

# 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 N	Operating life (operations)	Travel to 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**

**Actuator Type**  
A Short hard plastic  
L Long hard plastic

**Ground Terminal**  
0 Without  
1 With\*

**Insertion**  
M Manual (bulk packaging)  
A Automatic (tube packaging)  
V Vertical (bulk packaging)\*

**Contact Material**  
1 Silver contacts  
3 Gold contacts

**Operation Force**  
2 1.3 N (130 grams), 100,000 operations  
3 1.3 N (130 grams), 1,000,000 operations  
4 3 N (300 grams), 100,000 operations  
5 5 N (500 grams), 100,000 operations  
9 3 N (300 grams), 500,000 operations

RoHS compliant and compatible. Tin plated.

\*Note: "1" Ground terminal not compatible with "V" insertion

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

**Button Style**

<b>K01</b> 10 mm square snap-on	<b>K06</b> 10 x 2,5 mm snap-on handle
<b>K02</b> ø8 mm round snap-on	<b>K07</b> 5 mm square
<b>K03</b> 8,5 x 3,8 mm single floating	<b>K08</b> 9,9 x 5 mm rectangular
<b>K04</b> 18,5 x 3,8 mm double floating	<b>K09</b> ø6,2 mm round
<b>K05</b> 5 mm square	

**Button Color**

<b>10</b> Dark gray	<b>60</b> Blue
<b>20</b> Light gray	<b>70</b> Gray-blue
<b>30</b> Yellow	<b>80</b> Ivory
<b>40</b> Red	<b>90</b> Black
<b>50</b> Green	

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



B

Tactile Switches

# KSA & KSL Series Sealed Tact Switch

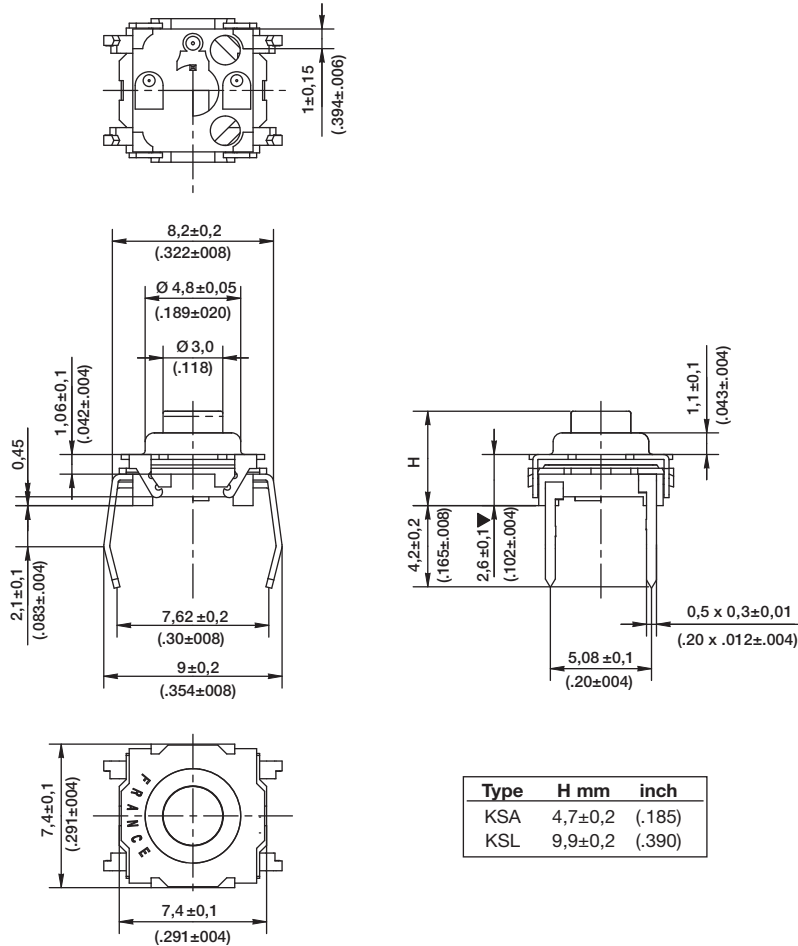
ACTUATOR TYPE

## KSA & KSL



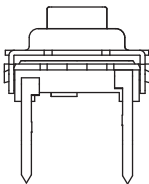
B

Tactile Switches

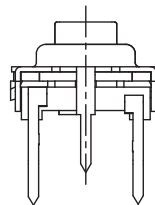


GROUND TERMINAL

0 WITHOUT



1\* WITH



\*Not compatible with "V" insertion



First Angle  
Projection



13 feb 14

B-70

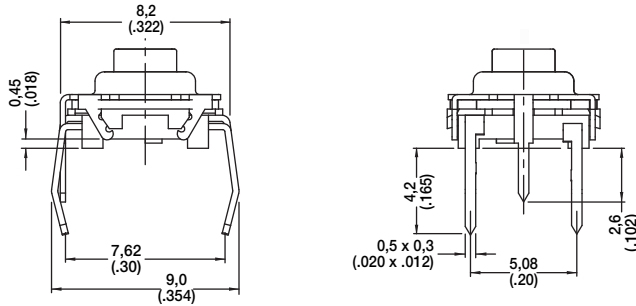
Dimensions are shown: mm (inches)  
Specifications and dimensions subject to change

[www.ck-components.com](http://www.ck-components.com)

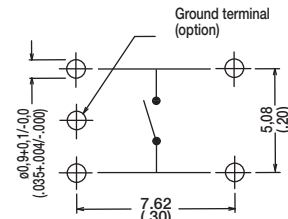
# KSA & KSL Series Sealed Tact Switch

## INSERTION

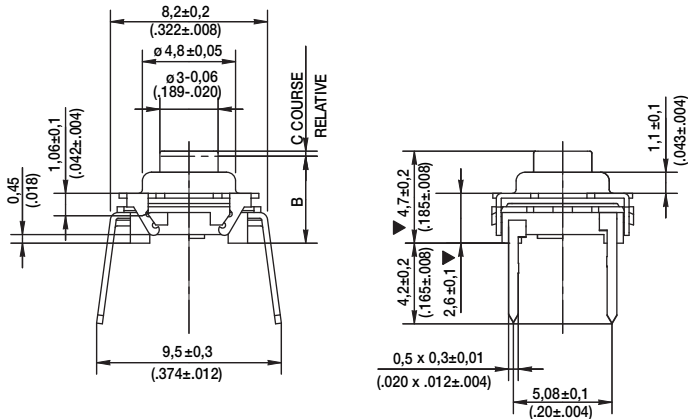
### M MANUAL (BULK PACKAGING)



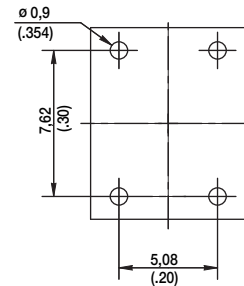
### PCB LAYOUT



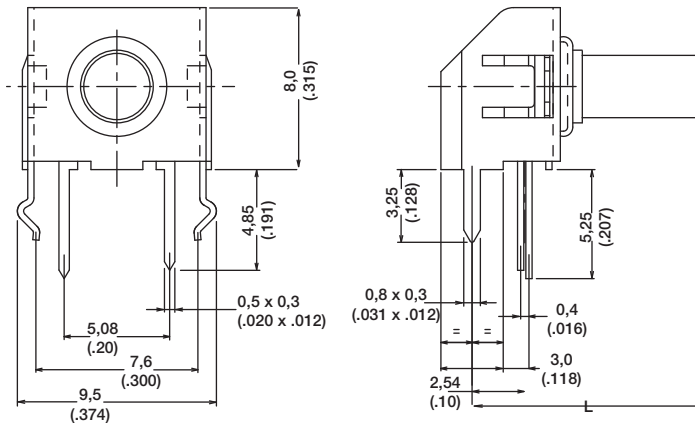
### A AUTOMATIC (TUBE PACKAGING, 65 PIECES PER TUBE)



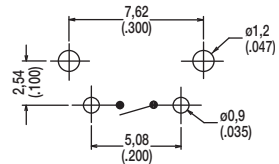
### PCB LAYOUT



### V VERTICAL



### PCB LAYOUT

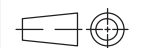


### DIMENSION L

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

## OPERATING FORCE

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



First Angle  
Projection

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

# KSA & KSL Series Sealed Tact Switch

## CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL
<b>1</b>	Silver contacts
<b>3</b>	Gold contacts

B

Tactile Switches

## SEALING

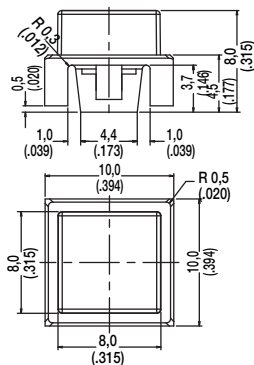
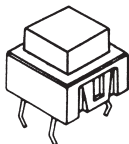
OPTION CODE	SEALING
<b>1</b>	Sealing level IP60

## BUTTONS

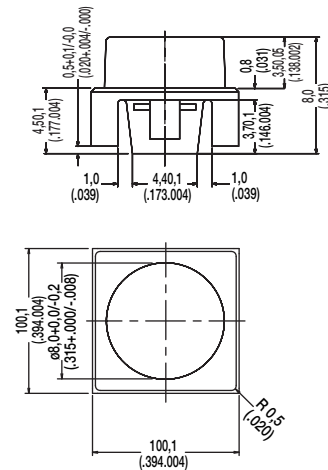
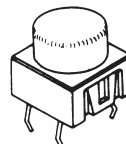
Buttons must be ordered separately and will be supplied in bulk.

BUTTON TYPE	KSA	KSL	KSAV	KSLV
<b>K01</b>	X			
<b>K02</b>	X			
<b>K03</b>	X	X	X	X
<b>K04</b>	X	X	X	X
<b>K05</b>		X		X
<b>K06</b>	X			
<b>K07</b>		X		X
<b>K08</b>		X		X
<b>K09</b>		X		X

**K01**



**K02**

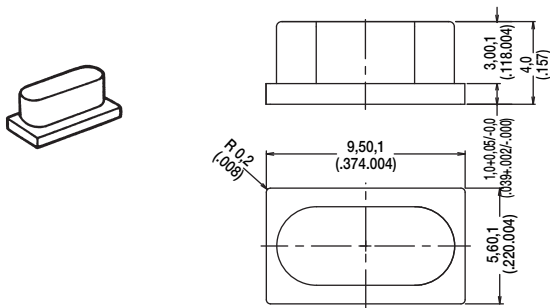


First Angle  
Projection

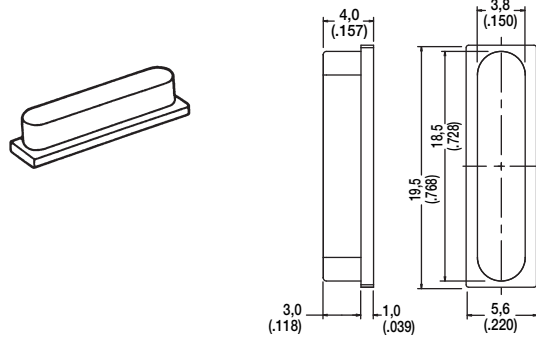
Dimensions are shown: mm (inches)  
Specifications and dimensions subject to change

# KSA & KSL Series Sealed Tact Switch

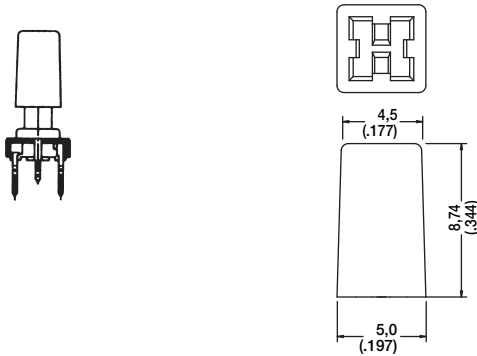
**K03**



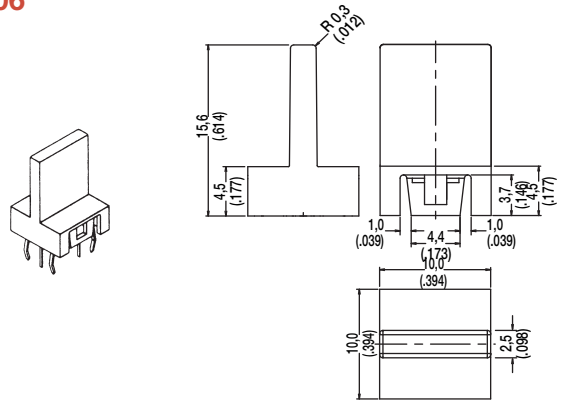
**K04**



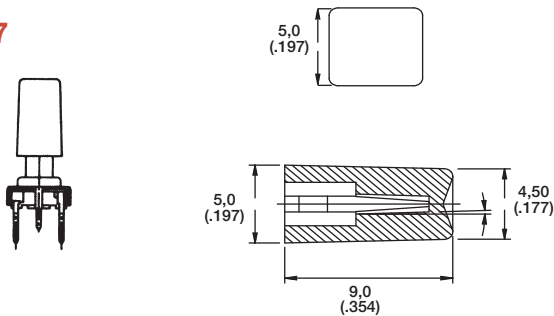
**K05**



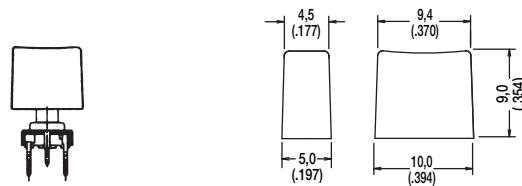
**K06**



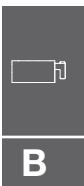
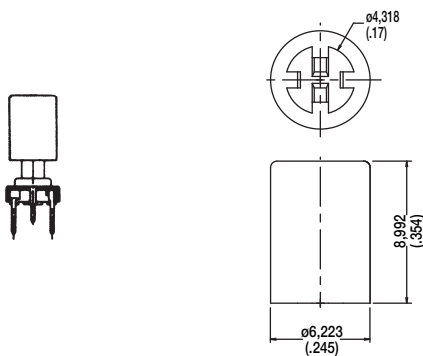
**K07**



**K08**



**K09**



Tactile Switches



First Angle  
Projection

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