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

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

Specifications

Function: momentary action
Contact arrangement: Normally Open
Terminals: Gullwing type for SMT

Mechanical

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force (Newtons)</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.

Electrical

<table>
<thead>
<tr>
<th></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 VDC</td>
<td>32 VDC</td>
</tr>
<tr>
<td>Minimum voltage</td>
<td>20 mV</td>
<td>20 mV</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 mΩ
Insulation resistance: (100 V): 1 GΩ (between terminals)
Bounce time: 1 ms max.

Environmental

<table>
<thead>
<tr>
<th></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: Lead free reflow soldering process in accordance with IEC 61760-1.

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

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.

*Available on KSR223G only.
KSR Series
Subminiature Tact Switch for SMT

KSR

Recommended PCB layout

TAPE & REEL

DIRECTION OF FEED

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
# Tactile Switches

## 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) (Newtons (grams))</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Silver versions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KSR212G LFS</td>
<td>1.5 &lt; 1,85 (185) &lt; 2.2</td>
<td>200,000</td>
<td>0.25 ± 0.15</td>
</tr>
<tr>
<td>KSR222G LFS</td>
<td>1.9 &lt; 2.25 (225) &lt; 2.6</td>
<td>200,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSR232G LFS</td>
<td>2.25 &lt; 3.00 (300) &lt; 3.75</td>
<td>200,000</td>
<td>0.35 ± 0.15</td>
</tr>
<tr>
<td>KSR252G LFS</td>
<td>3.4 &lt; 4.50 (450) &lt; 5.6</td>
<td>200,000</td>
<td>0.5 ± 0.15</td>
</tr>
<tr>
<td><strong>Gold versions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KSR214G LFS</td>
<td>1.5 &lt; 1,85 (185) &lt; 2.2</td>
<td>200,000</td>
<td>0.25 ± 0.15</td>
</tr>
<tr>
<td>KSR224G LFS</td>
<td>1.9 &lt; 2.25 (225) &lt; 2.6</td>
<td>200,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSR234G LFS</td>
<td>2.25 &lt; 3.00 (300) &lt; 3.75</td>
<td>200,000</td>
<td>0.35 ± 0.15</td>
</tr>
<tr>
<td>KSR254G LFS</td>
<td>3.4 &lt; 4.50 (450) &lt; 5.6</td>
<td>200,000</td>
<td>0.5 ± 0.15</td>
</tr>
</tbody>
</table>

**OVERLOAD:** 20 Newtons

### Electrical

<table>
<thead>
<tr>
<th>Function</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>Function</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

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.

---

**KSR212G LFS**  
**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  
**LFS** RoHS compliant and compatible. Silver plated.  
**LFG** RoHS compliant and compatible. Gold plated.  
**KSR222G LFS**  
**KSR232G LFS**  
**KSR252G LFS**  
**KSR214G LFS**  
**KSR224G LFS**  
**KSR234G LFS**  
**KSR254G LFS**  
**G** Gullwing  

---

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

Tape & Reel

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com