

# SWITCH SOLUTIONS FOR BUILDING AND HOME AUTOMATION APPLICATIONS

## Building and Home Automation

Performance, reliability, and durability are key requirements when it comes to keeping residential and commercial buildings safe, comfortable, and energy efficient. Home owners and building managers expect their HVAC, lighting, and safety & security systems to function reliably around the clock.

C&K products, with their reputation for high quality and long cycle life, are ideally suited for demanding applications in harsh environments. By working directly with customers, C&K provides application specific, custom solutions to our customer's most challenging requirements.



## Safety and Security

- Smoke & carbon monoxide alarms
- Fire alarm systems
- Intrusion alarms & security systems
- Security cameras & controllers
- Building intercom systems
- Automatic gates and doors
- Elevator controls
- Nurse call systems



**BUILDING AND HOME AUTOMATION APPLICATIONS**

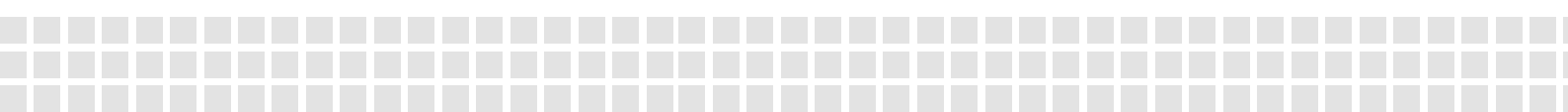
**HVAC & Energy Management**

- Furnaces & air handler units
- HVAC control boards
- Wall mounted heaters
- Programmable thermostats
- Air dampers & zone controls
- Tankless water heaters
- Energy meters, timers, & relays
- Circuit breakers
- Boiler controls
- Domotics controllers & keypads
- Solar inverters
























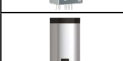







**Lighting**

- Occupancy sensors
- Lighting controllers
- Timers & relays
- Programmable switches
- Shutter & blind controllers



**BUILDING AND HOME AUTOMATION APPLICATIONS**

**Switch Solutions  
for Building and  
Automation  
Applications  
– Products**

											
		DIP / Coded Rotary	Slide	Tact	Snap	Detect	Toggle	Push-button / Keypresswitch	Keylock	MPS	MPSR
	Smoke / CO Detectors	•	•	•		•		•			
	Intrusion Alarms	•		•		•		•	•	•	
	Building Access Controls	•		•	•		•	•	•	•	•
	Automatic Gates	•		•	•			•			•
	Video Security	•		•		•			•		
	Elevator Controls	•		•	•		•	•	•		
	Programmable Thermostats	•	•	•		•					
	HVAC Control Boards	•	•	•				•			
	HVAC Air Dampers	•			•						
	Furnace, Boiler, Aircon Systems			•	•			•			
	Wall Heaters	•	•	•	•			•			
	Tankless Water Heaters	•		•	•			•			
	HVAC Zone Controls	•	•	•							
	Lighting Controllers		•	•				•			
	Occupancy Sensors	•	•	•		•					
	Shutter & Blind Controllers	•		•	•	•					
	Circuit Breakers	•		•	•	•		•			
	Energy Meters			•		•		•			
	Nurse Call Systems	•		•				•	•		

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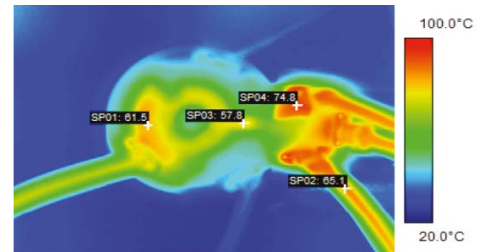
**Designing Technology into Solutions**

	Application	Function	Switches
<b>Safety &amp; Security</b>	Smoke alarm	Test & reset buttons	Tact, Slide, Detect
		Node / network address identification	DIP, Detect
	Carbon monoxide alarm	Test & reset buttons	Tact, Pushbutton
	Glass break detector	Test button, sensitivity settings	Tact, DIP, Rotary DIP
		Node / network address identification	Rotary DIP
	Shock sensor (ATM's)	Mode select (safe / vault / ATM)	DIP
	Fire / intrusion alarm (relay module)	Node / network address identification	DIP
		Cover tamper switch	Tact, Detect
	Fire alarm / zone expansion module	Node / network address identification	DIP, Switchlock
	Fire alarm / communicator module	Mode switch, cover tamper switch	Tact
	Fire alarm pull switch	Pull switch position	Toggle, Snap
	Door intercom systems	Intercom call buttons	Tact or pushbutton
	Door / telephone entry systems	Configuration switch	DIP
		Master code program switch	Toggle
	Fire doors / automatic doors	Door latch / strike position	Snap
	Gate openers	Code entry / open & close buttons	Pushbutton
	Gate openers / card access module	Master code program / reset switch	Tact
	Lift gate controllers	Gate operation settings	DIP
		Manual gate cycle button	Tact
	Sliding gate openers	Gate open / closed limit switches	Snap
Commercial garage door openers	Door position remote controls	Snap, DIP	
Nurse call systems (hospital)	Call / cancel switch, corner light / room ID	Tact, DIP, Pushbutton	
Security cameras (PTZ)	Camera node / network ID	DIP, Switchlock	
	Camera settings (baud rate, protocol)	DIP	
IR security cameras	IR light level settings	DIP	
Highway / road / traffic cameras	Menu navigation switches	Tact	
DVR, security cameras	Function buttons, navigation switch	Tact, Navigation	
Joystick controller, security camera	Function / navigation buttons	Tact, Navigation	
Elevators	Floor selection	Tact or Pushbutton	
	Maintenance / fire lockout	Switchlock	
	Main control board, top of car (TOC) controller	Toggle, Rotary DIP, Tact	
	Door open / closed limit switch	Snap	
<b>HVAC</b>	Furnace / aircon control boards	Fan settings, gas ignition settings, fault recall	DIP, Tact
	Programmable thermostats	Temperature up / down settings, reset button	Tact
		On / off, gas / electric heat select, fan speed	Slide
	Air handler / VAV units	Controller settings	DIP, Rotary DIP
	Terminal unit / air dampers	Damper position, damper settings	Snap, Rotary DIP
	Furnace / Air handler units	Blower / fan door safety switch	Snap
	Wall heater (condensing boilers)	On / off button, temperature select	Slide, Tact, Keyswitch
		Control board / heater settings	DIP, Rotary DIP, Keyswitch
	Tankless water heaters	Programming keys, heater settings	Tact, DIP, Keyswitch
	Lighting timers, switches	On / off switch, programming buttons	Slide, Tact
Shutter & blind controllers	Auto / manual select, open / close buttons	Slide, Tact	
<b>Lighting</b>	Occupancy sensors	Day / night selection, sensitivity settings	Slide, DIP
	Lighting timers, switches	On / off switch, programming buttons	Slide, Tact
	Shutter, shade, & blind motors	Position switch	Snap
	Shutter & blind controllers	Auto / manual select, open / close buttons	Slide, Tact
Receiver unit settings, node address ID		Tact, DIP	

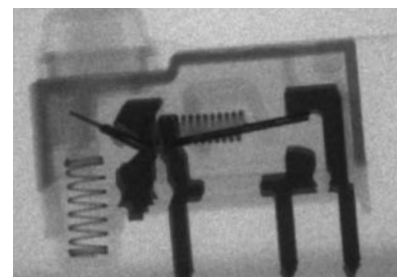
**BUILDING AND HOME AUTOMATION APPLICATIONS**

**Engineering Technology into Solutions**

Solutions to the challenges facing the Industrial market space require collaboration between customer and supplier. To provide local engineer-to-engineer communication and support, C&K has design centers located in Boston, MA (USA), Dole France, and Huizhou China. In order to develop robust product designs and expedite time to market, C&K leverages design and analysis tools such as solid modeling CAD systems, FEA and dynamic motion software, mold flow analysis, 3D printing & SLA, X-ray, SEM/FTIR, thermal imaging, force testing, and sound analysis chambers.



Molding rheology simulation



Dynamic x-ray analysis

**Manufacturing Technology into Solutions**

C&K has been providing innovative solutions to our customers for over 50 years, using our extensive industry and applications knowledge and the latest development and manufacturing techniques to solve the most difficult design challenges and provide customer and application specific solutions. Our manufacturing locations are ISO 9001 and TS16949 certified. To ensure quality, reliability, and long cycle life, as well as meet design to cost objectives, C&K maintains internal control of key manufacturing processes such as stamping, precision molding, plating, and high speed automatic assembly.



Precision stamping and over molding tools designed and built by C&K



High speed and high precision milling machine for tools and machine building



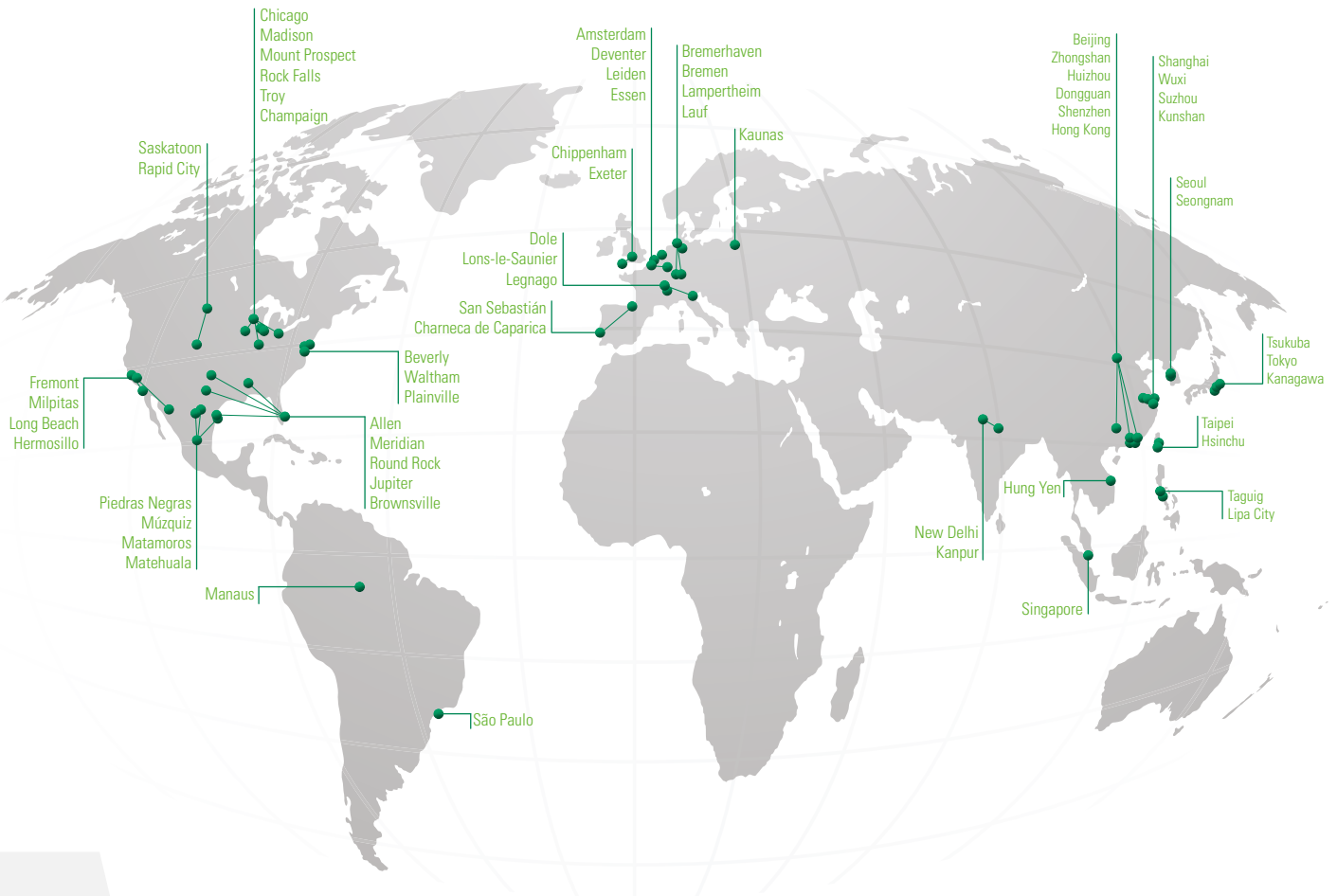
High speed switch assembly machine designed and built by C&K



Customized in-house testing capability

**BUILDING AND HOME AUTOMATION APPLICATIONS**

**Sales Support**



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