



**RUTRONIK**  
ELECTRONICS WORLDWIDE



Committed to excellence

# Switches

Product Lines & Applications

**C&K**<sup>®</sup>

Consult | Components | Logistics | Quality

[www.rutronik.com](http://www.rutronik.com)

# C&K for Every Application

**RUTRONIK**  
ELECTRONICS WORLDWIDE

Tactile  
Switches



Detect  
Switches



Pushbutton  
Switches



Toggle  
Switches



Rocker  
Switches



Rotary  
Switches



Slide  
Switches



DIP  
Switches



Snap  
Switches



Key-  
Switches



KSC XA

ATP19

FDS

KSC DCT

KSC PF

New  
Products

**C&K**<sup>®</sup>

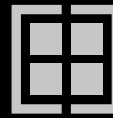
PT

SSW

PTS647

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

# Expertise – Every Touch & Every Where



# RUTRONIK

ELECTRONICS WORLDWIDE



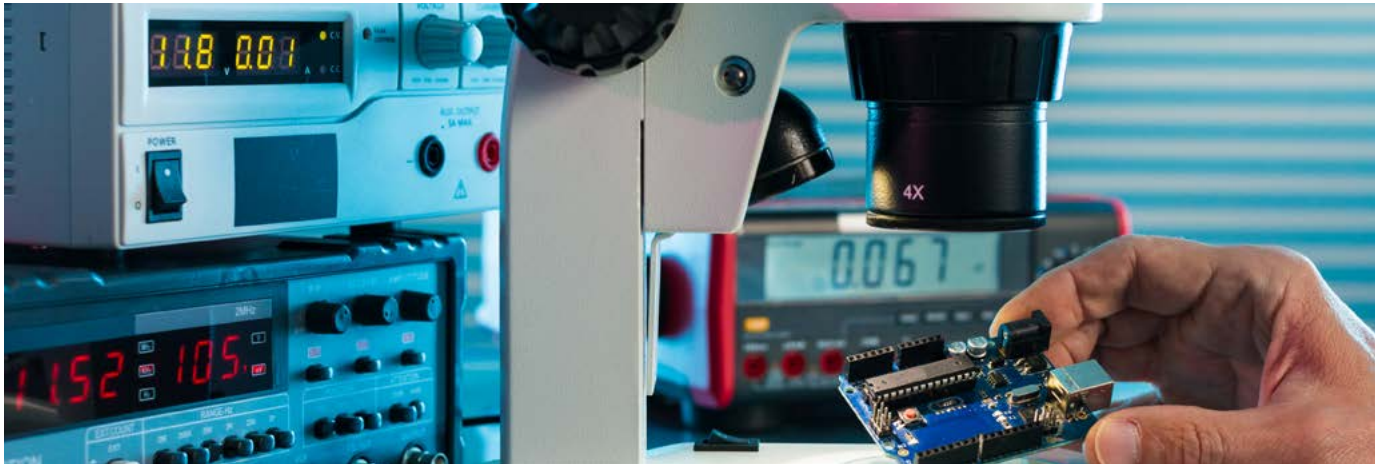
**RUTRONIK**  
AUTOMOTIVE


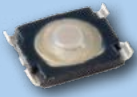




**RUTRONIK**  
EMBEDDED

**RUTRONIK**  
POWER

**RUTRONIK**  
SMART



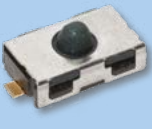
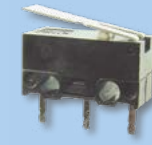
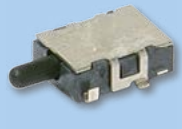
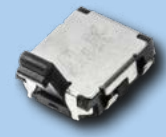
# Tactile Switches



Information						
<b>Series</b>	KSC	KMT0	KSJ	PTS645	KSR	PTS641
<b>Footprint</b>	6.8 x 6.2	3 x 2.6	7.62 x 5.08	6 x 6	7.3 x 3.8	6.3 x 6.3
<b>Total Height (mm)</b>	2.5 to 7.7	0.65	6.65	4.3 to 9.5	2.5	2.5 to 3.4
<b>Actuation Force (N)</b>	1 to 6.25	1.0 to 3.4	2.0 to 3.0	1.3 to 2.6	1.2 to 4.5	1.6 to 3.2
<b>IP Rating</b>	IP67 (KSC 5: IP50)	IP68	IP60	IP40	IP40	IP40
<b>Life Cycles</b>	100,000 to 5,000,000	300,000 to 1,000,000	30,000 to 100,000	100,000	100,000 to 200,000	100,000
<b>Features / Benefits</b>	<ul style="list-style-type: none"> <li>Positive tactile feeling</li> <li>J or G terminations</li> <li>Various heights</li> <li>IP67</li> </ul>	<ul style="list-style-type: none"> <li>Smallest thickness with integrated actuator</li> <li>Extended life cycles</li> <li>IP68</li> <li>Ultra low current capabilities</li> </ul>	<ul style="list-style-type: none"> <li>Designed for mechanism</li> <li>Spherical actuator allows actuation force off center <math>\pm 30^\circ</math> with regard to vertical</li> <li>Compliant side actuation</li> </ul>	<ul style="list-style-type: none"> <li>Variety of actuator lengths</li> <li>Choice of actuation force</li> <li>RoHS compliant and compatible</li> </ul>	<ul style="list-style-type: none"> <li>G Terminations</li> <li>N.O. and N.C.</li> <li>Detect type available</li> <li>Rubber actuator</li> <li>RoHS compliant and compatible</li> </ul>	<ul style="list-style-type: none"> <li>6.3 mm x 6.3 mm footprint</li> <li>Multiple heights</li> <li>Ground pin option</li> </ul>
<b>Applications</b>	<ul style="list-style-type: none"> <li>Automotive</li> <li>Medical</li> <li>Industrial</li> <li>Network infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Mobile Phones</li> <li>Hearing Aids</li> <li>Bluetooth Headset</li> <li>HA remote controls</li> </ul>	<ul style="list-style-type: none"> <li>Automotive</li> <li>Cranes, off road, railway</li> <li>Factory automation</li> <li>Security systems</li> </ul>	<ul style="list-style-type: none"> <li>Consumer products</li> <li>Instrumentation</li> <li>Computer products</li> <li>Industrial</li> </ul>	<ul style="list-style-type: none"> <li>Automotive</li> <li>Medical equipment</li> <li>Industrial electronics</li> <li>Smart meters</li> </ul>	<ul style="list-style-type: none"> <li>Metering</li> <li>White goods</li> <li>Home and garden equipment</li> </ul>

# Detect Switches



						
<b>Series</b>	SSW	HDT	ATS	ZMA	SDS	FDSE
<b>Footprint (with actuator)</b>	15,4 x 8.3	4.7 x 3.8	7.3 x 3.8	12.8 x 5.8	6.7 x 5.0	4.2 x 3.6
<b>Total Height (mm)</b>	12.2	5.3	3.2	6.6	2.0	3.14
<b>Actuation Force (N)</b>	2.0	0.34	2.0	0.78 or 1.47	0.74	0.34
<b>Operating temperature (°C)</b>	-40 to 85	-40 to 85	-40 to 125	-40 to 85	-40 to 85	-40 to 60
<b>Life Cycles</b>	300,000	100,000	5,000	10,000 - 300,000	50,000	50,000
<b>Features / Benefits</b>	<ul style="list-style-type: none"> <li>▪ SMT</li> <li>▪ Redundant contacts</li> <li>▪ Change over time &lt;15 ms</li> <li>▪ Top and side actuation</li> <li>▪ Low acoustics</li> <li>▪ IP67</li> </ul>	<ul style="list-style-type: none"> <li>▪ Top or side actuation</li> <li>▪ Pick and place compatible</li> <li>▪ RoHS compliant and compatible</li> <li>▪ Halogen free</li> </ul>	<ul style="list-style-type: none"> <li>▪ Normally closed function</li> <li>▪ Vertical detect</li> <li>▪ Reliable long time compression</li> <li>▪ RoHS compliant and compatible</li> <li>▪ IP54</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reliable snap-acting mechanism</li> <li>▪ Compact size</li> <li>▪ Various PCB terminals and actuators</li> <li>▪ RoHS compliant and compatible</li> </ul>	<ul style="list-style-type: none"> <li>▪ Low profile package sits just 2mm of PCB</li> <li>▪ Low actuating force</li> <li>▪ Pick &amp; place compatible, available in tape &amp; reel packaging</li> <li>▪ RoHS compliant and compatible</li> </ul>	<ul style="list-style-type: none"> <li>▪ Angled actuation</li> <li>▪ Flat or Bending Termination</li> <li>▪ Long travel type</li> <li>▪ RoHS Compliant</li> </ul>
<b>Applications</b>	<ul style="list-style-type: none"> <li>▪ Automotive, ASIL related applications (electronic parking brake, by wire function)</li> <li>▪ Safety applications</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consumer electronics</li> <li>▪ Computers</li> <li>▪ Medical devices</li> <li>▪ ATCA and MicroTCA devices</li> </ul>	<ul style="list-style-type: none"> <li>▪ Smart meters</li> <li>▪ Alarm systems</li> <li>▪ Anti-tamper devices</li> </ul>	<ul style="list-style-type: none"> <li>▪ RCB detection switch</li> <li>▪ Communication devices</li> <li>▪ Testing equipment</li> <li>▪ Alarm systems</li> <li>▪ Consumer electronics</li> </ul>	<ul style="list-style-type: none"> <li>▪ Medical devices</li> <li>▪ Consumer electronic devices</li> <li>▪ PCB lock cam detect</li> <li>▪ ATCA and MicroTCA</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consumer electronics</li> <li>▪ Medical devices</li> <li>▪ Safety control devices</li> </ul>

## Key Segments



**Building Application**

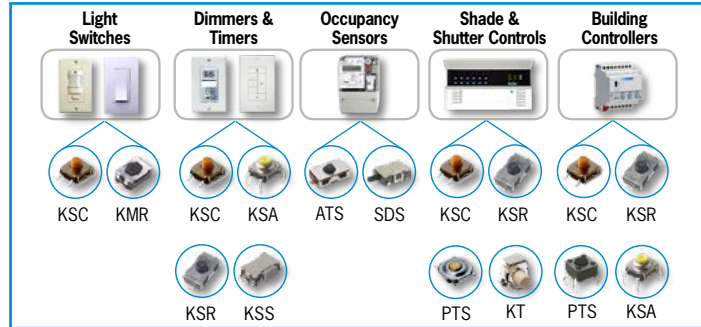


**Safety & Security**

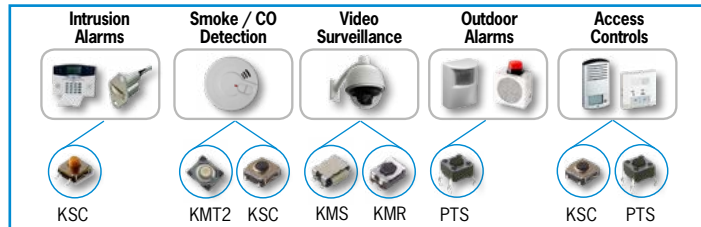


**HVAC**

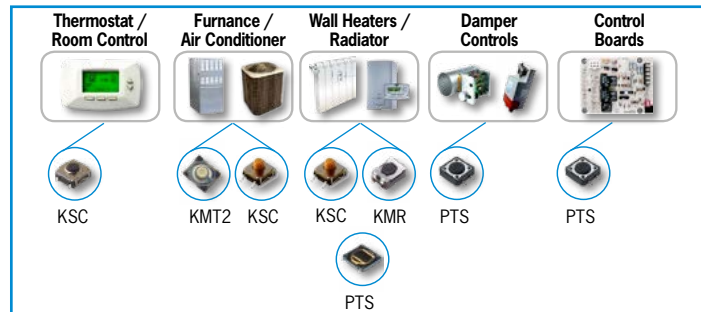
## Building Application – Lighting & Energy



## Safety & Security



## HVAC



## Key Segments



Interior Controls

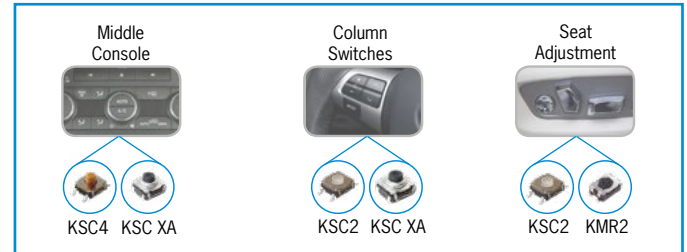


Access Management



Other Fields of Applications

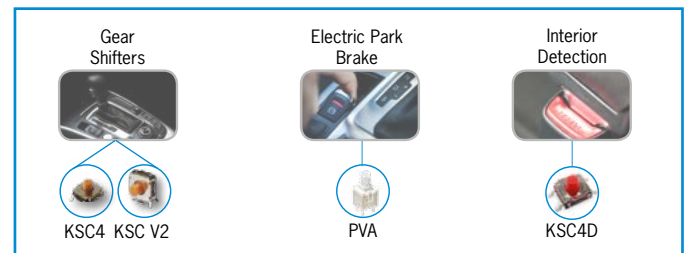
## Interior Controls



## Access Management



## Other Fields of Applications



## Key Segments



**Electrosurgery**



**e-Health**

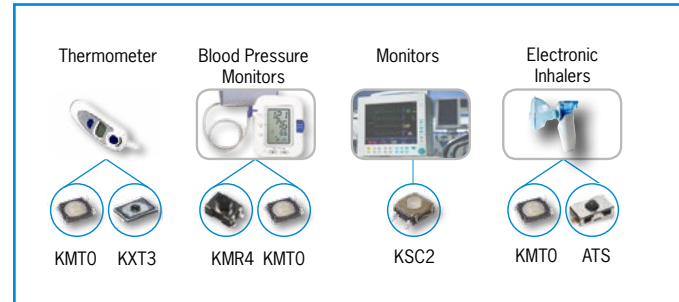


**Medical  
Wearables**

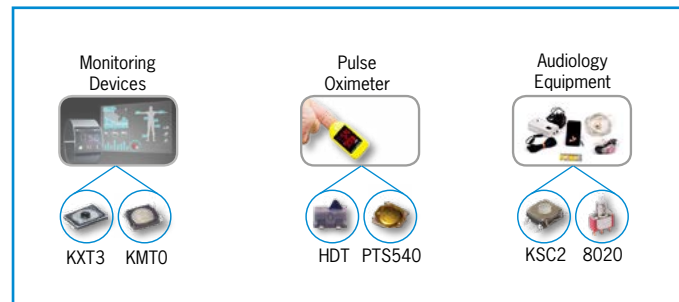
## Electrosurgery



## e-Health



## Medical Wearables





# Rutronik Core Competences

## Our Product Portfolio



Semiconductors



Boards & Systems



Passive Components



Storage Technologies



Electromechanical  
Components



Wireless Technologies



Displays & Monitors

## Our Initiatives



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## Committed to Excellence

### 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.

### Components – Variety. Built-in.

**The Product Portfolio from RUTRONIK**

Wide product range of semiconductors, passive and electro-mechanical components, displays & monitors, boards & systems, storage and wireless technologies for optimum coverage of your needs.

### Logistics – Reliability. Built-in.

**The Delivery Service from RUTRONIK**

Innovative and flexible solutions: from supply chain management to individual logistics systems.

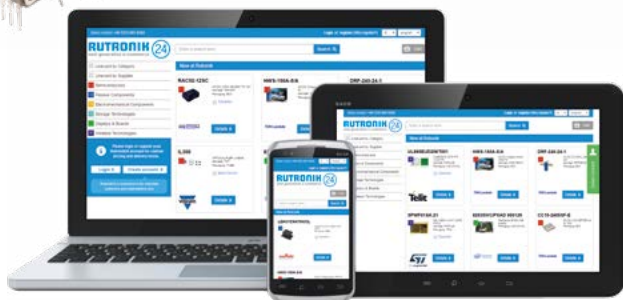
### Quality – Security. Built-in.

**Quality Management without Compromise**

The integrated management system (IMS) encompasses quality control, information security, environmental protection, occupational health and safety.



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**C&K**

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.





**RUTRONIK**  
ELECTRONICS WORLDWIDE

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