

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

B

Tactile Switches

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	1,4 ± 0,4	100,000	0,5 ± 0,2
KSA0M311	1,4 ± 0,4	1,000,000	0,5 ± 0,2
KSA0M411	3 ± 0,75	100,000	0,6 ± 0,2
KSA0M511	5 ± 1,5	100,000	0,7 ± 0,2
KSA0M911	3 ± 0,75	500,000	0,6 ± 0,2
KSL0M211	1,4 ± 0,4	100,000	0,5 ± 0,2
KSL0M311	1,4 ± 0,4	1,000,000	0,5 ± 0,2
KSL0M411	3 ± 0,75	100,000	0,6 ± 0,2
KSL0M511	5 ± 1,5	100,000	0,7 ± 0,2
KSL0M911	3 ± 0,75	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: 250 Vrms		
CONTACT RESISTANCE: ≤ 100m Ω		
INSULATION RESISTANCE (100 V): ≥ 10 ⁹ 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

K

S

1

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)*

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

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

RoHS compliant and compatible.
Tin plated.

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

20 Light gray

30 Yellow

40 Red

50 Green

60 Blue

70 Gray-blue

80 Ivory

90 Black

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

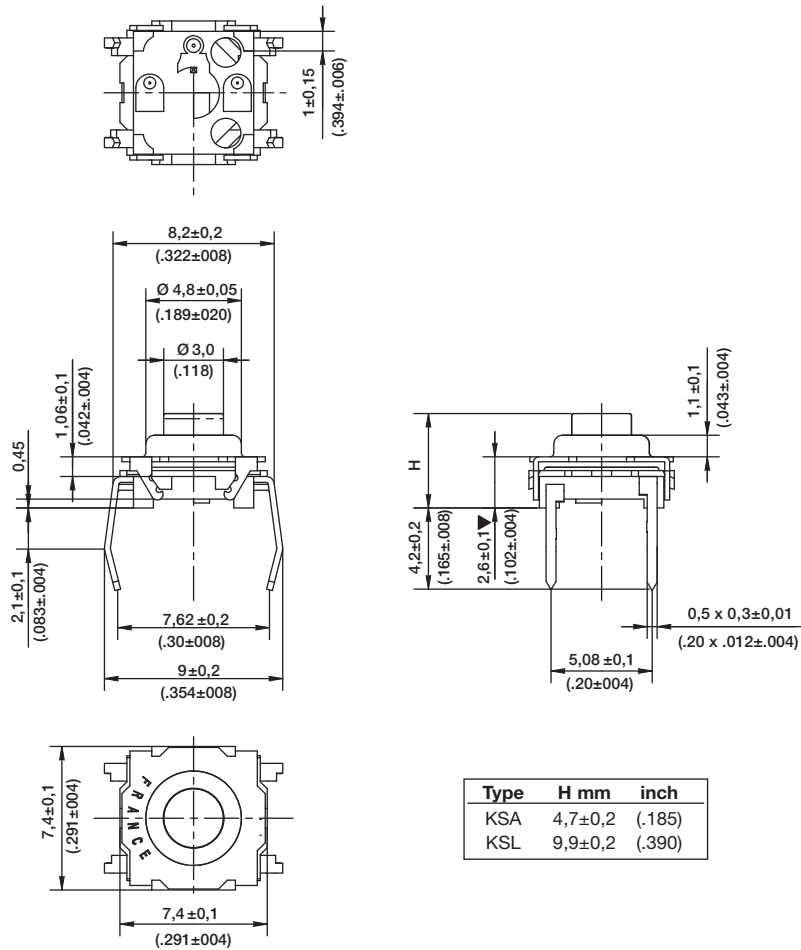


Dimensions are shown: mm (inches)
Specifications and dimensions subject to change

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ACTUATOR TYPE

KSA & KSL

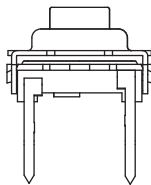


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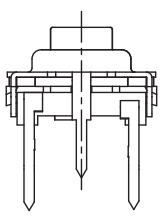
Tactile Switches

GROUND TERMINAL

0 WITHOUT



1* WITH



*Not compatible with "V" insertion



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Tactile Switches

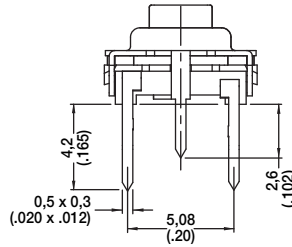
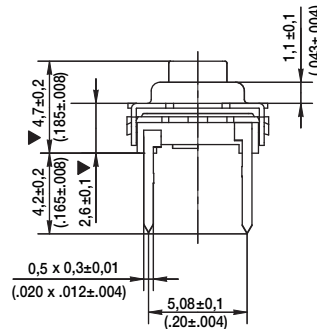


Figure 10: Dimensions for 10-pin D-subminiature connector. The diagram shows a rectangular connector footprint with four mounting holes at the corners. Dimensions are given in inches and millimeters. The overall width is 0.940 inches (23.91 mm) and the overall height is 0.900 inches (22.86 mm). The distance between the centers of the mounting holes is 0.762 inches (19.30 mm) horizontally and 0.508 inches (12.90 mm) vertically. A ground terminal is indicated as an optional feature on the right side.

Technical drawing of a mechanical part showing dimensions and tolerances:

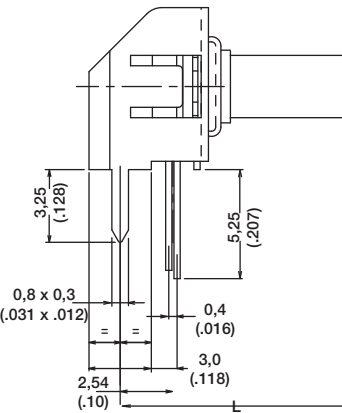
- Overall width: $8,2 \pm 0,2$ ($.322 \pm .008$)
- Inner diameter: $\varnothing 4,8 \pm 0,05$
- Inner hole diameter: $\varnothing 3-0,06$ ($.189-.020$)
- Distance from top surface to centerline: $1,06 \pm 0,1$ ($.042 \pm .004$)
- Distance from bottom surface to centerline: $0,45$ ($.018$)
- Distance from bottom surface to base: B
- Overall height: $9,5 \pm 0,3$ ($.374 \pm .012$)
- Feature: C COURSE RELATIVE



Technical drawing of a mechanical part, likely a valve or connector, showing a top view and a side view. The top view shows a circular feature with a central hole and two side ports. The side view shows the profile of the part with dimensions. Dimensions are given in millimeters (mm) and inches (in).

Dimensions (mm) and (inches):

- Overall width: 9,5 (.374)
- Overall height: 8,0 (.315)
- Distance from top edge to the center of the circular feature: 4,85 (.191)
- Distance from the center of the circular feature to the center of the side port: 5,08 (.20)
- Distance from the center of the side port to the bottom edge: 7,6 (.300)
- Distance from the center of the side port to the bottom edge (alternative measurement): 0,5 x 0,3 (.020 x .012)



Technical drawing of a three-hole part. The drawing shows three holes arranged in a triangular pattern. The dimensions are as follows:

- Top hole diameter: $\varnothing 1,2$ (.047)
- Bottom hole diameter: $\varnothing 0,9$ (.035)
- Distance between top and bottom hole centers: 7,62 (.300)
- Distance between the two bottom hole centers: 5,08 (.200)
- Distance from the top hole center to the vertical centerline of the bottom holes: 2,54 (.100)

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

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



Dimensions are shown: mm (inches)



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CONTACT MATERIAL



OPTION CODE	CONTACT MATERIAL
1	Silver contacts
3	Gold contacts



B

Tactile Switches

SEALING



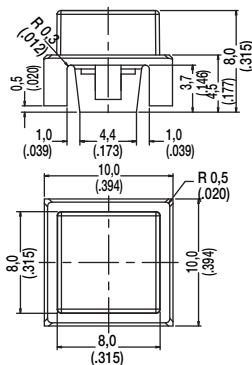
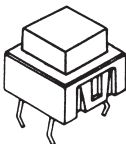
OPTION CODE	SEALING
1	Sealing level IP60

BUTTONS

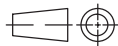
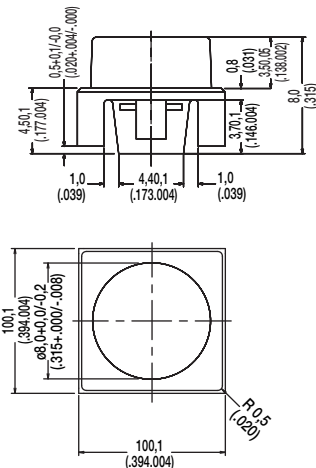
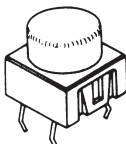
Buttons must be ordered separately and will be supplied in bulk.

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

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

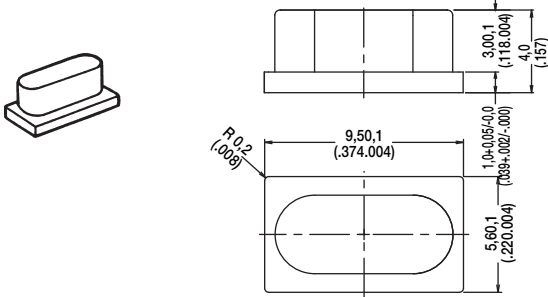


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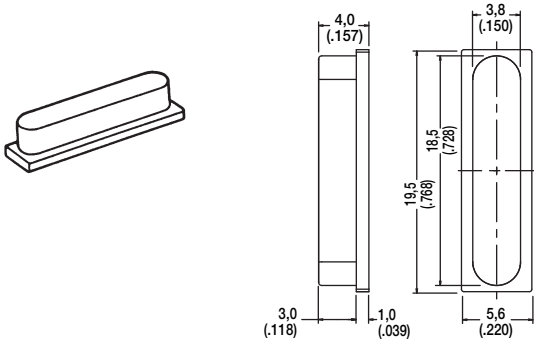
Tactile Switches

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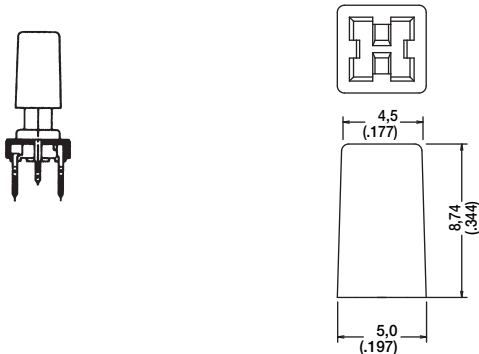
K03



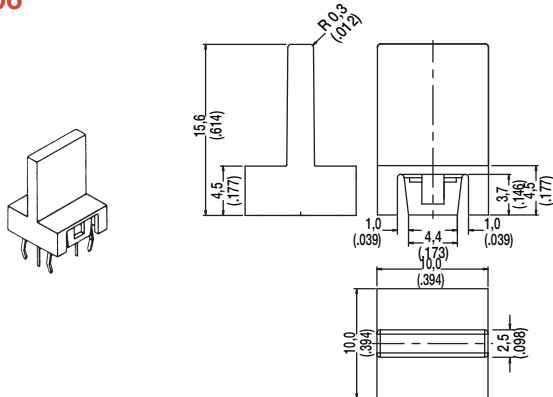
K04



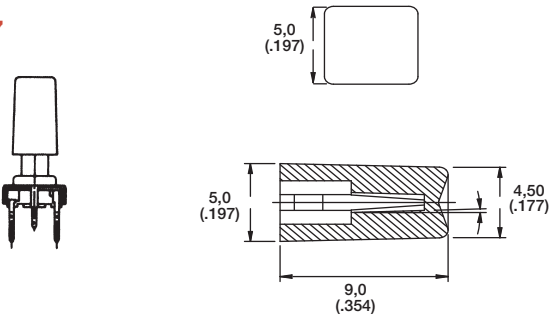
K05



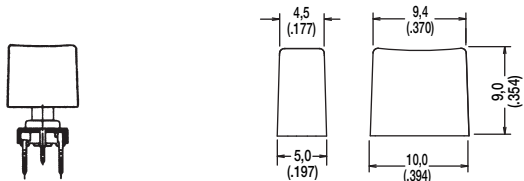
K06



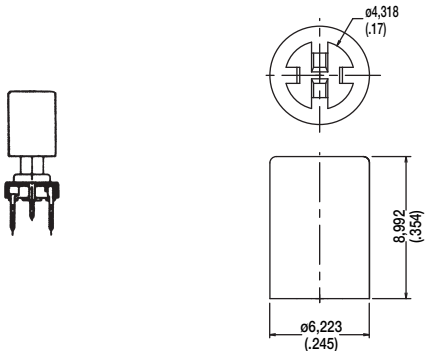
K07



K08



K09



First Angle
Projection

Dimensions are shown: mm (inches)
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