

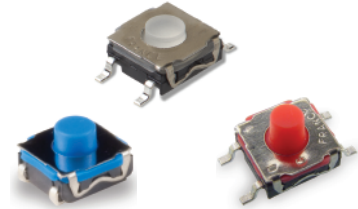
# KSC Series Sealed Tact Switch for SMT

## Features/Benefits

- Positive tactile feeling
- J or G terminations
- Various heights
- IP67

## Typical Applications

- Automotive
- Cellular phones
- Industrial electronics
- Network infrastructure and IT
- Elevator



## Specification

FUNCTION: Momentary action  
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.  
TERMINALS: J bend & Gullwing type for SMT  
SEALING: IP67 except KSC5 (IP50)

## Liability Limitation

This datasheet does not provide enough information for applications that require a certain level of quality or safety such as automotive, medical systems, or safety equipment. Please contact customer service for the 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*  | 0.1 mA |

DIELECTRIC STRENGTH (50 Hz, 1 min.):  $\geq 250$  Vrms  
CONTACT RESISTANCE:  $\leq 100$  m $\Omega$   
INSULATION RESISTANCE (100 V):  $\geq 10$  M  $\Omega$   
BOUNCE TIME:  $\leq 1$  ms

\* Ultra low current with 10  $\mu$ A - 1 VDC version are available upon request for KSC2 and KSC4

## Environmental

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

## Process

- SOLDERING: Depending on the application, this component is suited to the following methods:
- Terminals being silver or gold plated over a nickel barrier, the use of slightly activated flux is suitable.
  - Soldering on double wave machine for vertical versions: soldering time  $\leq 5$  sec.
  - Cleaning according to typical washing processes.
  - Infrared Reflow Soldering in accordance with IEC 61760-1.

## Packaging

Tape and Reel (see series for quantity information)

**NOTE:** Specifications listed above are for switches with standard options.

## KSC Product Range

| KSC1             | KSC2          | KSC3          | KSC4          | KSC5          | KSC6          | KSC7          | KSC8          | KSC9                              | KSC10         |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------------------|---------------|
| Without actuator | Soft actuator | Hard actuator | Soft actuator | Hard actuator | Hard actuator | Soft actuator | Hard actuator | Hard actuator                     | Soft actuator |
| H = 2.5 mm       | H = 3.5 mm    | H = 3.5 mm    | H = 5.2 mm    | H = 5.6 mm    | H = 7.7 mm    | H = 4.3 mm    | H = 4.9 mm    | H = 7.7 mm compatible with button | H = 4.9 mm    |
| IP67             | IP67          | IP67          | IP67          | IP50          | IP67          | IP67          | IP67          | IP67                              | IP67          |



Note: KSC Series is subject to variants. Please contact customer service for other options.

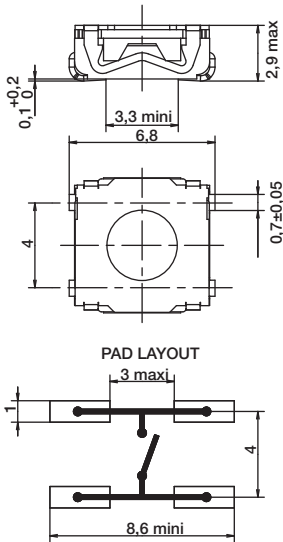
# KSC Series

## Sealed Tact Switch for SMT

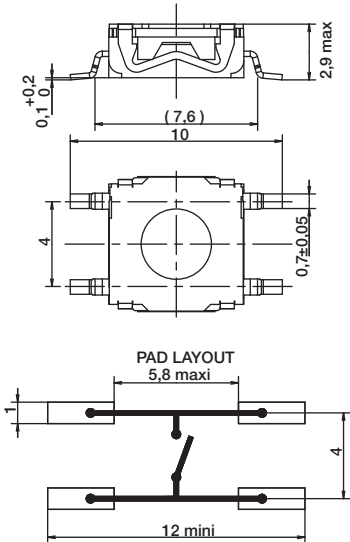
Tactile Switches

B

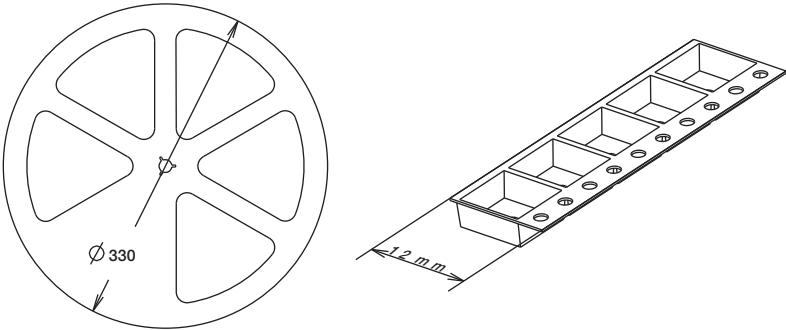
J J BEND



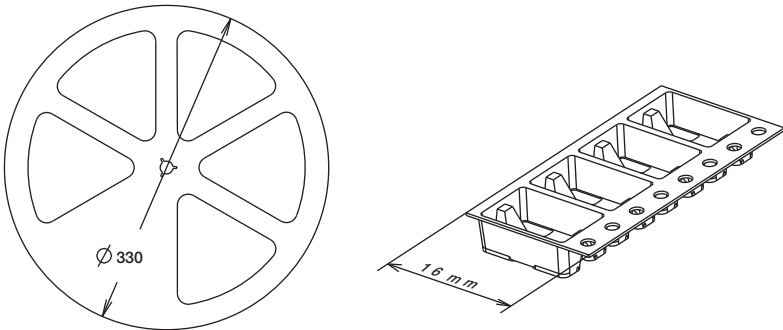
G GULLWING



12 MM



16 MM



| 12 mm | Pieces | 16 mm      | Pieces |
|-------|--------|------------|--------|
| KSC1J | 2,000  | KSC1G      | 2,000  |
| KSC2J | 2,000  | KSC2G      | 2,000  |
| KSC3J | 2,000  | KSC3G      | 2,000  |
|       |        | KSC4J & G  | 1,000  |
|       |        | KSC5J & G  | 1,000  |
|       |        | KSC6J & G  | 750    |
|       |        | KSC7J & G  | 1,000  |
|       |        | KSC8J & G  | 1,000  |
|       |        | KSC9J & G  | 750    |
|       |        | KSC10J & G | 1,000  |



Dimensions are shown: mm  
Specifications and dimensions subject to change

www.ck-components.com

# KSC1 Series

## Sealed Tact Switch for SMT

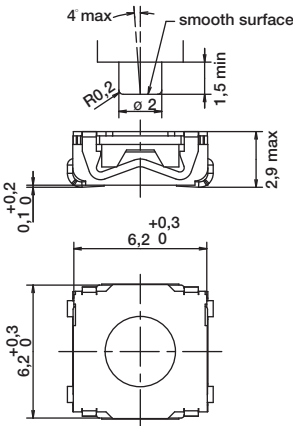
KSC1 without actuator 2,5 mm high



| Type   | Operating force FA (Newtons) | Operating life (operations) | Travel (mm) |
|--------|------------------------------|-----------------------------|-------------|
| KSC121 | 1.8 ± 0.65                   | 200,000                     | 0.3 ± 0.15  |
| KSC141 | 3 ± 0.75                     | 200,000                     | 0.3 ± 0.15  |
| KSC151 | 5.5 ± 1.4                    | 100,000                     | 0.35 ± 0.15 |

### Packaging

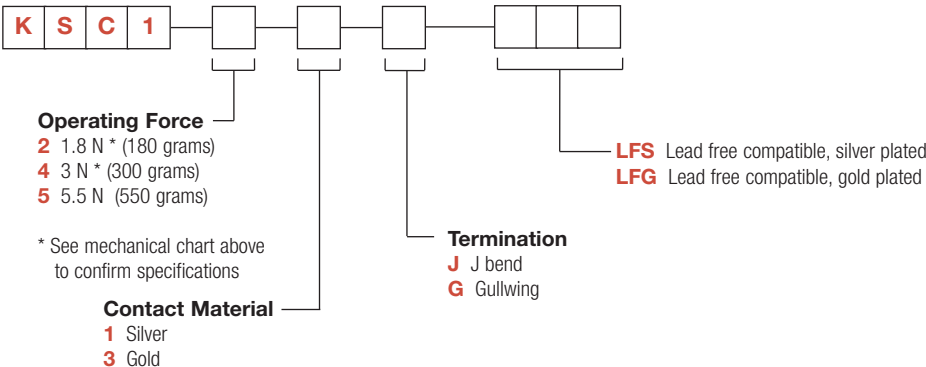
Switches delivered on continuous tape & reels of 2,000 pieces  
 Dimensions according to EIA RS-481/ IEC 60286-3 standard  
 External diameter 330 ± 2 mm



### 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.



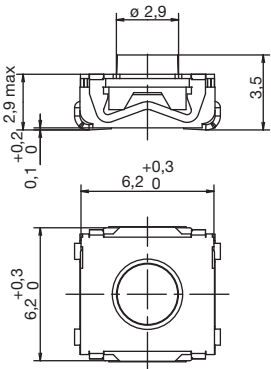
# KSC2 Series

## Sealed Tact Switch for SMT

KSC2 soft actuator 3,5 mm high



| Type       | Operating force FA (Newtons) | Operating life (operations) | Travel (mm)      |
|------------|------------------------------|-----------------------------|------------------|
| KSC201     | 1.6 ± 0.6                    | 5,000,000                   | 0.3 ± 0.2        |
| KSC221     | 2 ± 0.5                      | 500,000                     | 0.35 ± 0.3/- 0.1 |
| KSC222     | 2 ± 0.5                      | 1,000,000                   | 0.35 ± 0.15      |
| KSC241     | 3.5 ± 0.9                    | 300,000                     | 0.5 ± 0.2        |
| KSC251     | 5.55 ± 1.45                  | 300,000                     | 0.5 ± 0.2        |
| KSC231 SPD | 3.5 ± 0.9                    | 300,000                     | 0.5 ± 0.2        |
| KSC241 SPD | 3.55 ± 0.9                   | 300,000                     | 0.5 ± 0.2        |
| KSC251 SPD | 6.2 ± 1.55                   | 100,000                     | 0.6 ± 0.2        |



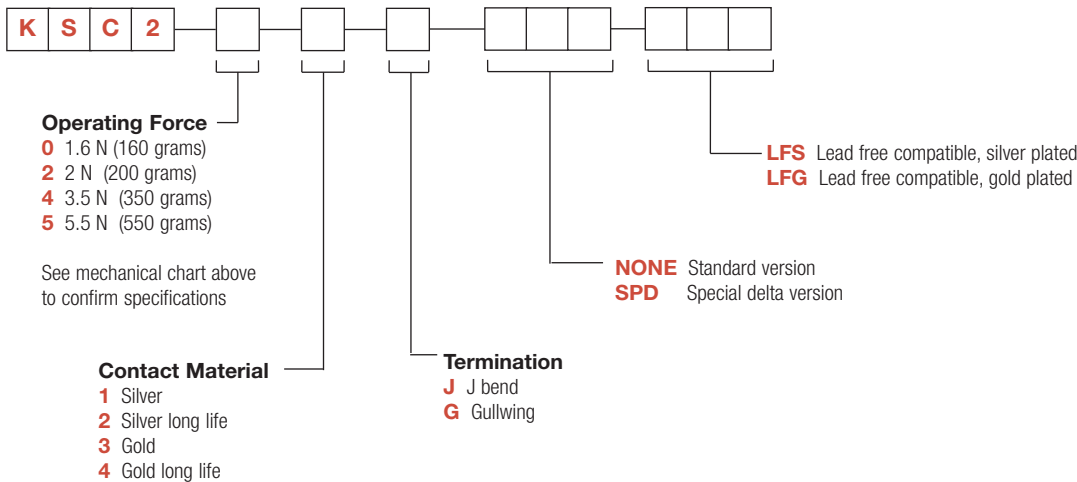
### Packaging

Switches delivered on continuous tape & reels of 2,000 pieces  
Dimensions according to EIA RS-481/ IEC 60286-3 standard  
External diameter 330 ± 2 mm

### How To Order

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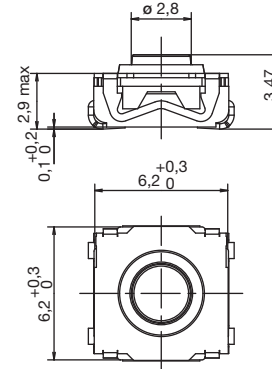


# KSC3 Series Sealed Tact Switch for SMT

KSC3 hard actuator 3,5 mm high



| Type   | Operating force FA (Newtons) | Operating life (operations) | Travel (mm)    |
|--------|------------------------------|-----------------------------|----------------|
| KSC321 | 2 ± 0.4                      | 300,000                     | 0.2 + 0.3/- 0  |
| KSC341 | 3 ± 0.75                     | 300,000                     | 0.2 + 0.3/- 0  |
| KSC351 | 5 ± 1                        | 100,000                     | 0.25 + 0.3/- 0 |



## Packaging

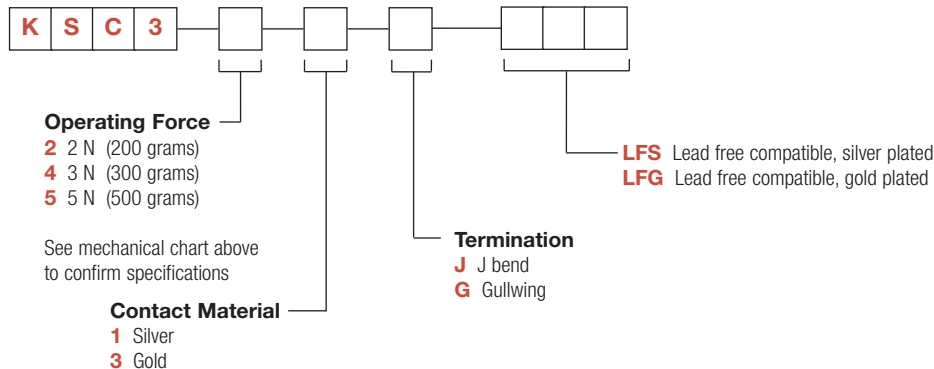
Switches delivered on continuous tape & reels of 2,000 pieces  
Dimensions according to EIA RS-481/ IEC 60286-3 standard  
External diameter 330 ± 2 mm

## How To Order

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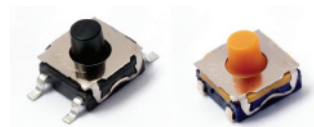
**For any part number different from those listed above, please consult your local representative.**



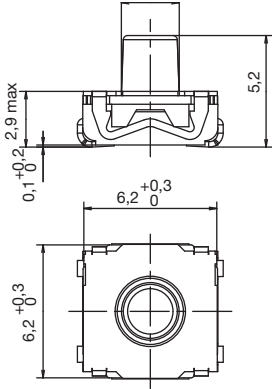
# KSC4 Series

## Sealed Tact Switch for SMT

KSC4 soft actuator 5,2 mm high



| Type        | Operating force FA (Newtons) | Operating life (operations) | Travel (mm) |
|-------------|------------------------------|-----------------------------|-------------|
| KSC401 50SH | 1.45 ± 0.55                  | 5,000,000                   | 0.5 ± 0.25  |
| KSC411 70SH | 1.4 ± 0.35                   | 1,000,000                   | 0.35 ± 0.20 |
| KSC421 70SH | 1.7 ± 0.45                   | 300,000                     | 0.5 ± 0.25  |
| KSC422 70SH | 1.7 ± 0.45                   | 1,000,000                   | 0.5 ± 0.25  |
| KSC441 70SH | 4 ± 1                        | 300,000                     | 0.75 ± 0.25 |
| KSC442 70SH | 4 ± 1                        | 1,000,000                   | 0.75 ± 0.25 |
| KSC451 70SH | 4.25 ± 0.75                  | 300,000                     | 0.8 ± 0.2   |
| KSC441 SPD  | 3.5 ± 0.9                    | 300,000                     | 0.7 ± 0.2   |
| KSC441 ST1  | 3.4 ± 1                      | 300,000                     | 0.7 ± 0.25  |
| KSC441 ST2  | 3.4 ± 1                      | 300,000                     | 0.35 ± 0.20 |
| KSC461 ST1  | 6.25 ± 1.75                  | 100,000                     | 1 ± 0.3     |
| KSC461 ST2  | 6.25 ± 1.75                  | 300,000                     | 0.5 ± 0.2   |



Tactile Switches

B

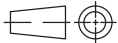
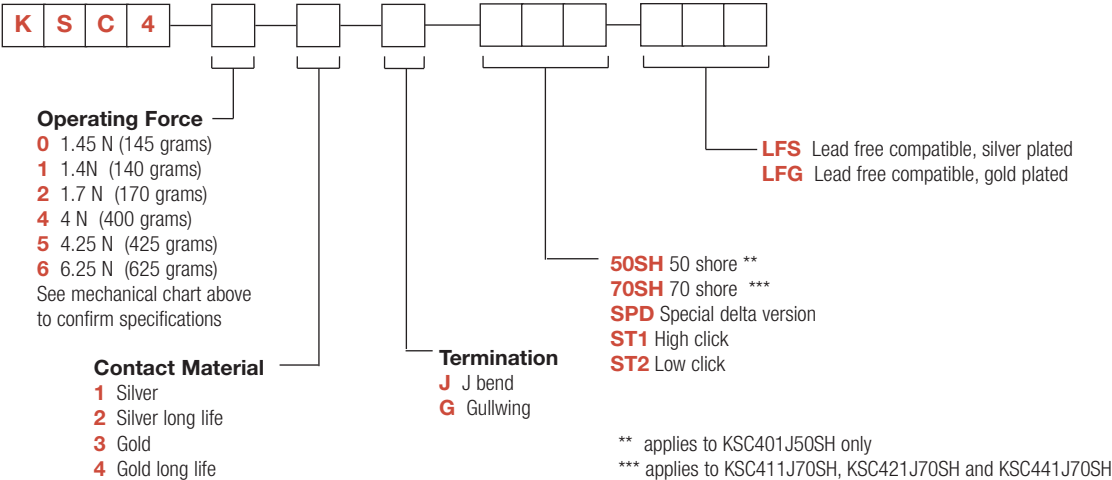
### Packaging

Switches delivered on continuous tape & reels of 1,000 pieces  
Dimensions according to EIA RS-481/ IEC 60286-3 standard  
External diameter 330 ± 2 mm

### How To Order

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First Angle  
Projection

Dimensions are shown: mm  
Specifications and dimensions subject to change

# KSC5 Series

## Tact Switch with Rocker Option for SMT

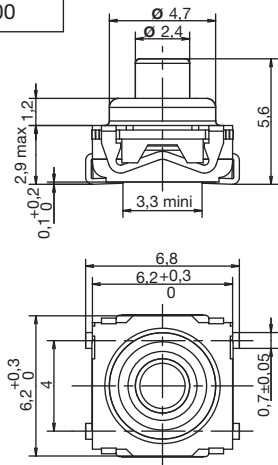
KSC5 hard actuator 5,6 mm high



| Type   | Operating force<br>axial FA<br>N (grams) | Operating force<br>lateral FL<br>N (grams) ±30% | Travel to<br>make<br>axial (mm) | Travel to<br>make<br>lateral (mm) | Life expectancy<br>cycles, axial | Life expectancy<br>cycles, lateral |
|--------|------------------------------------------|-------------------------------------------------|---------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| KSC521 | 2 ± 0.5                                  | 1.2 - 2.6                                       | 0.25 ± 0.15                     | 0.5 ± 0.25                        | 100,000                          | 10,000                             |
| KSC541 | 3 ± 0.75                                 | 1.8 - 3.8                                       | 0.25 ± 0.15                     | 0.5 ± 0.25                        | 100,000                          | 10,000                             |

### Packaging

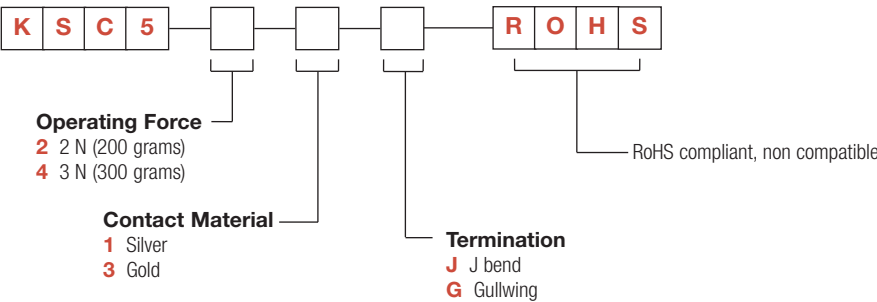
Switches delivered on continuous tape & reels of 1,000 pieces,  
dimensions according to EIA RS-481/ IEC 60286-3 standard  
External diameter 330 ± 2 mm



### How To Order

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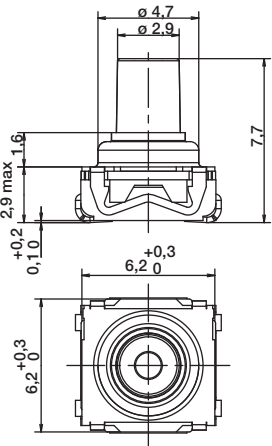
# KSC6 Series

## Sealed Tact Switch for SMT

KSC6 hard actuator 7,7 mm high



| Type   | Operating force FA (Newtons) | Operating life (operations) | Travel (mm) |
|--------|------------------------------|-----------------------------|-------------|
| KSC621 | 1.7 ± 0.5                    | 300,000                     | 0.4 ± 0.2   |
| KSC631 | 2.55 ± 0.65                  | 300,000                     | 0.4 ± 0.2   |
| KSC641 | 3.4 ± 0.85                   | 300,000                     | 0.4 ± 0.2   |



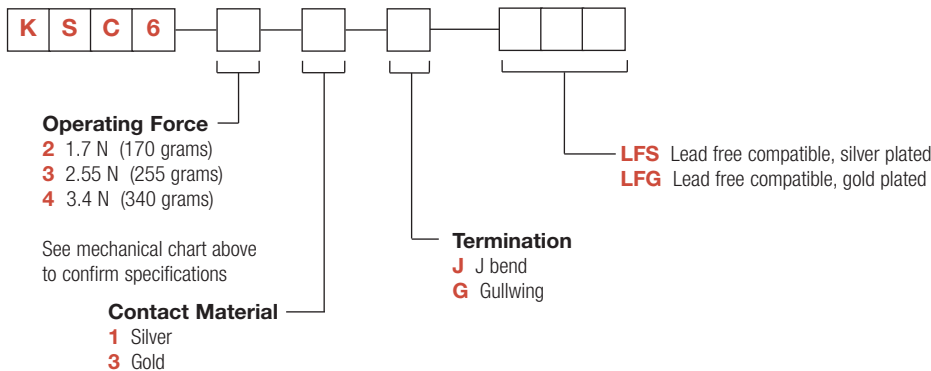
### Packaging

Switches delivered on continuous tape & reels of 750 pieces  
Dimensions according to EIA RS-481/ IEC 60286-3 standard  
External diameter 330 ± 2 mm

### 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.

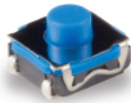
However, please note that all the combinations of these options are not feasible.  
For any part number different from those listed above, please consult your local representative.



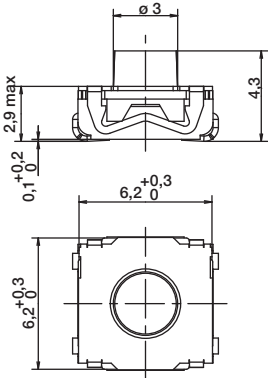
# KSC7 Series

## Tact Switch with Rocker Option for SMT

KSC7 soft actuator 4,3 mm high



| Type   | Operating force FA (Newtons) | Operating life (operations) | Travel (mm) |
|--------|------------------------------|-----------------------------|-------------|
| KSC701 | 1.6 ± 0.6                    | 5,000,000                   | 0.3 ± 0.2   |
| KSC721 | 2.25 ± 0.55                  | 300,000                     | 0.3 ± 0.15  |
| KSC741 | 3.9 ± 1                      | 300,000                     | 0.4 ± 0.2   |



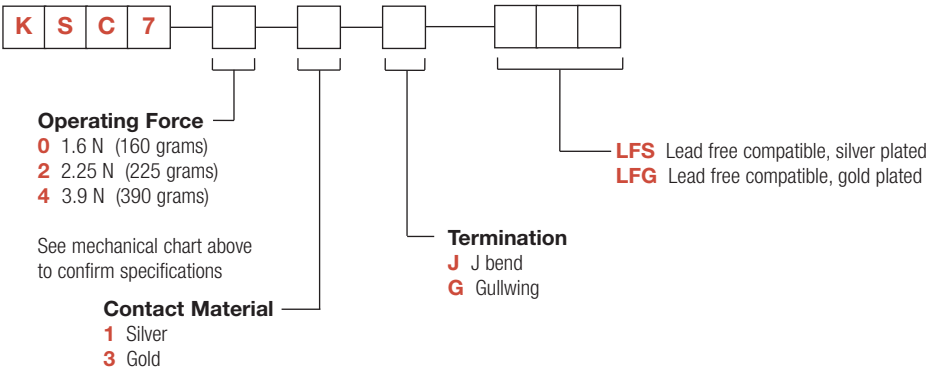
### Packaging

Switches delivered on continuous tape & reels of 1,000 pieces  
 Dimensions according to EIA RS-481/ IEC 60286-3 standard  
 External diameter 330 ± 2 mm

### How To Order

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Dimensions are shown: mm  
 Specifications and dimensions subject to change

# KSC8 Series

## Sealed Tact Switch for SMT

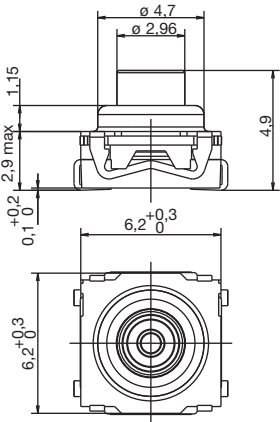
KSC8 hard actuator 4,9 mm high



| Type      | Operating force FA (Newtons) | Operating life (operations) | Travel (mm) |
|-----------|------------------------------|-----------------------------|-------------|
| KSC821    | 3.15 ± 0.75                  | 300,000                     | 0.65 ± 0.2  |
| KSC821 OL | 1.7 ± 0.5                    | 300,000                     | 0.4 ± 0.2   |
| KSC831 OL | 2.55 ± 0.65                  | 300,000                     | 0.4 ± 0.2   |
| KSC841 OL | 3.4 ± 0.85                   | 300,000                     | 0.4 ± 0.2   |

### Packaging

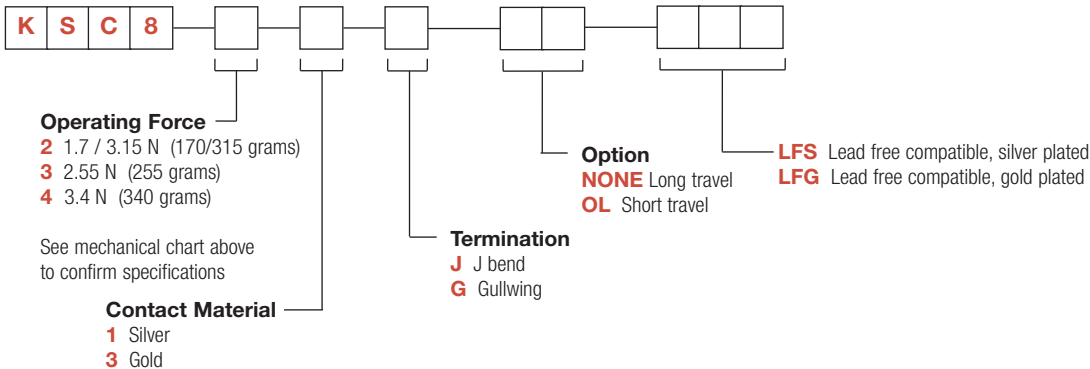
Switches delivered on continuous tape & reels of 1,000 pieces  
Dimensions according to EIA RS-481/ IEC 60286-3 standard  
External diameter 330 ± 2 mm



### How To Order

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# KSC9 Series Sealed Tact Switches for SMT

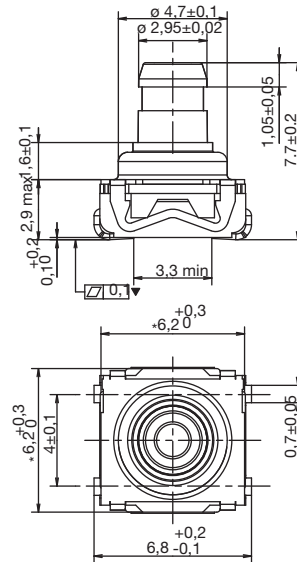
## KSC9 hard actuator 7,7 mm high



| Type   | Operating force FA (Newtons) | Operating life (operations) | Travel (mm)   |
|--------|------------------------------|-----------------------------|---------------|
| KSC921 | $1.7 \pm 0.5$                | 300,000                     | $0.4 \pm 0.2$ |
| KSC931 | $2.25 \pm 0.65$              | 300,000                     | $0.4 \pm 0.2$ |
| KSC941 | $3.4 \pm 0.85$               | 300,000                     | $0.4 \pm 0.2$ |

## Packaging

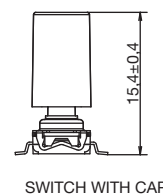
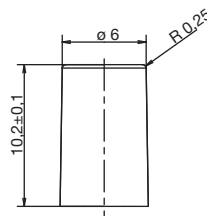
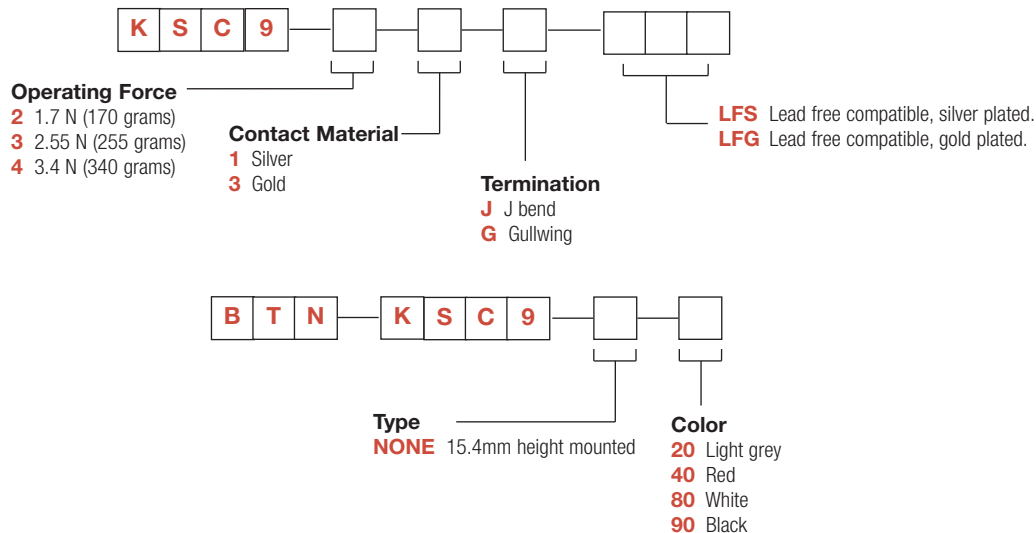
Switches delivered on continuous tape & reels of 750 pieces  
Dimensions according to EIA RS-481/ IEC 60286-3 standard  
External diameter  $330 \pm 2$  mm



## How To Order

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



Dimensions are shown: mm  
Specifications and dimensions subject to change

# KSC10 Series

## Sealed Tact Switches for SMT

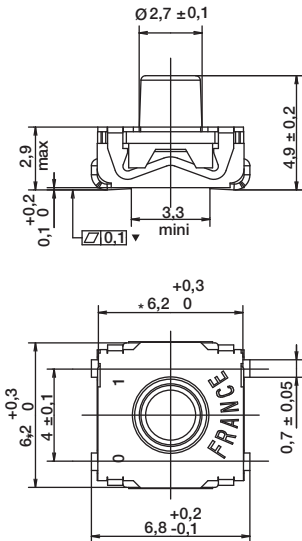
KSC10 soft actuator 4,9 mm high



| Type    | Operating force FA (Newtons) | Operating life (operations) | Travel (mm) |
|---------|------------------------------|-----------------------------|-------------|
| KSC1001 | 1.45 ± 0.55                  | 5,000,000                   | 0.45 ± 0.25 |

### Packaging

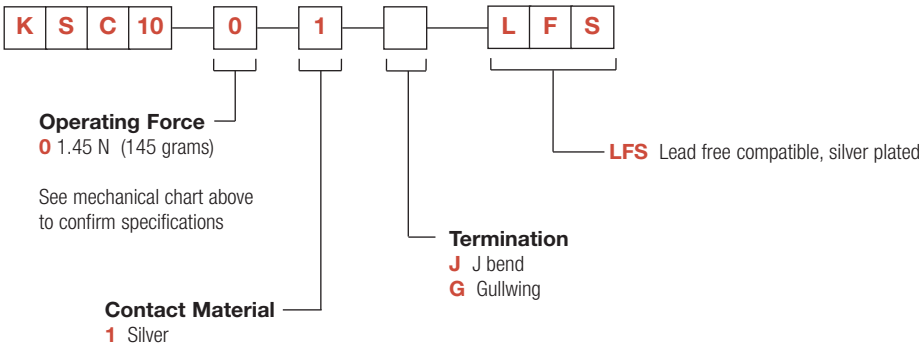
Switches delivered on continuous tape & reels of 1,000 pieces  
 Dimensions according to EIA RS-481/ IEC 60286-3 standard  
 External diameter 330 ± 2 mm



### How To Order

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Note: KSC10 offered with yellow actuator as standard, hardness 55 Shore



Dimensions are shown: mm  
 Specifications and dimensions subject to change