KSR Series
Subminiature Tact Switch for SMT

Features/Benefits
- 4 actuation forces
- G terminations
- N.O. and N.C.
- Detect type available
- Rubber actuator
- RoHS compliant and compatible

Specifications and dimensions subject to change

Typical Applications
- Automotive
- Medical equipment
- Industrial electronics
- Smart meters

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force (Newtons (grams))</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSR211G LFS / KSR213G LFG</td>
<td>1.5 &lt; 1.85 (185) &lt; 2.2</td>
<td>100,000</td>
<td>0.25 ± 0.15</td>
</tr>
<tr>
<td>KSR221G LFS / KSR223G LFG</td>
<td>1.9 &lt; 2.25 (225) &lt; 2.6</td>
<td>100,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSR231G LFS / KSR233G LFG</td>
<td>2.25 &lt; 3.00 (300) &lt; 3.75</td>
<td>100,000</td>
<td>0.35 ± 0.15</td>
</tr>
<tr>
<td>KSR251G LFS / KSR253G LFG</td>
<td>3.4 &lt; 4.50 (450) &lt; 5.6</td>
<td>100,000</td>
<td>0.5 ± 0.15</td>
</tr>
<tr>
<td>KSR221G NC LFS</td>
<td>1.5 &lt; 2.25 (225) &lt; 3</td>
<td>30,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSR223G NC LFG</td>
<td>1.5 &lt; 2 (200) &lt; 2.5</td>
<td>30,000</td>
<td>0.3 ± 0.15</td>
</tr>
</tbody>
</table>

Overload: 20 Newtons
Detect switch versions are available. Please see Detect chapter KSR2D/M series.

Packaging
Switches are delivered on continuous tape, in reels of 2,500 pieces.

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.

<table>
<thead>
<tr>
<th>Actuator</th>
<th>Operating Force</th>
<th>Contact Material</th>
<th>Switch Function</th>
<th>Termination</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1 N (180 grams)</td>
<td>Silver</td>
<td>(NONE) Normally open</td>
<td>G Gull wing</td>
</tr>
<tr>
<td>2</td>
<td>2 N (200 grams)</td>
<td>Gold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3 N (300 grams)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>4.5 N (450 grams)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Available on KSR22xG only.

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
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Subminiature Tact Switch for SMT

KSR

Dimensions are shown: mm
Specifications and dimensions subject to change

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Tactile Switches

KSR

TAPE & REEL

First Angle
Projection

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
KSR Long Life-200,000 cycles-Gold and Silver Series Subminiature Tact Switch for SMT

Features/Benefits
- 4 actuation forces
- G terminations
- N.O.
- Detect type available
- Rubber actuator
- IP50 sealed
- RoHS compliant and compatible

Typical Applications
- Automotive
- Medical equipment
- Industrial electronics

Specification
FUNCTION: momentary action
CONTACT ARRANGEMENT: Normally Open
TERMINALS: Gullwing type for SMT

Mechanical

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating Force (Fa)</th>
<th>Operating Life</th>
<th>Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver versions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KSR212G LFS</td>
<td>1,5 &lt; 1,85 (185)</td>
<td>200,000</td>
<td>0,25 ± 0,15</td>
</tr>
<tr>
<td>KSR222G LFS</td>
<td>1,9 &lt; 2,25 (225)</td>
<td>200,000</td>
<td>0,3 ± 0,15</td>
</tr>
<tr>
<td>KSR232G LFS</td>
<td>2,25 &lt; 3,00 (300)</td>
<td>200,000</td>
<td>0,35 ± 0,15</td>
</tr>
<tr>
<td>KSR252G LFS</td>
<td>3,4 &lt; 4,50 (450)</td>
<td>200,000</td>
<td>0,5 ± 0,15</td>
</tr>
<tr>
<td>Gold versions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KSR214G LFS</td>
<td>1,5 &lt; 1,85 (185)</td>
<td>200,000</td>
<td>0,25 ± 0,15</td>
</tr>
<tr>
<td>KSR224G LFS</td>
<td>1,9 &lt; 2,25 (225)</td>
<td>200,000</td>
<td>0,3 ± 0,15</td>
</tr>
<tr>
<td>KSR234G LFS</td>
<td>2,25 &lt; 3,00 (300)</td>
<td>200,000</td>
<td>0,35 ± 0,15</td>
</tr>
<tr>
<td>KSR254G LFS</td>
<td>3,4 &lt; 4,50 (450)</td>
<td>200,000</td>
<td>0,5 ± 0,15</td>
</tr>
</tbody>
</table>

OVERLOAD: 20 Newtons

Electrical

<table>
<thead>
<tr>
<th>Type</th>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM POWER:</td>
<td>1 VA</td>
<td>0.2 VA</td>
</tr>
<tr>
<td>MAXIMUM VOLTAGE:</td>
<td>32 V dc</td>
<td>32 V dc</td>
</tr>
<tr>
<td>MINIMUM VOLTAGE:</td>
<td>20 m Vdc</td>
<td>20 m Vdc</td>
</tr>
<tr>
<td>MAXIMUM CURRENT DC:</td>
<td>50 mA</td>
<td>10 mA</td>
</tr>
<tr>
<td>MINIMUM CURRENT DC:</td>
<td>1 mA</td>
<td>1 mA</td>
</tr>
</tbody>
</table>

CONTACT RESISTANCE: ≤ 100 m Ω
INSULATION RESISTANCE (100 V): 1 G Ω (between terminals)
BOUNCE TIME: 1 ms max

Environmental

<table>
<thead>
<tr>
<th>Type</th>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING TEMPERATURE:</td>
<td>-40°C to 85°C</td>
<td>-40°C to 125°C</td>
</tr>
<tr>
<td>STORAGE TEMPERATURE:</td>
<td>-55°C to 85°C</td>
<td>-55°C to 125°C</td>
</tr>
</tbody>
</table>

Process

SOLDERING: Compatible with lead free reflow soldering process.

NOTE: Specifications listed above are for switches with standard options.
For information on specific and custom switches, consult Customer Service Center.

Packaging
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Actuator
2 Soft actuator

Operating Force
1 1.8 N (180 grams)
2 2.0 N (200 grams)
3 3.0 N (300 grams)
5 4.5 N (450 grams)

Contact Material
2 Silver
4 Gold

Termination
G Gull wing

LFS RoHS compliant and compatible, Silver plated.
LFG RoHS compliant and compatible, Gold plated.
KSR Long Life-200,000 cycles-Gold and Silver Series Subminiature Tact Switch for SMT

**KSR**

![Diagram of KSR switch]

**Tape & Reel**

![Schematic diagram of tape and reel]

**Recommended PCB layout**

- ø1,9
- 2,5
- 1,75
- 3,8
- 7,3
- 1
- 6
- 6
- 8
- 1,4

**Dimensions**

- ø1,5
- 2,8
- 6,25
- 7,65
- 6,25
- 12
- 5,5
- 2,1
- 4
- 2
- 2
- 4
- 3,75
- 8

**Direction of Feed**

Specifications and dimensions subject to change.

Dimensions are shown: mm

www.ckswitches.com