

# SWITCH SOLUTIONS FOR FACTORY AUTOMATION APPLICATIONS

## Factory Automation

Performance, reliability, and durability are key requirements for keeping industrial equipment up and running. With production lines running 24/7, factory managers understand the high cost of machine down time.

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.

## Automation and Control

- PLC / PAC
- Inverters & drives
- Motion controllers
- Motor starters
- Protection relays
- Timing relays
- Programmable relays
- Circuit breakers
- Power supplies
- Signal conditioners
- Pneumatics / valve controls
- Sensors and switches



## Processing Equipment & General Machinery

- CNC machines
- Robotics
- Automated assembly equipment
- Process automation
- Semiconductor equipment
- Welding & cutting machines
- General machinery
- Marking equipment
- Material handling
- Cranes & hoists



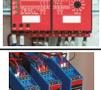
## C&K Switch Solution by Applications

- Inverter drive configuration
- Input voltage selection
- Encoder and potentiometer controls
- Network node address selection
- Operating mode selection
- Door interlock & machine safety
- Trip class settings
- Auto/manual reset selection
- Trip current adjustment
- Time delay settings
- Input/output signal adjustment
- On/Off switches
- Test & reset function
- Bus termination
- Trip status indication
- Custom switch assemblies



**FACTORY AUTOMATION APPLICATIONS**

**Switch Solutions for Industrial Applications – Products**

									
		DIP	Rotary	Slide	Tact	Snap	Rocker	Keylock	Pushbuttons
	Low Voltage Motor Drives	•	•	•	•				
	High Voltage Cabinets					•			•
	PLC/PAC	•	•		•				
	CNC Machine Controls	•			•			•	•
	Motion Controllers		•	•			•	•	
	Servo Systems	•			•				
	Network & Communication	•	•		•				
	Power Supplies			•			•		•
	Protection Relays	•	•	•	•				•
	Manual Motor Starters		•	•	•				•
	Soft Starters		•			•			
	Circuit Breakers	•	•		•	•			•
	Timing Relays		•	•	•				
	Safety Relays		•		•				•
	Signal Conditioners	•	•		•				•
	Robotics Controllers	•			•		•	•	•
	Sensors & Switches		•			•			•

**FACTORY AUTOMATION APPLICATIONS**

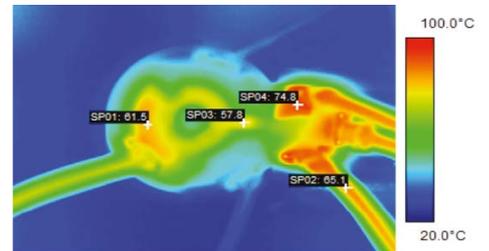
**Designing Technology into Solutions**

Application	Function	Switches
<b>Inverters</b>	Inverter config, motor frequency	DIP
	Input/Output signal selection (V/A)	Slide
	Bus termination, network address	DIP
	Potentiometer, encoder settings, MMI	Slide, DIP, Tact
	Servo/Vector control selection	DIP, Slide
<b>PLC</b>	Mode selection (run/stop/program)	Rotary, Toggle
	Network address setting	DIP
	I/O Module lock, unlock	Toggle
<b>CNC Controls</b>	PLC mode select, NC commissioning	Rotary DIP
	Network address setting	DIP
	Program protect, start/stop	Keylock, Pushbutton
<b>Overload Relay</b>	Motor current, trip class settings	Rotary DIP
	Stop/Reset switch, Test button	Tact, Pushbutton
	Auto/manual reset select	Slide
<b>Safety Relays</b>	Delay settings	Slide, Rotary DIP
	Test button	Tact, Pushbutton
<b>Timing Relays</b>	Delay settings	Rotary DIP
<b>Motor Starter</b>	On/Off switch, motor current settings	Rocker, Rotary DIP
	Test button	Tact, Pushbutton
<b>Circuit Breaker</b>	Configuration switches	DIP, Rotary DIP
	Test button, trip status indicator	Tact, Pushbutton, Snap
<b>Power Supply</b>	On/Off switch, input voltage selection	Rocker, Slide
<b>Power Supply / UPS</b>	Output current, time delay selection	Slide, Rotary DIP
<b>Control Cabinet</b>	Door interlock switch	Snap
<b>Hoist/Winch</b>	Controller	Pushbutton, Toggle, Keylock
<b>Cycle Counters</b>	Program, reset buttons	Tact, Pushbutton
<b>Pressure Transmitter</b>	Mode, set switch	Tact, Pushbutton
<b>Photoelectric Sensor</b>	Time delay, light on/dark on selection	Rotary DIP, Slide, DIP
<b>Signal Conditioner</b>	Calibration range, zero settings	DIP, Tact
<b>Welding Machines</b>	Welder settings	Toggle, Rotary, Rocker
<b>Plasma Cutters</b>	On/Off switch, output power adjust	Rocker, Rotary
<b>Laser Cutting / Marking</b>	On/Off, laser enable, cycle start	Rocker, Keylock, Pushbutton
<b>Robot Controls</b>	On/off, run/teach mode, jog	Rocker, Keylock, Pushbutton

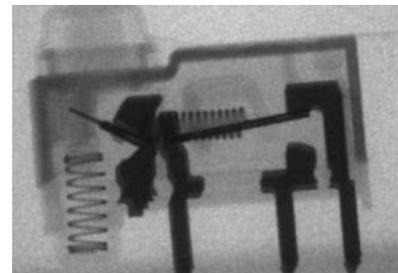
**FACTORY AUTOMATION APPLICATIONS**

**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 IATF 16949 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.



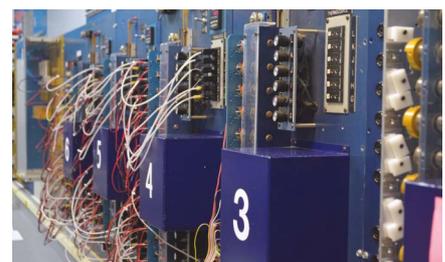
Precision stamping and over molding tools designed and built by C&K



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



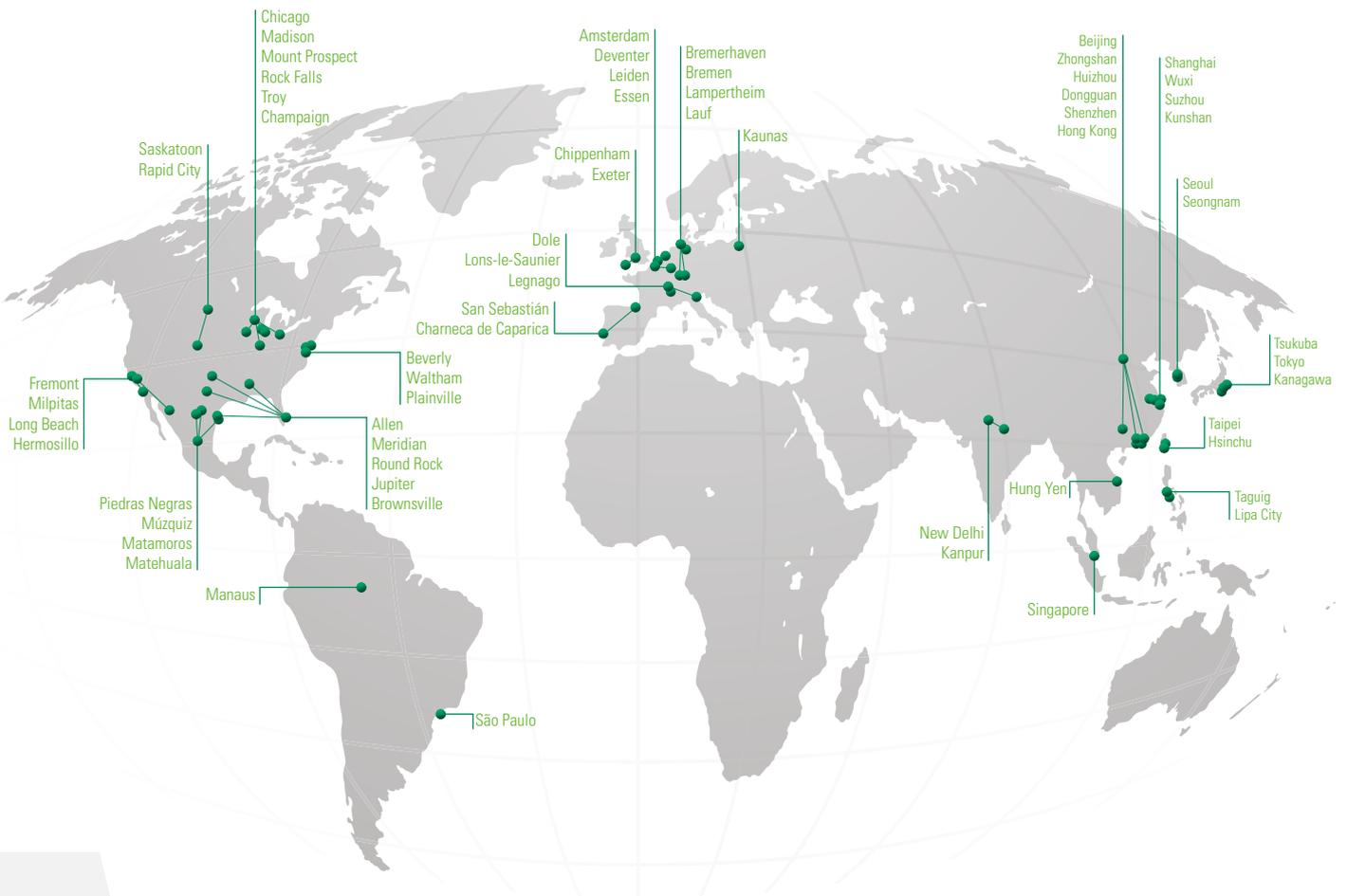
High speed switch assembly machine designed and built by C&K



Customized in-house testing capability

**FACTORY AUTOMATION APPLICATIONS**

**Sales Support**



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