 3A@ 12 V DC, 0.01A @ 12 V DC  
ELECTRICAL LIFE: 100,000 cycles @ 0.01A 12V DC  
100,000 cycles @ 3A 12 V DC  
6,000 cycles @ 3A 125 V AC  
MECHANICAL LIFE: 500,000 cycles  
INSULATION RESISTANCE: 100 M ohm min.  
DIELECTRIC STRENGTH: 500 Vrms.  
OPERATING TEMPERATURE: -40°C + 85°C.  
OPERATING FORCE: 130 grams.

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

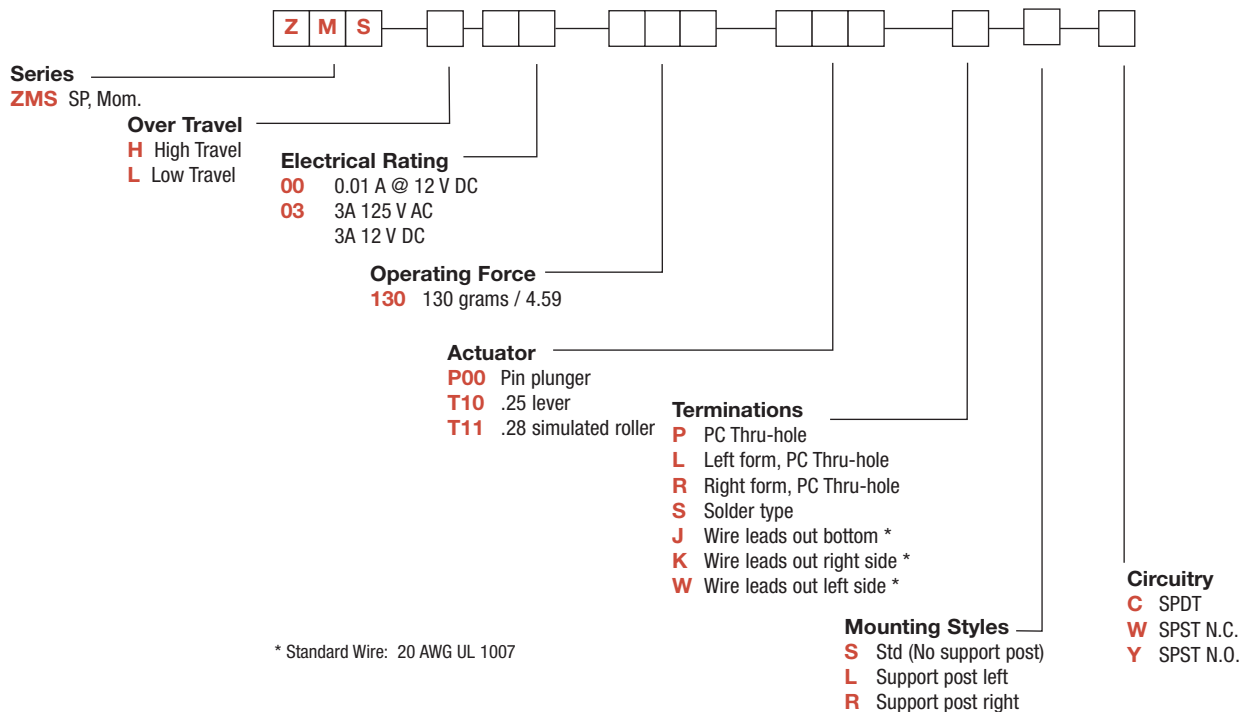
## Materials

CASE: Nylon  
COVER/ACTUATOR: PBT  
MOVABLE CONTACTS: 3 Amp silver alloy, 0.01A gold plating over silver alloy  
STATIONARY CONTACTS: 3 Amp silver alloy, 0.01 A gold plating over silver alloy  
TERMINALS: Brass, silver plated  
LEVER: Stainless steel

**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-58 through J-60. For additional options not shown in catalog, consult Customer Service Center.

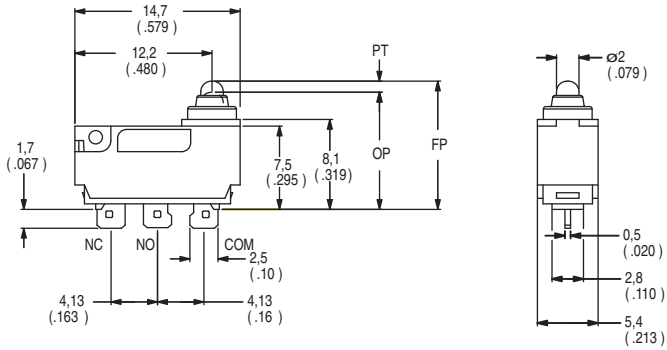


Snap-acting

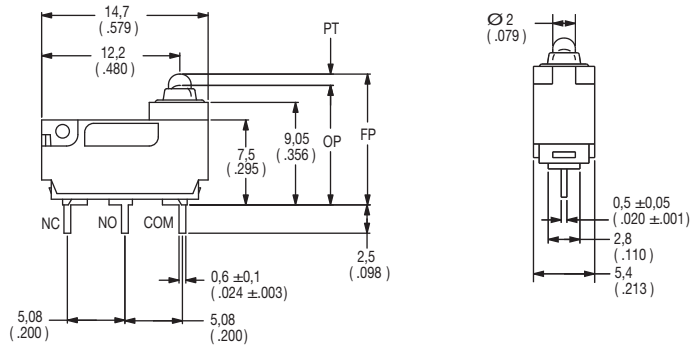
# ZMS Series Subminiature Snap-acting Switches (IP65)

## SERIES Z M S ■ ■ ■ ■ ■ ■ ■ ■

**ZMSH** HIGH OVER TRAVEL  
Switch option shown: ZMSH00P00SSC



**ZMSL** LOW OVER TRAVEL  
Switch option shown: ZMSL00P00PSC



Snap-acting

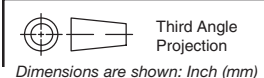
## ELECTRICAL RATING ■ ■ ■ ■ ■ ■ ■ ■

OPTION CODE	CONTACT MATERIAL	UL61058-1 UL1054	ENEC
	MOVABLE CONTACT / STATIONARY CONTACT	ELECTRICAL RATING	ELECTRICAL RATING
00	Gold plating over silver alloy	0.01 AMP @ 12 V DC 0.1 AMP @ 12 V DC	10m AMP @ 12 V DC 5E5
03	Silver alloy	3 AMPS @ 125 V AC 3 AMPS @ 12 V DC	3 AMPS @ 12 V DC 1E5

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

## OPERATING FORCE ■ ■ ■ ■ ■ ■ ■ ■

OPTION CODE	BASIC SWITCH OPERATING FORCE (OZ./GRAMS)
130	130 4.59

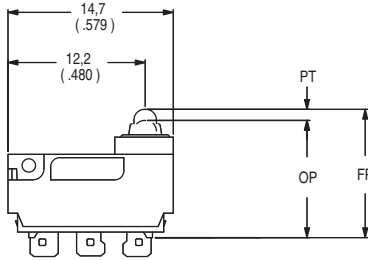


Dimensions are shown: Inch (mm)  
Specifications and dimensions subject to change

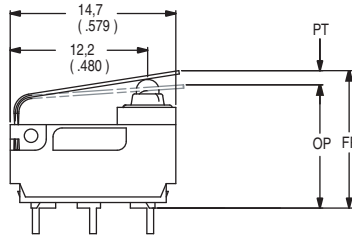
# ZMS Series Subminiature Snap-acting Switches (IP65)

## ACTUATOR

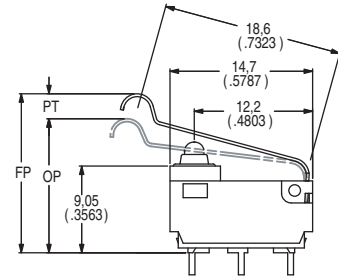
**P00** PIN PLUNGER (IP65)



**T10** .25 LEVER (IP65)



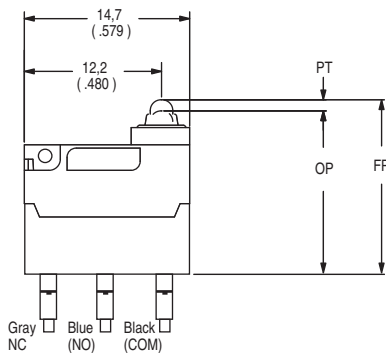
**T11** LEVER (IP65)



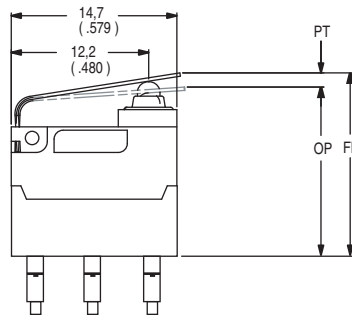
### SWITCH CHARACTERISTICS

Actuator code	Maximum Operate Force (grams/oz.)	Minimum Release Force (grams/oz.)	Free Position Max	Maximum Pre-travel	Operate Position	Maximum Differential	Low Overtravel min. (L)	High Overtravel min. (H)
<b>P00</b>	130 4.59	13 0.45	.472 (12)	0.032 (0,8)	.415 ± .012 (10.55 ± .3)	.012 (0,3)	0.031 (0,8)	0.068 (1,72)
<b>T10</b>	195 6.88	55 1.93	.604 (15.35)	0.152 (3.85)	.440 ± .020 (11.2 ± .5)	0.020 (0,5)	0.053 (1,35)	0.084 (2,14)
<b>T11</b>	160 5.64	45 1.58	.726 (18.45)	0.186 (4.8)	.539 ± .032 (13.7 ± .8)	0.030 (0,7)	0.062 (1,65)	0.101 (2,57)

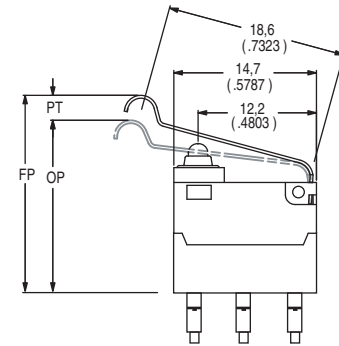
**P00** PIN PLUNGER (IP67)



**T10** .25 LEVER (IP67)



**T11** .28 LEVER (IP67)



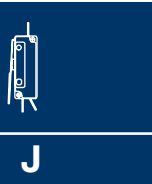
### SWITCH CHARACTERISTICS "J" TERMINATION ONLY

Actuator code	Maximum Operate Force (grams/oz.)	Minimum Release Force (grams/oz.)	Free Position Max	Maximum Pre-travel	Operate Position	Maximum Differential	Low Overtravel min. (L)	High Overtravel min. (H)
<b>P00</b>	130 4.59	13 0.45	.650 (16.50)	0.032 (0,8)	.593 ± .020 (15.05 ± 0.5)	.012 (0,3)	0.031 (0,8)	0.068 (1,72)
<b>T10</b>	195 6.88	55 1.93	.781 (19.85)	0.152 (3.85)	.618 ± .028 (15.7 ± .7)	0.020 (0,5)	0.053 (1,35)	0.084 (2,14)
<b>T11</b>	160 5.64	45 1.58	.904 (22.95)	0.188 (4.8)	.717 ± .039 (18.2 ± 1.0)	0.030 (0,7)	0.062 (1,65)	0.101 (2,57)



Third Angle Projection

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

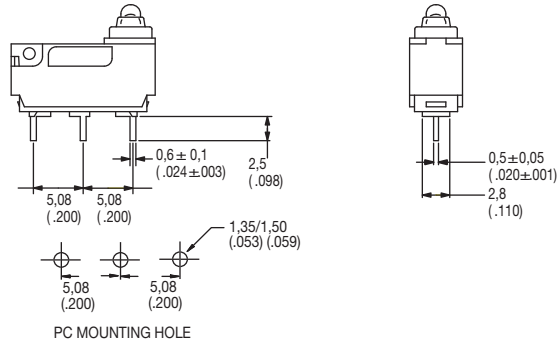


Snap-acting

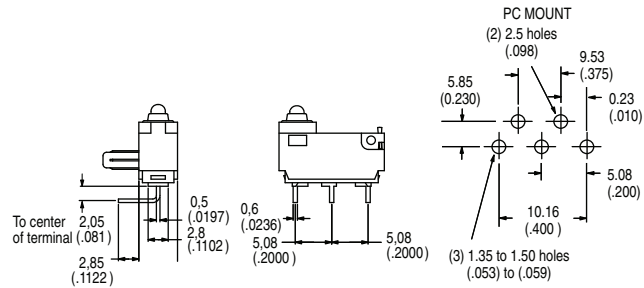
# ZMS Series Subminiature Snap-acting Switches (IP65)

## TERMINATIONS

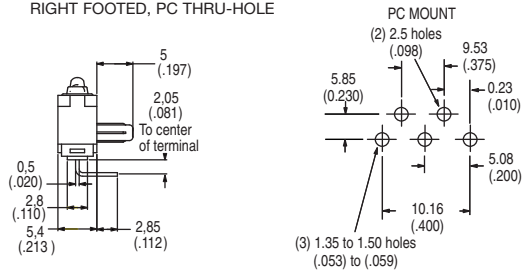
**P** PC THRU-HOLE



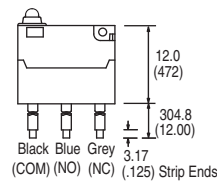
**L** LEFT FOOTED, PC THRU-HOLE



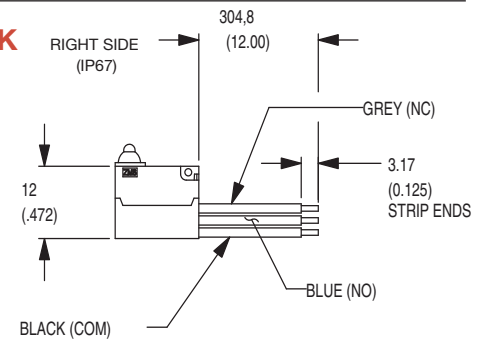
**R** RIGHT FOOTED, PC THRU-HOLE



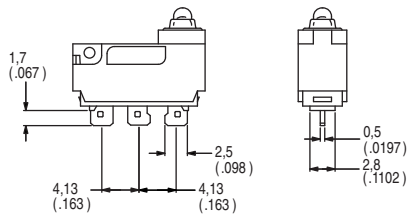
**J** WIRE LEADS BOTTOM (IP67)



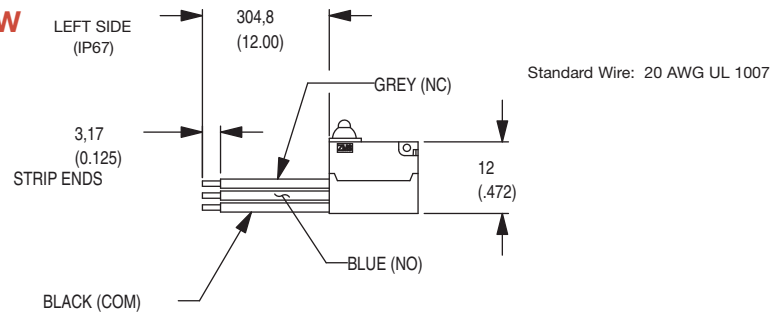
**K** RIGHT SIDE (IP67)



**S** SOLDER TYPE

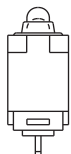


**W** LEFT SIDE (IP67)

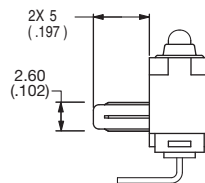


## MOUNTING STYLES

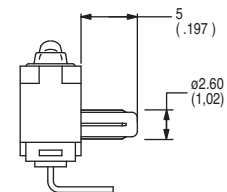
**S** STD (NO SUPPORT POST)



**L** SUPPORT POST LEFT



**R** SUPPORT POST RIGHT

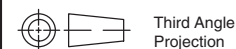


## CIRCUITRY

**C** SPDT (Single Pole, Double Throw)

**W** SPST, NC (Single Pole, Single Throw, Normally Closed)

**Y** SPST, NO (Single Pole, Single Throw, Normally Open)



Third Angle  
Projection

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

**C&K**