

# KSA & KSL Series Sealed Tact Switch

## Features/Benefits

- Designed for automatic or manual insertion
- Cambered terminals to ensure self retention
- Top or side actuated
- Large choice of caps
- RoHS compliant and compatible

## Typical Applications

- Automotive
- Industrial
- Telecommunication networks



## Specification

CONTACT ARRANGEMENT: SPST, N.O.  
DOUBLE OVERMOLDING ON TERMINAL  
SEALING: IP60  
TERMINALS: PC pins, ground pin optional

## Mechanical

| Type     | Actuation force<br>N | Operating life<br>(operations) | Travel to<br>make |
|----------|----------------------|--------------------------------|-------------------|
| KSA0M211 | 1 - 1,8              | 100,000                        | 0,5 ± 0,2         |
| KSA0M311 | 1 - 1,8              | 1,000,000                      | 0,5 ± 0,2         |
| KSA0M411 | 2,25 - 3,75          | 100,000                        | 0,6 ± 0,2         |
| KSA0M511 | 3,5 - 6,5            | 100,000                        | 0,7 ± 0,2         |
| KSA0M911 | 2,25 - 3,75          | 500,000                        | 0,6 ± 0,2         |
| KSL0M211 | 1 - 1,8              | 100,000                        | 0,5 ± 0,2         |
| KSL0M311 | 1 - 1,8              | 1,000,000                      | 0,5 ± 0,2         |
| KSL0M411 | 2,25 - 3,75          | 100,000                        | 0,6 ± 0,2         |
| KSL0M511 | 3,5 - 6,5            | 100,000                        | 0,7 ± 0,2         |
| KSL0M911 | 2,25 - 3,75          | 500,000                        | 0,6 ± 0,2         |

**NOTE:** Other versions in terms of force, termination length and corrosion protection available. Please contact your sales representative.  
This data sheet does not provide enough information for applications which require a certain level of quality or safety such as automotive, medical systems, safety equipment. Please contact your sales representative to get contractual specification package.

## Electrical

|                                | Silver              | Gold   |
|--------------------------------|---------------------|--------|
| MAXIMUM POWER:                 | 1 VA                | 0.2 VA |
| MAXIMUM VOLTAGE:               | 32 VDC              | 32 VDC |
| MINIMUM VOLTAGE:               | 20 mV               | 20 mV  |
| MAXIMUM CURRENT:               | 50 mA               | 10 mA  |
| MINIMUM CURRENT:               | 1 mA                | 1 mA   |
| DIELECTRIC STRENGTH:           | 300 Vrms            |        |
| CONTACT RESISTANCE:            | < 100m Ω            |        |
| INSULATION RESISTANCE (100 V): | > 10 <sup>9</sup> Ω |        |
| BOUNCE TIME:                   | < 1 ms              |        |

## Environmental

|                        | Silver        | Gold           |
|------------------------|---------------|----------------|
| OPERATING TEMPERATURE: | -40°C to 85°C | -40°C to 125°C |
| STORAGE TEMPERATURE:   | -40°C to 85°C | -55°C to 125°C |

## Process

Wave soldering compatible with lead free soldering profile.

## Packaging

Can be delivered in tubes of 65 pieces for automatic insertion or in boxes of 500 pieces for manual insertion (250 pieces for KSL, KSLV, KSAV).

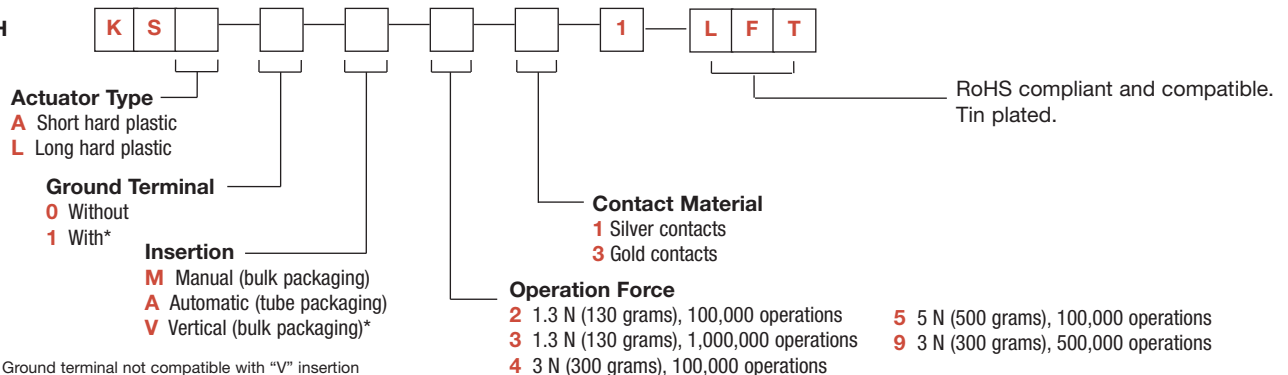
## How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

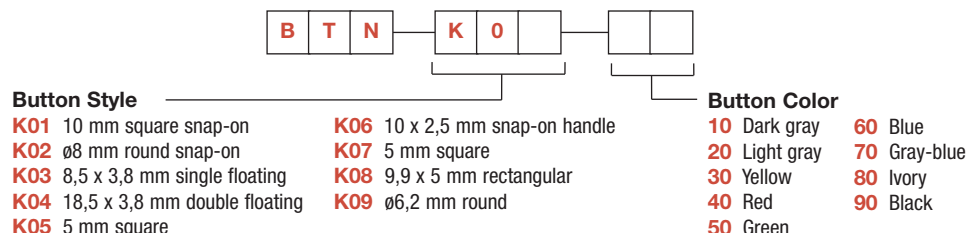
However, please note that all the combinations of these options are not feasible.

For any part number different from those listed above, please consult your local representative.

### SWITCH



### BUTTONS Buttons must be ordered separately and will be supplied in bulk.



\*NOTE: Please note that all buttons are not RoHS compliant. Please check the compliance with your C&K sales representative.



KSA & KSL Series  
Sealed Tact Switch

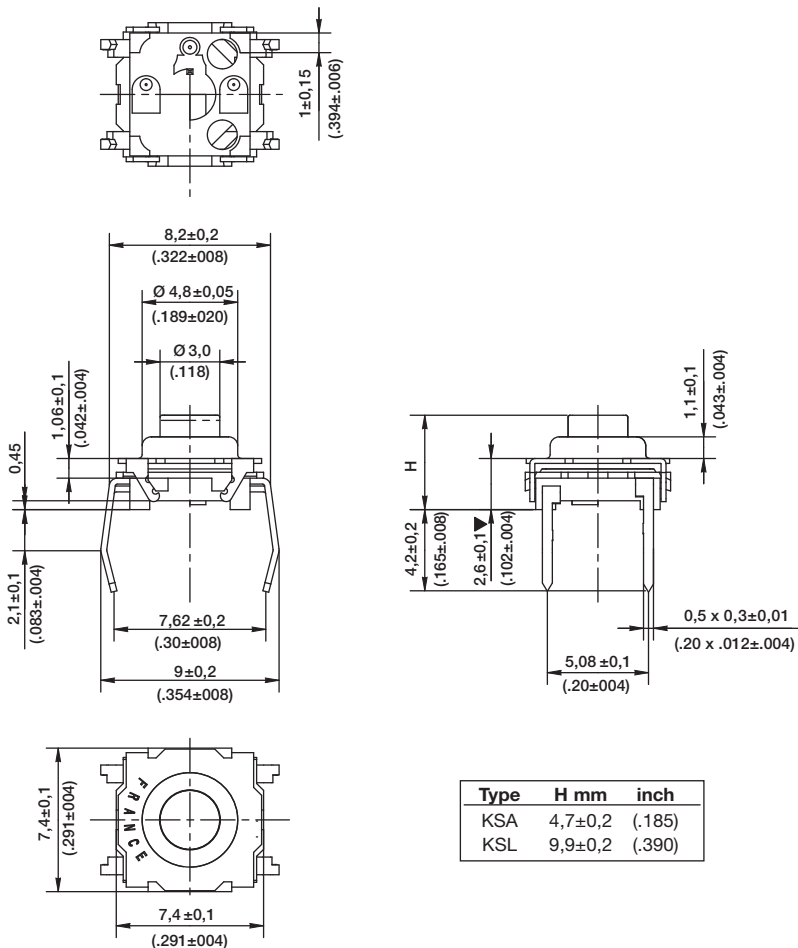
ACTUATOR TYPE 

KSA & KSL



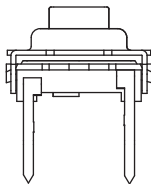
B

Tactile Switches

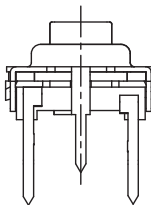


GROUND TERMINAL 

0 WITHOUT



1\* WITH



\*Not compatible with "V" insertion



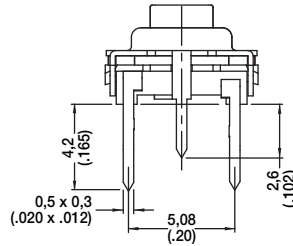
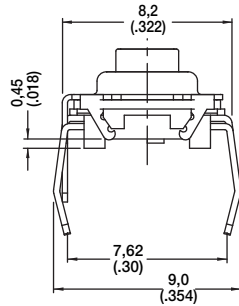
First Angle  
Projection

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

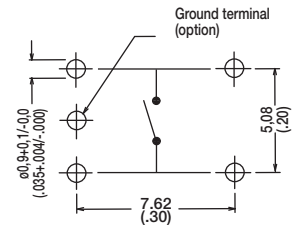
# KSA & KSL Series Sealed Tact Switch

## INSERTION

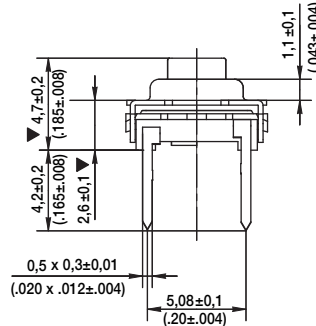
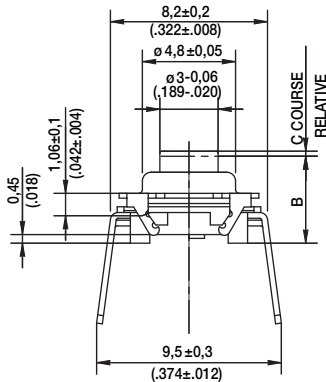
### M MANUAL (BULK PACKAGING)



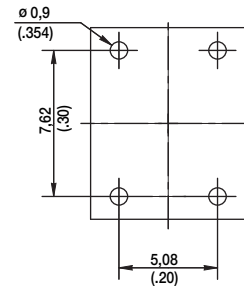
#### PCB LAYOUT



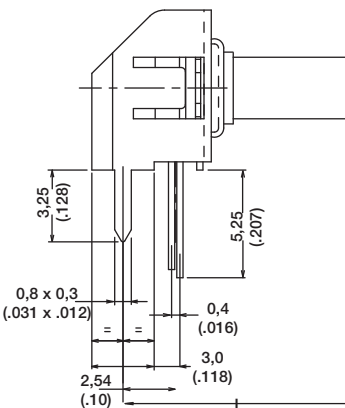
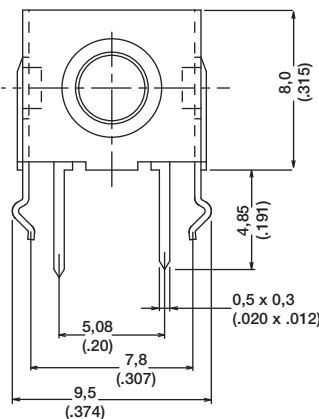
### A AUTOMATIC (TUBE PACKAGING, 65 PIECES PER TUBE)



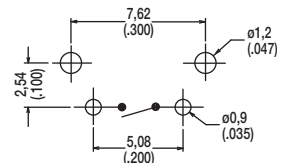
#### PCB LAYOUT



### V VERTICAL



#### PCB LAYOUT



#### DIMENSION L

| Type  | L mm | inch |
|-------|------|------|
| KSA0V | 5,8  | .228 |
| KSL0V | 11,1 | .437 |

## OPERATING FORCE

| OPTION CODE | OPERATING FORCE                           |
|-------------|-------------------------------------------|
| 2           | 1.3 N (130 grams)<br>100,000 operations   |
| 3           | 1.3 N (130 grams)<br>1,000,000 operations |
| 4           | 3.0 N (300 grams)<br>100,000 operations   |
| 5           | 5.0 N (500 grams)<br>100,000 operations   |
| 9           | 3.0 N (300 grams)<br>500,000 operations   |



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

# KSA & KSL Series Sealed Tact Switch

## CONTACT MATERIAL



| OPTION CODE | CONTACT MATERIAL |
|-------------|------------------|
| 1           | Silver contacts  |
| 3           | Gold contacts    |

## SEALING



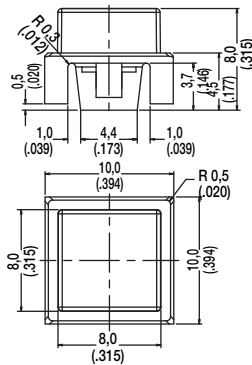
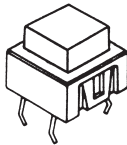
| OPTION CODE | SEALING            |
|-------------|--------------------|
| 1           | Sealing level IP60 |

## BUTTONS

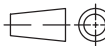
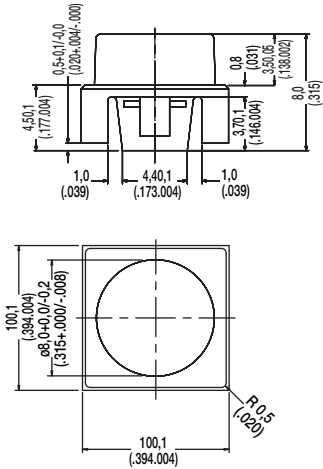
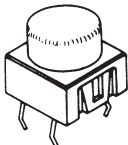
Buttons must be ordered separately and will be supplied in bulk.

| BUTTON TYPE | KSA | KSL | KSAV | KSLV |
|-------------|-----|-----|------|------|
| K01         | X   |     |      |      |
| K02         | X   |     |      |      |
| K03         | X   | X   | X    | X    |
| K04         | X   | X   | X    | X    |
| K05         |     | X   |      | X    |
| K06         | X   |     |      |      |
| K07         |     | X   |      | X    |
| K08         |     | X   |      | X    |
| K09         |     | X   |      | X    |

K01



K02



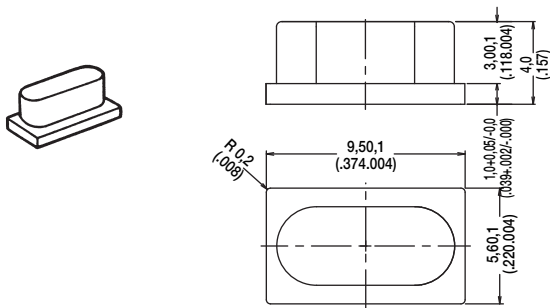
First Angle  
Projection

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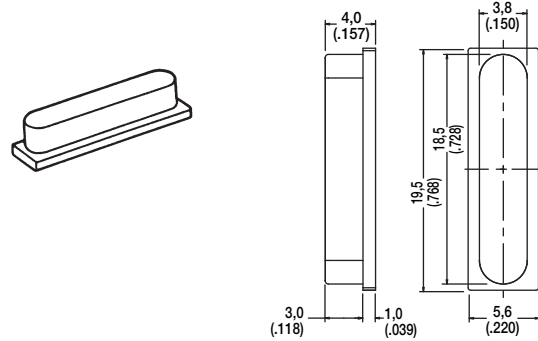


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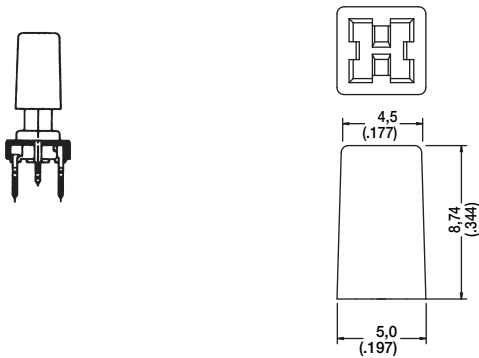
**K03**



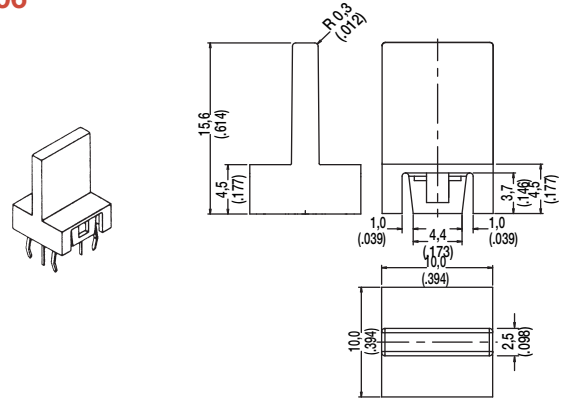
**K04**



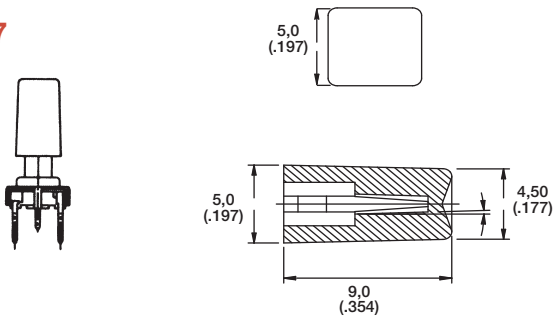
**K05**



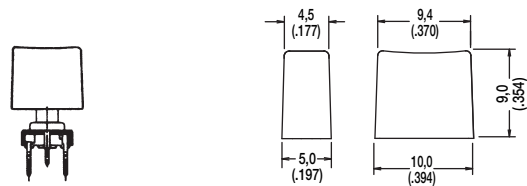
**K06**



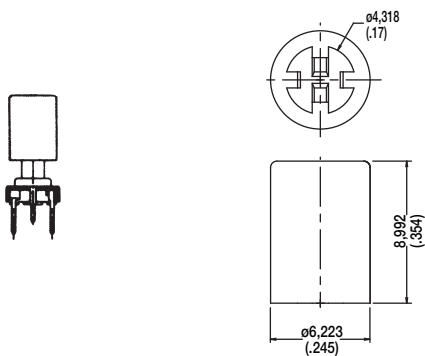
**K07**



**K08**



**K09**



Tactile Switches



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