



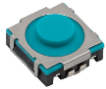
C&K[®] Switches Overview

Control, Sense, Set

 **Littelfuse[®]**
Expertise Applied | Answers Delivered

C&K[®] Switches solutions overview

Tactile, Pushbutton, Key Switch, DIP



Tactile



Pushbutton



Keyswitch



DIP

Detect, Snap Acting, Slide, Toggle



Detect



Snap Acting



Slide



Toggle

Rocker, Switch Lock, Rotary



Rocker



Switch Lock



Rotary



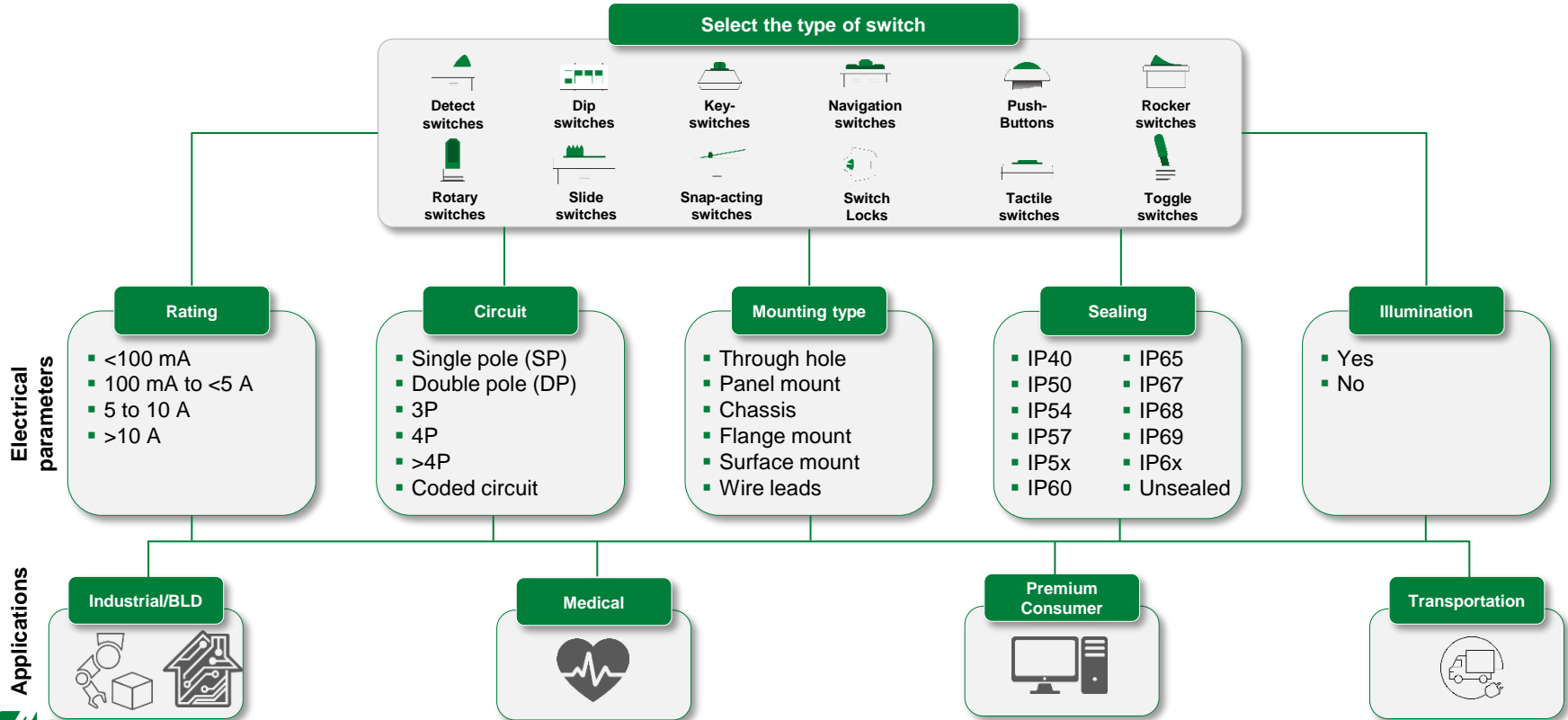
Customization

- **High-reliability, tactical, & miniaturized switches** with over 35,000 standard products and over 10 million switch combinations available in a variety of formats and styles
- **Custom design & innovation** to meet customer requirements for haptic touch, look, sound, and other unique features
- **Value added services** from integrated connectors and wire to fully customized assemblies
- **State-of-the-art manufacturing** facilities in Europe and Asia with in-house design and testing facilities

Connect, Sense, Set.....



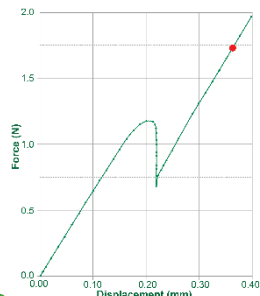
Selecting a Switch



C&K customization expertise

Enhance user experience

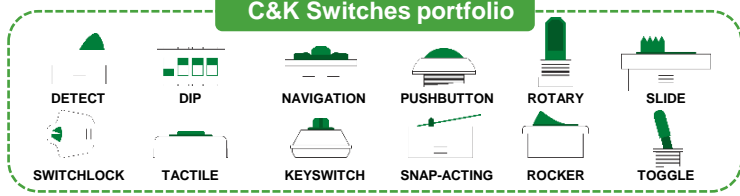
- Customized Haptic Switches
 - Desirable appearance, feel & sound
- Decorative solutions
 - Custom graphics, logos, & textures
- Lighting
 - Backlight accenting & light piping to enhance your product appearance



Design & manufacturing tools

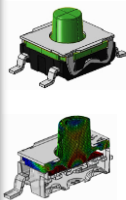
- 3-D CAD modeling
- Mold flow analysis
- FEA
- Dynamic motion analysis
- High-speed photography
- Fixed & dynamic X-ray
- Thermal imaging
- SEM/FTIR
- Sound chamber and force/displacement tester

C&K Switches portfolio



Value added services

- Designing switches into modules & assemblies
- Multi-function & multi-axis switching
- Integrating switches and electronics
- Provides wire harnesses, terminated wires, integrated connectors, or header pins



Quality & reliability

- Develop & manufacture sealed switches to meet either IP67 or IP68 standard
- Harsh environmental compatibility
- Sweat resistance testing
- SO2 and SO4 gas testing

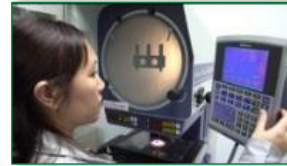
Design products to meet customer requirements for haptic touch, look, sound, & other unique features



C&K manufacturing excellence

Dole, France

- Vertically integrated, R&D (400 employees, defect rate < 0.5ppm)
- Proprietary equipment & methods
- Custom molds, dies & assembly machines
- Quality certifications (ISO 9001:2008, ISO 14001:2004, ISO 50001, TS 16949:2009, ESCC - MIL-NASA)



Huizhou, China

- Vertically-integrated, R&D capabilities (800 employees, 60 lines, defects rate < 2ppm)
- Auto-assembly & Auto-inspection machines (80 sets, 90% In-house designed, cycle time 0.8s to 2s)
- Quality certifications (ISO 9001:2008, ISO 14001:2004, TS 16949:2009)

Workshops

- 90% tooling designed and manufactured internally
- Stamping Workshops (Dole and Huizhou)
- Molding Workshops (Dole and Huizhou)
- Plating Workshops (Dole)
- Assembly Workshops (Dole and Huizhou)



Hung Yen, Vietnam

- Built in 2019 (47 lines, 250 employees, and defects rate < 2ppm)
- Manual assembly lines with semi-automated machines and tools (Cycle time 2s, lean work cells, in-line QA processes)
- Quality certifications (ISO 9001:2015)

Striving for complete customer satisfaction through state of art manufacturing facility & defect free performance



Partner for tomorrow's electronic systems

Broad Product Portfolio

We are an industrial technology manufacturing company empowering a sustainable, connected, and safer world

Testing Capabilities

We help customers get products to market faster, we offer certification testing to global regulatory standards

Application Expertise

Our engineers partner directly with customers to help speed up product design and meet their unique needs

Compliance & Regulatory

We help customers in the design process to account for requirements set by global regulatory authorities

Global Customer Service

Our global customer service team is with you to anticipate your needs and ensure a seamless experience

Global Manufacturing

High-volume manufacturing that is committed to the highest quality standards





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