

# KSA & KSL Series Sealed Tact Switch

Tactile Switches

## 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  
 MEMBRANE SEALING  
 TERMINALS: PC pins, ground pin optional

## Mechanical

Type	Actuation force N (grams)	Operating life (operations)	Travel to make
KSA0M211	1.3 (130)	500,000	0,5 ± 0,2
KSA0M311	1.3 (130)	1,000,000	0,5 ± 0,2
KSA0M411	3.0 (300)	100,000	0,6 ± 0,2
KSA0M511	5.0 (500)	100,000	0,7 ± 0,2
KSA0M911	3.0 (300)	500,000	0,6 ± 0,2
KSL0M211	1.3 (130)	500,000	0,5 ± 0,2
KSL0M311	1.3 (130)	1,000,000	0,5 ± 0,2
KSL0M411	3.0 (300)	100,000	0,6 ± 0,2
KSL0M511	5.0 (500)	100,000	0,7 ± 0,2
KSL0M911	3.0 (300)	500,000	0,6 ± 0,2

## 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 90°C	-40°C to 125°C
STORAGE TEMPERATURE:	-40°C to 90°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 ITT representative.

**SWITCH**

K

S

L

F

T

**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)\*

**Sealing**

**1** Totally sealed (IP 65)

**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.

B

T

N

K

0

**Button Style**

**K01** 10 mm square snap-on

**K02** ø8 mm round snap-on

**K03** 8,5 x 3,8 mm single floating

**K04** 18,5 x 3,8 mm double floating

**K05** 5 mm square

**K06** 10 x 2,5 mm snap-on handle

**K07** 5 mm square

**K08** 9,9 x 5 mm rectangular

**K09** ø6,2 mm round

**Button Color**

**10** Dark gray    **60** Blue

**20** Light gray    **70** Gray-blue

**30** Yellow    **80** Ivory

**40** Red    **90** Black

**50** Green

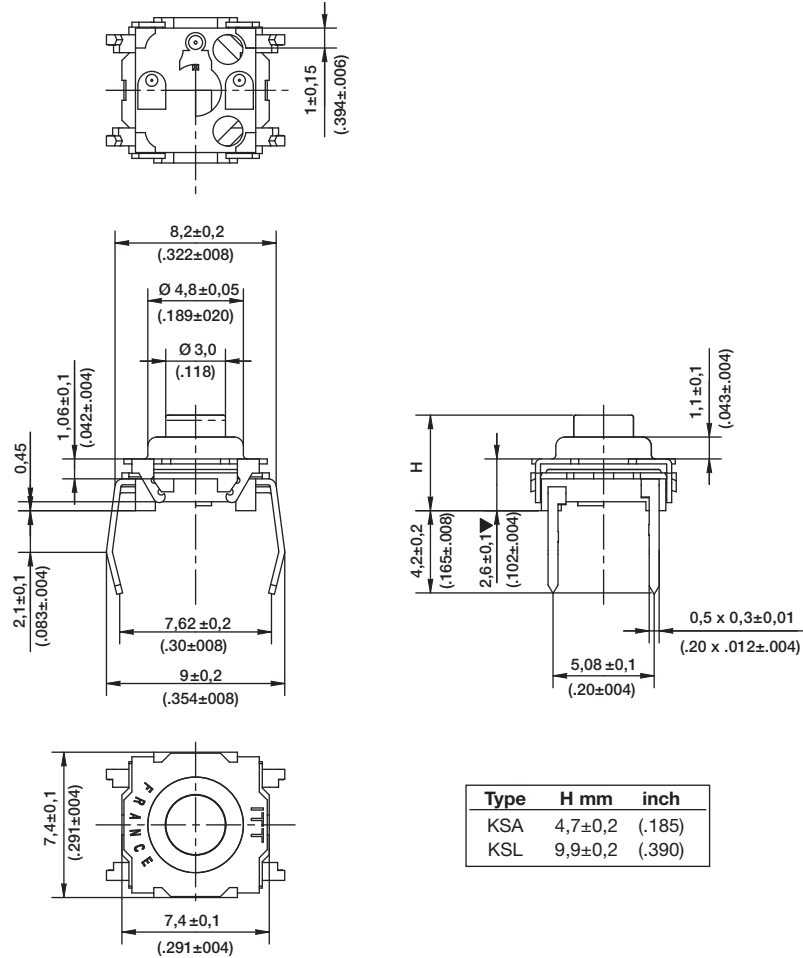


Dimensions shown in: mm (inch)  
 Specifications and dimensions subject to change

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## ACTUATOR TYPE

### KSA & KSL

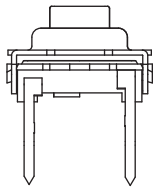


B

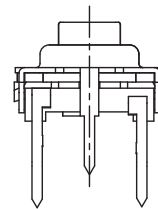
Tactile Switches

## GROUND TERMINAL

0 WITHOUT



1\* WITH



\*Not compatible with "V" insertion



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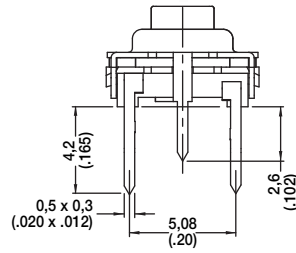
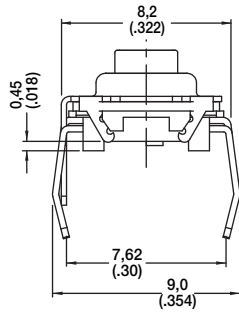
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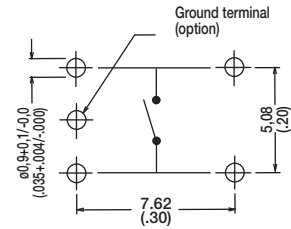
## INSERTION



### M MANUAL (BULK PACKAGING)



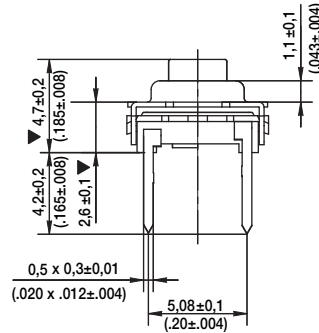
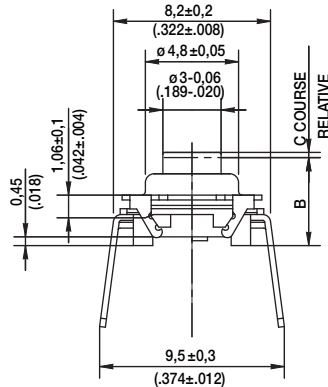
### PCB LAYOUT



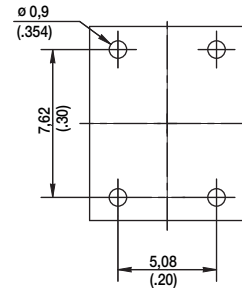
Tactile Switches

B

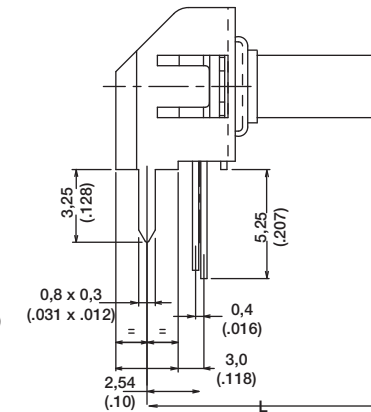
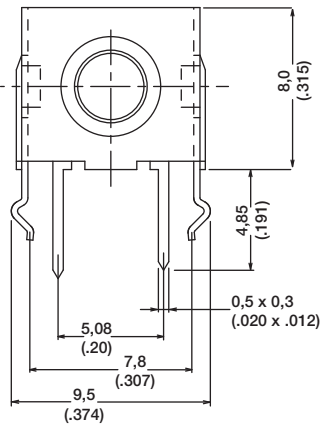
### A AUTOMATIC (TUBE PACKAGING, 65 PIECES PER TUBE)



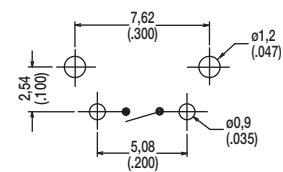
### PCB LAYOUT



### 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) 100,000 operations
3	1.3 N (130 grams) 1,000,000 operations
4	3.0 N (300 grams) 100,000 operations
5	5.0 N (500 grams) 100,000 operations
9	3.0 N (300 grams) 500,000 operations



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## CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL
1	Silver contacts
3	Gold contacts

## SEALING

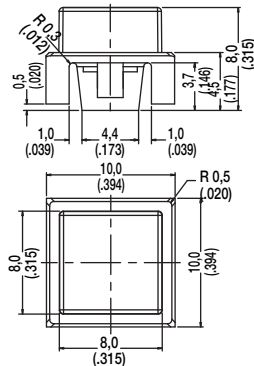
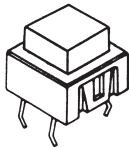
OPTION CODE	SEALING
0	Sealed against flux
1	Totally sealed

## BUTTONS

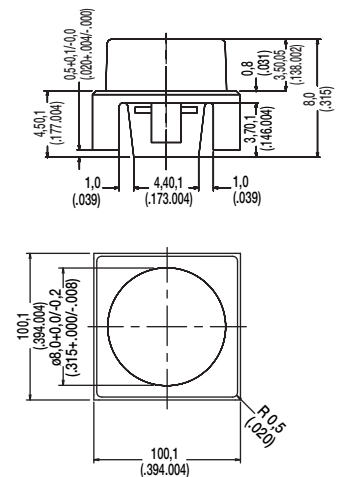
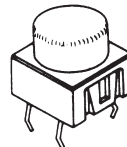
Buttons must be ordered separately and will be supplied in bulk.

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**

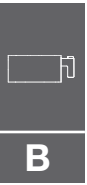


**K02**



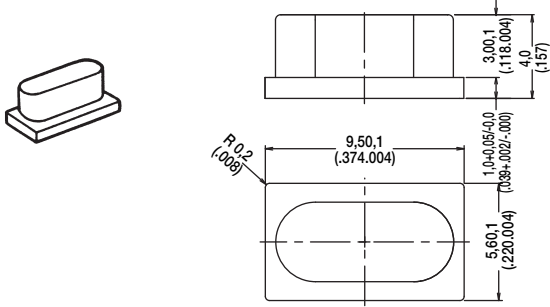
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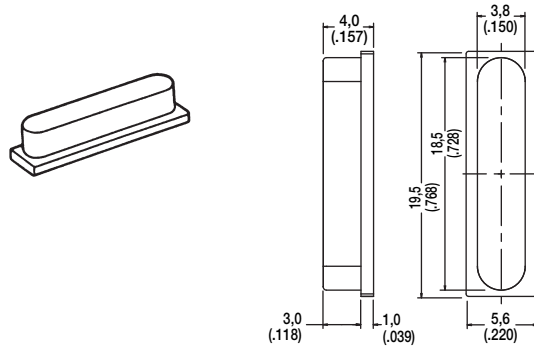


Tactile Switches

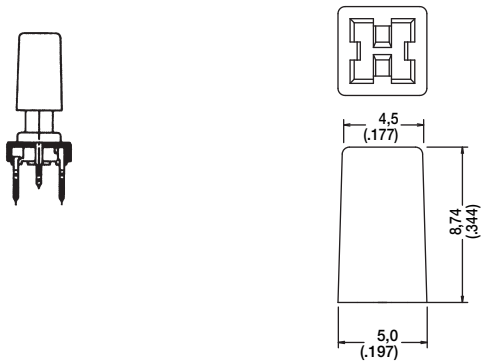
**K03**



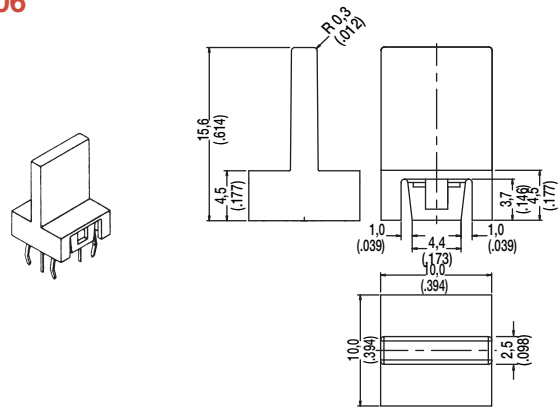
**K04**



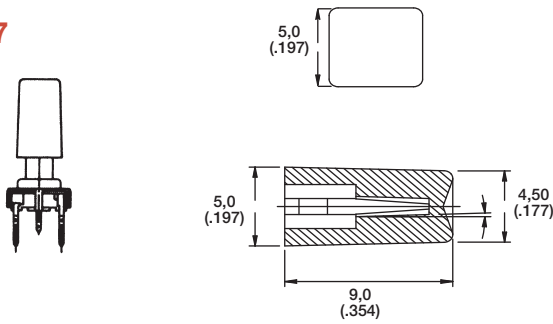
**K05**



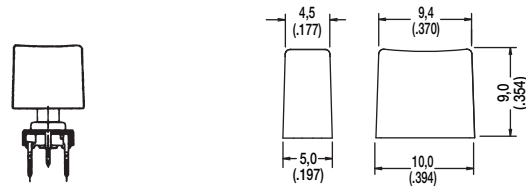
**K06**



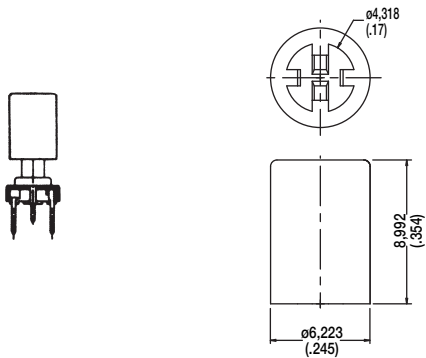
**K07**



**K08**



**K09**



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