Committed to excellence

Switches

Product Lines & Applications

Consult | Components | Logistics | Quality

www.rutronik.com
C&K offers the largest portfolio of available switches and unmatched custom design capabilities to help customers access or create any switch they need.
# Tactile Switches

<table>
<thead>
<tr>
<th>Information</th>
<th>KSC</th>
<th>KMT0</th>
<th>KSJ</th>
<th>PTS645</th>
<th>KSR</th>
<th>PTS641</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series</strong></td>
<td>KSC</td>
<td>KMT0</td>
<td>KSJ</td>
<td>PTS645</td>
<td>KSR</td>
<td>PTS641</td>
</tr>
<tr>
<td><strong>Footprint</strong></td>
<td>6.8 x 6.2</td>
<td>3 x 2.6</td>
<td>7.62 x 5.08</td>
<td>6 x 6</td>
<td>7.3 x 3.8</td>
<td>6.3 x 6.3</td>
</tr>
<tr>
<td><strong>Total Height (mm)</strong></td>
<td>2.5 to 7.7</td>
<td>0.65</td>
<td>6.65</td>
<td>4.3 to 9.5</td>
<td>2.5</td>
<td>2.5 to 3.4</td>
</tr>
<tr>
<td><strong>Actuation Force (N)</strong></td>
<td>1 to 6.25</td>
<td>1.0 to 3.4</td>
<td>2.0 to 3.0</td>
<td>1.3 to 2.6</td>
<td>1.2 to 4.5</td>
<td>1.6 to 3.2</td>
</tr>
<tr>
<td><strong>IP Rating</strong></td>
<td>IP67 (KSC 5: IP50)</td>
<td>IP68</td>
<td>IP60</td>
<td>IP40</td>
<td>IP40</td>
<td>IP40</td>
</tr>
<tr>
<td><strong>Life Cycles</strong></td>
<td>100,000 to 5,000,000</td>
<td>300,000 to 1,000,000</td>
<td>30,000 to 100,000</td>
<td>100,000</td>
<td>100,000 to 200,000</td>
<td>100,000</td>
</tr>
<tr>
<td><strong>Features / Benefits</strong></td>
<td>Positive tactile feeling</td>
<td>Smallest thickness with integrated actuator</td>
<td>Designed for mechanism</td>
<td>Variety of actuator lengths</td>
<td>G Terminations</td>
<td>6.3 mm x 6.3 mm footprint</td>
</tr>
<tr>
<td></td>
<td>J or G terminations</td>
<td>Extended life cycles</td>
<td>Spherical actuator allows actuation force off center ± 30° with regard to vertical</td>
<td>Choice of actuation force</td>
<td>N.O. and N.C.</td>
<td>Multiple heights</td>
</tr>
<tr>
<td></td>
<td>Various heights</td>
<td>IP68</td>
<td>Ultra low current capabilities</td>
<td>Compliant side actuation</td>
<td>Detect type available</td>
<td>Multiple heights</td>
</tr>
<tr>
<td></td>
<td>IP67</td>
<td></td>
<td></td>
<td></td>
<td>Rubber actuator</td>
<td>Ground pin option</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RoHS compliant and compatible</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Applications</strong></td>
<td>Automotive</td>
<td>Mobile Phones</td>
<td>Automotive</td>
<td>Consumer products</td>
<td>Automotive</td>
<td>Metering</td>
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<tr>
<td></td>
<td>Medical</td>
<td>Hearing Aids</td>
<td>Cranes, off road, railway</td>
<td>Instrumentation</td>
<td>Medical</td>
<td>White goods</td>
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<tr>
<td></td>
<td>Industrial</td>
<td>Bluetooth Headset</td>
<td>Factory automation</td>
<td>Computer products</td>
<td>Industrial</td>
<td>Home and garden equipment</td>
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<tr>
<td></td>
<td>Network infrastructure</td>
<td>HA remote controls</td>
<td>Security systems</td>
<td>Industrial electronics</td>
<td>Smart meters</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Detect Switches

<table>
<thead>
<tr>
<th>Series</th>
<th>SSW</th>
<th>HDT</th>
<th>ATS</th>
<th>ZMA</th>
<th>SDS</th>
<th>FDSE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Footprint</strong> (with actuator)</td>
<td>15.4 x 8.3</td>
<td>4.7 x 3.8</td>
<td>7.3 x 3.8</td>
<td>12.8 x 5.8</td>
<td>6.7 x 5.0</td>
<td>4.2 x 3.6</td>
</tr>
<tr>
<td><strong>Total Height (mm)</strong></td>
<td>12.2</td>
<td>5.3</td>
<td>3.2</td>
<td>6.6</td>
<td>2.0</td>
<td>3.14</td>
</tr>
<tr>
<td><strong>Actuation Force (N)</strong></td>
<td>2.0</td>
<td>0.34</td>
<td>2.0</td>
<td>0.78 or 1.47</td>
<td>0.74</td>
<td>0.34</td>
</tr>
<tr>
<td><strong>Operating temperature (°C)</strong></td>
<td>-40 to 85</td>
<td>-40 to 85</td>
<td>-40 to 125</td>
<td>-40 to 85</td>
<td>-40 to 85</td>
<td>-40 to 60</td>
</tr>
<tr>
<td><strong>Life Cycles</strong></td>
<td>300,000</td>
<td>100,000</td>
<td>5,000</td>
<td>10,000 - 300,000</td>
<td>50,000</td>
<td>50,000</td>
</tr>
</tbody>
</table>

### Features / Benefits

- SMT
- Redundant contacts
- Change over time <15 ms
- Top and side actuation
- Low acoustics
- IP67
- Top or side actuation
- Pick and place compatible
- RoHS compliant and compatible
- Halogen free
- Normally closed function
- Vertical detect
- Reliable long time compression
- RoHS compliant and compatible
- IP54
- Reliable snap-acting mechanism
- Compact size
- Various PCB terminals and actuators
- RoHS compliant and compatible
- Low profile package sits just 2 mm of PCB
- Low actuating force
- Pick & place compatible, available in tape & reel packaging
- RoHS compliant and compatible
- Angled actuation
- Flat or Bending Termination
- Long travel type
- RoHS Compliant

### Applications

- Automotive, ASIL related applications (electronic parking brake, by wire function)
- Consumer electronics
- Computers
- Medical devices
- ATCA and MicroTCA devices
- Smart meters
- Alarm systems
- Anti-tamper devices
- RCB detection switch
- Communication devices
- Testing equipment
- Alarm systems
- Consumer electronics
- Medical devices
- Consumer electronic devices
- PCB lock cam detect
- ATCA and MicroTCA
- Consumer electronics
- Medical devices
- Safety control devices
Key Market Focus

Mission Critical Applications

INDUSTRIAL AUTOMOTIVE MEDICAL BUILDING AUTOMATION HVAC SAFETY & SECURITY HIGH END TEST ENERGY & UTILITY FACTORY AUTOMATION BY WIRE FUNCTION INTERIOR CONTROLS ACCESS CONTROL INTERIOR DETECTION ELECTROSURGERY TIME RELEASED MEDICAL PATCHES DENTAL SUITES

Home Automation

Key Markets

Key Segments

Building Application Safety & Security HVAC

Building Application – Lighting & Energy

Safety & Security

HVAC

Key Markets

Building Application – Lighting & Energy

Safety & Security

HVAC
Automotive

Key Markets

Key Segments

Interior Controls

Access Management

Other Fields of Applications

Interior Controls

Middle Console

Column Switches

Seat Adjustment

KSC4 KSC XA

KSC2 KSC XA

KSC2 KMR2

Interior Controls

Access Management

Keyfobs

Handles / Trunks

Latches

KSS KMR2

KSC2 KSC4

KSC2 KSC4

Access Management

Other Fields of Applications

Gear Shifters

Electric Park Brake

Interior Detection

KSC4 KSC V2

PVA

KSC4D

Other Fields of Applications
### Key Segments

<table>
<thead>
<tr>
<th>Electrosurgery</th>
<th>e-Health</th>
<th>Medical Wearables</th>
</tr>
</thead>
</table>

### Electrosurgery

- Instruments
- Lasers
- Respirators
- Defibrillators

#### Instruments
- KMR
- KSC2

#### Lasers
- PTS830

#### Respirators
- KSC4

#### Defibrillators
- KSC3
- 8020

### e-Health

- Thermometers
- Blood Pressure Monitors
- Monitors
- Electronic Inhalers

#### Thermometers
- KMT0
- KXT3

#### Blood Pressure Monitors
- KMR4
- KMT0

#### Monitors
- KSC2

#### Electronic Inhalers
- KMT0
- ATS

### Medical Wearables

- Monitoring Devices
- Pulse Oximeter
- Audiology Equipment

#### Monitoring Devices
- KXT3
- KMT0

#### Pulse Oximeter
- HDT
- PTS540

#### Audiology Equipment
- KSC2
- 8020
Rutronik
Core Competences

Consult – Know-how. Built-in.
The Technical Competence from RUTRONIK
Worldwide and individual consulting on the spot: by competent sales staff, application engineers and product specialists.

The Product Portfolio from RUTRONIK
Wide product range of semiconductors, passive and electromechanical components, displays & monitors, boards & systems, storage and wireless technologies for optimum coverage of your needs.

Quality Management without Compromise
The integrated management system (IMS) encompasses quality control, information security, environmental protection, occupational health and safety.

Our Product Portfolio

- Semiconductors
- Passive Components
- Electromechanical Components
- Displays & Monitors
- Boards & Systems
- Storage Technologies
- Wireless Technologies

Our Initiatives

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Founded in 1928, C&K is one of the world’s most trusted brands of high-quality electromechanical switches. The company’s unmatched custom design capabilities are recognized globally by design engineers who demand reliable switch performance.

C&K offers more than 55,000 standard products and 8.5 million switch combinations to companies that design, manufacture and distribute electronics products. Used in automotive, industrial, IoT, wearables, medical, telecom, consumer products, aerospace, and POS terminals, C&K products include tactile, pushbutton, snap-acting, toggle, rocker, detect, DIP, keyswitch, navigation, rotary, slide, switchlock, thumbwheel, smart card readers, high-reliability connectors and custom assemblies.
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