

# 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<br>N | Operating life<br>(operations) | Travel to<br>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 <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.

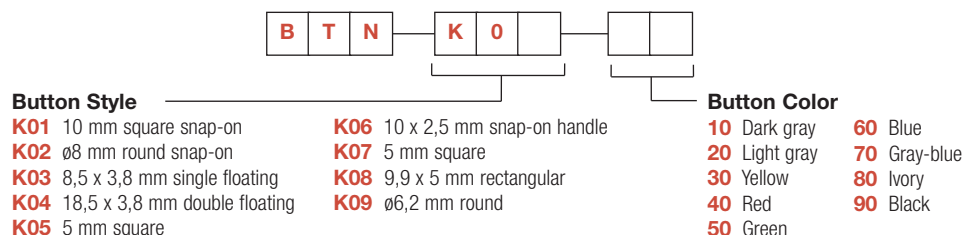
However, please note that all the combinations of these options are not feasible.

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.

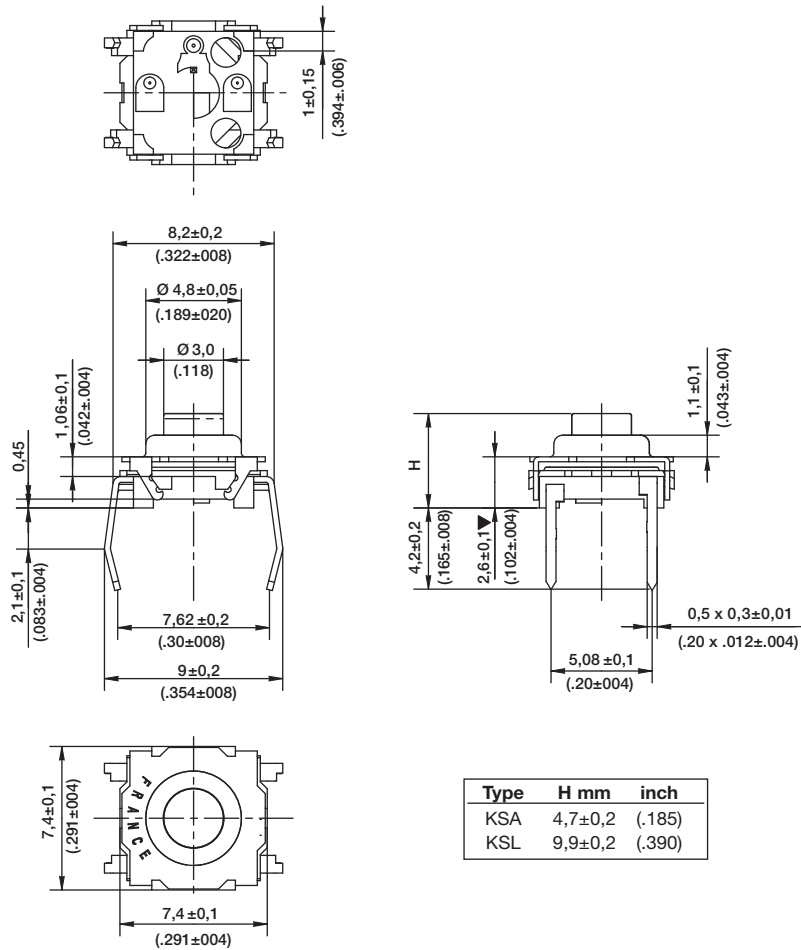


Dimensions are shown: mm (inches)  
Specifications and dimensions subject to change

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Sealed Tact Switch

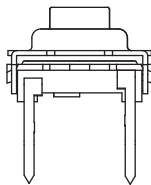
ACTUATOR TYPE 

KSA & KSL

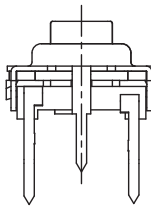


GROUND TERMINAL 

0 WITHOUT



1\* WITH



\*Not compatible with "V" insertion



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B

Tactile Switches

# Tactile Switches

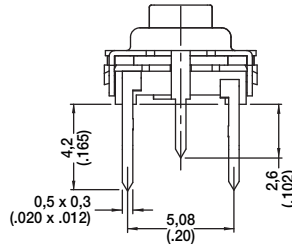
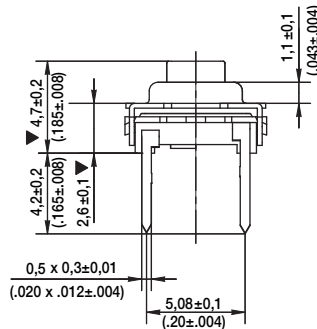


Figure 10: Dimensions for 16-pin connector. The diagram shows a rectangular connector footprint with four circular pins at the corners. Dimensions are given in inches and millimeters. The overall width is 0.94 (24.0) inches and 7.62 (30) inches. The overall height is 5.08 (20) inches. The distance between the center of the left pins is 0.94 (24.0) inches and 0.035 (0.009) inches. The distance between the center of the right pins is 5.08 (20) inches. A ground terminal is indicated as an option.

Technical drawing of a mechanical part, likely a valve or actuator, showing dimensions in millimeters. The drawing includes a top view and a side view. Key dimensions include:

- Overall width:  $8.2 \pm 0.2$  mm ( $322 \pm .008$  mm)
- Inner diameter:  $\varnothing 4.8 \pm 0.05$  mm ( $189 \pm .020$  mm)
- Outer diameter:  $\varnothing 3.06$  mm ( $124 \pm .004$  mm)
- Height:  $1.06 \pm 0.1$  mm ( $42 \pm .004$  mm)
- Base width:  $9.5 \pm 0.3$  mm ( $374 \pm .012$  mm)
- Vertical dimension:  $0.45$  mm ( $0.18$  mm)

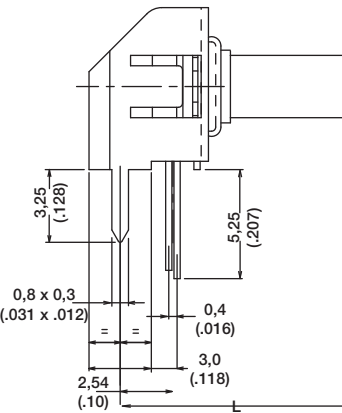
The drawing is labeled "C COURSE" and "RELATIVE".



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 / in):

- Overall width: 9,5 (.374)
- Overall height: 8,0 (.315)
- Distance from top edge to center of circular feature: 5,08 (.20)
- Distance from center of circular feature to center of side port: 7,6 (.300)
- Distance from center of side port to bottom edge: 4,85 (.191)
- Side port opening: 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)<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)



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CONTACT MATERIAL



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



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Tactile Switches

SEALING



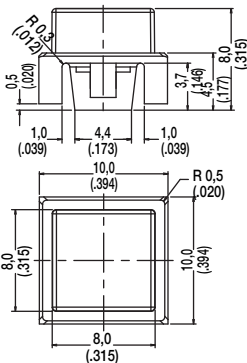
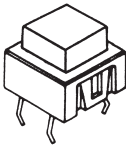
| OPTION CODE | SEALING            |
|-------------|--------------------|
| 1           | Sealing level IP60 |

BUTTONS

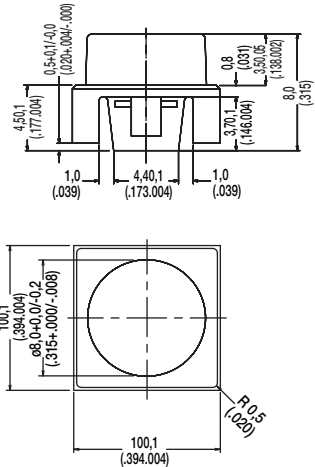
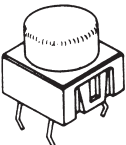
Buttons must be ordered separately and will be supplied in bulk.

| 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)  
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Tactile Switches

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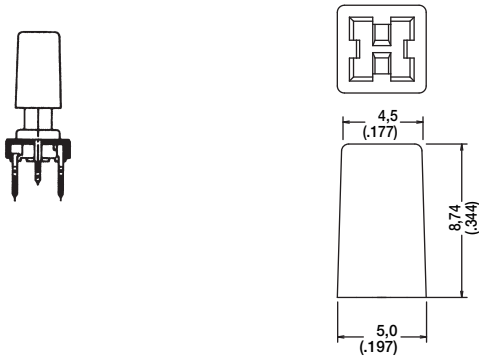
K03



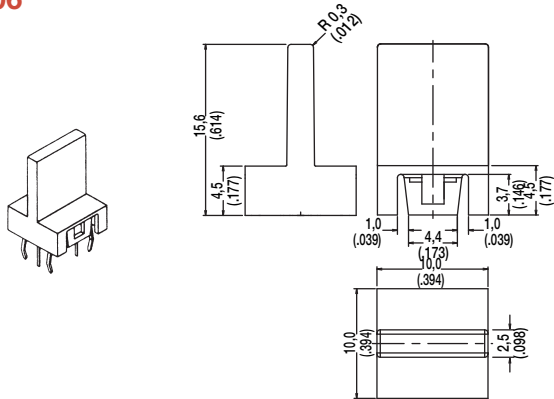
K04



K05



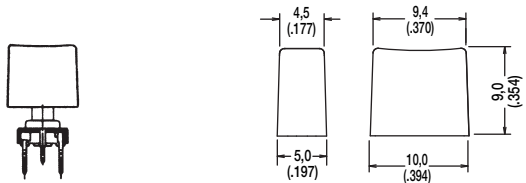
K06



K07



K08



K09



Dimensions are shown: mm (inches)  
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## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

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