

# Specialized switching solution



**Innovating Motion**



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The data used in this Product Overview may be used as a guideline only.  
Specific operational characteristics of our products may vary according to  
individual applications. It is strongly recommended that specific operating  
conditions are clarified with Johnson Electric before application.

Johnson Electric Terms and Conditions of Sale apply.


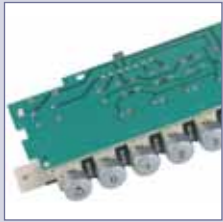





All data may be subject to change without notice.

# Looking for a specialized switching solution?

## Look no further:

In addition to the wide range of standard products shown in Johnson Electric catalogues, we will be happy to work with you to meet your system needs. If your application requires more than a standard product solution, please consider us early in your design process. Our product development team will be happy to discuss your specification, whether you need a special value-added assembly or a complete system. We specialize in developing solutions for medium and high-volume applications.

The images shown give some examples of our capabilities.

		 <p><b>Building Automation &amp; Security</b></p>
<p><b>Switch Subsystems</b></p>	<p><b>Home Appliances, White Goods, Floor Care</b></p> 	<p><b>Business Machines, Leisure &amp; Fitness</b></p> 
	<p><b>Transportation</b></p> 	<p><b>Industrial Equipment &amp; Automation</b></p> 
<p><b>Value Added Switch Solutions</b></p>	<p><b>Power &amp; Garden Tools</b></p> 	<p><b>Healthcare &amp; Medical Equipment</b></p> 

<p><b>Switch Products</b></p>  <p>saia</p>	 <p>BAR</p>	 <p>burgess</p>	 <p>th+contact</p>
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# Value Added Switch Solutions & Subsystems

**Johnson Electric offers a unique combination of technology, engineering and manufacturing resources to ensure the market success of your customer project:**

Johnson Electric is an engineering and manufacturing powerhouse with a vertically integrated supply chain to ensure quality and just-in-time performance worldwide. Every switch component in our value added solutions & subsystems is manufactured inhouse to drive attainment of our ultimate goal of zero defects.

Cables and harnesses are made in-house to suit the application and customer requirements. As an alternative we have a highly competent team of first class external suppliers for connectors, connector housings, mounting solutions and printed circuit boards.

Our product range consists of several brands. Each brand specialises in particular areas. The Johnson Electric family is the safe choice for value added solutions & subsystems.

**saia**

State of the art precision microswitches  
[www.saia-switch.com](http://www.saia-switch.com)

**burgess**

#1 in robust construction and environmental protection  
[www.burgess-switch.com](http://www.burgess-switch.com)

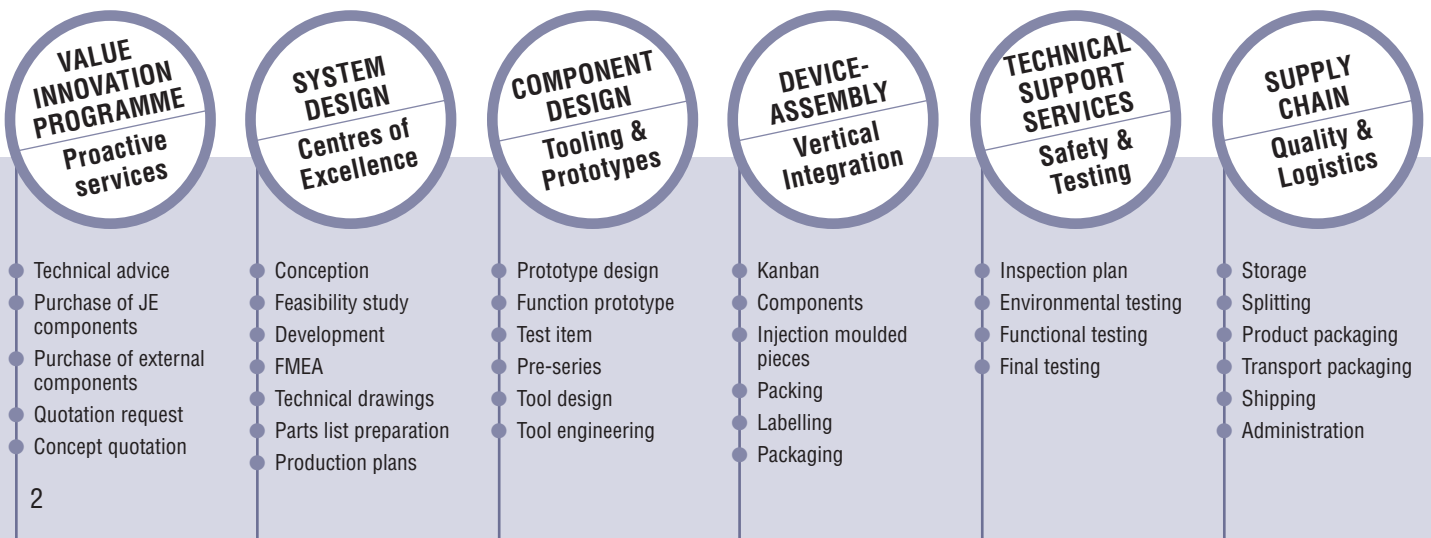
**BAR**

#1 in innovation  
[www.baer-switch.com](http://www.baer-switch.com)

**th contact**

Best modular design  
[www.th-contact.com](http://www.th-contact.com)

## Johnson Electric offer



# Building Automation & Security Switches



**Alarm call points**  
**Electric door openers**  
**Alarm devices**

**Locks**  
**Door, building entry**  
**Gate control, vehicle entry**

## Market and application requirements:

Safe switching, restricted access systems and vandalism detection. Johnson Electric systems master these tasks in everyday use, whether in an industrial or residential environment, in consumer or commercial applications. Typical applications are call points, electric digital locks, and alarm system modules. With our systems, you are on the safe side.

## Johnson Electric solution examples

### Alarm call point

Dual microswitch in custom made housing with additional control device  
 Function: Manual activation and glass break detection



### Emergency Stop

Portable emergency stop with reduced depth ideal for switch panels and emergency stop boxes  
 Function: Emergency-off



### Switch combination panel

Panel with piezo switches in robust vandal proof design  
 Function: Door open and close including text display

## Johnson Electric Switches offer

### SYSTEM DESIGN

- Vandal proof products
- Special approved components
- Vertical integration of switch products

### SYSTEM SOLUTIONS

- Assembly of custom made housings
- Plug-in assembly
- Capable of variation



# Home Appliances, White Goods, Floor Care Switches



**Espresso machines**  
**Filter coffee machines**  
**Blenders**

**Refrigeration**  
**Range Hoods**  
**Vacuum cleaners**

## Market and application requirements:

Immediate response. Our systems are used for coffee grinding, whipping milk, cleaning valves, ejecting filter sets, detecting fluid levels, and testing to ensure safe appliance maintenance, such as during the cleaning process, suitable for both low budget devices and high end machines.

## Johnson Electric solution examples

### Automatic coffee machine

Subsystem consisting of motor, switch, and wiring harness  
 Function: Coffee grinding machine

### Vacuum cleaner

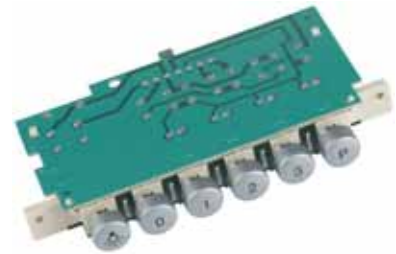
Subsystem consisting of switches, cables, and custom made housing  
 Function: Control switch

### Cooker Hood

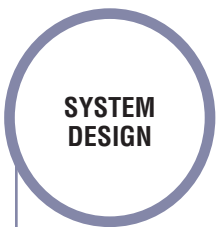
Subsystem consisting of switches and PCB mounting plate  
 Function: Control switch

### Coffee machine

Integrated auto shut off with ASIC  
 Function: Control switch with auto shut off



## Johnson Electric Switches offer



- Optimized design & tactile feeling
- Electronic subsystems & intelligent Auto Shut Off
- Twin shot moulding tool engineering



- PCB assembly
- Panel assembly
- Standard or custom made harnesses

# Business Machines, Leisure & Fitness Switches

**Vending machines**

**Gaming machines**

**ATM (automated teller machines)**



**Card Readers**

**Postal equipment**

## Market and application requirements:

Make your selection: Applicable to any machine automated function such as: insert payment card, detect cash insertion, eject small change and vend product. Versatile and high quality tactile solutions. Johnson Electric products fulfil these and many other tasks in public places worldwide, every day, around the clock.

## Johnson Electric solution samples

### Vending machine

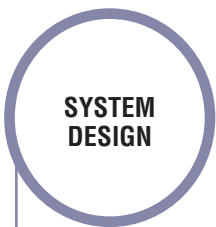
Subsystem with motor, switch and custom made cable harness  
 Function: Goods dispense control

### Gaming machine

Switch with miniature PCB and integrated connector  
 Function: Push button switch



## Johnson Electric Switches offer



- Extremely long mechanical lifetime
- Tactile feeling
- Moulding tool engineering



- Assembly of custom made housings
- Custom made connectors
- Integration of motor products





## Market and application requirements:

Dust, heat, humidity: Johnson Electric systems are reliable task masters, whether drive control, panels and operating levers, or when transmitting positional signals to pedals and detecting positioning of major parts, such as drive battery cover. Leading brands use our expertise.

## Johnson Electric solution examples

### Drive lever control in combine harvesters

Microswitches in IP67 complete with cable harness and special plugs  
Function: Forward/backward signal

### Brake pedal switches

Microswitch for use in extreme environmental conditions, shock resistant, fully sealed, unaffected by aggressive substances such as battery acid, petrol and oil. The switch is designed for use in fork lift trucks.  
Function: Brake pedal position-signal



## Johnson Electric Switches offer

### SYSTEM DESIGN

- Robust solutions optimized as to environmental protection
- Custom made accessories and kits
- Low to medium volume applications

### SYSTEM SOLUTIONS

- Use of sealed switch products
- Harness assembly & seal
- Lead frame technology





# Industrial Equipment & Automation Switches



**Control panels**  
**Industrial automation**  
**Testing equipment**

## Market and application requirements:

Reliable opening and closing of all types of gates, roller blinds, and Venetian blinds. Used in operating controls, whether for commercial or domestic applications. Our switches reliably detect the drive end position and switch off the drive. For comfort and safety, choose Johnson Electric.

## Johnson Electric solution samples

### Gate control

Switch with extremely long overtravel,  
 Supplied with cable harness and plug  
 Function: Terminal position detection  
 in security gates

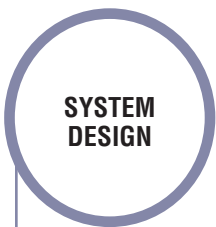


### Emergency stop switch box

Emergency stop switch in industry  
 standard box with circular plug-in  
 connector  
 Used in industrial automation  
 Function: Emergency stop function  
 for industrial applications



## Johnson Electric Switches offer



- Robust custom made solutions
- Long life
- Medium to high volume applications



- Harness assembly (welding, solder)
- Assembly of custom made accessories
- Panel assembly

# Power & Garden Tools Switches



**Circular saws**

**Grass cutters**

**Electric screwdrivers**

**Leaf blowers**

**Grass trimmers**

**Market and application requirements:**

Heavy professional use day after day, in icy cold conditions or unbearable hot weather, rain or drought, motorway or camp site, large building site or in the garden or forest. Our solutions are even used to activate hand grip heating systems. Comfort and safety, Johnson Electric applications equally fulfil both requirements.

**Johnson Electric solution examples**

**Concrete cutters, grass cutters**  
 Switch in IP67 housing with special lever and cable harness  
 Function: Safety switch for motor stop

**Professional power screwdriver**  
 Switch with custom made harness, reinforced tubing and connector  
 Function: Electrical control



**Johnson Electric Switches offer**



- Professional & consumer solutions
- Custom made accessories and kits
- Medium to high volume applications



- Use of sealed switch products
- Harness assembly & seal
- Integration of electronic components



# Healthcare & Medical Equipment Switches

**Dialysis machines**

**Syringe pumps**

**Wheelchairs**



**Nebulizers**

**Mobility aids**

**Hospital beds**

## Market and application requirements:

Precision and safety is our daily business. Johnson Electric systems offers drug delivery & patient care solutions that ensure the correct position of cartridges, and help aid movement for the sick the elderly and disabled

## Johnson Electric solution examples

### Dialysis machine

Switch with cable harness, connector and customer made mounting hardware  
 Function: Position detection

### Hospital bed

Switch with cable harness, connector and integrated electronic components  
 Function: Actuator position



## Johnson Electric Switches offer

### SYSTEM DESIGN


- Precise switch products
- Compatibility to medical standards
- Environmental protection


### SYSTEM SOLUTIONS


- Harness assembly
- Integration of electronic devices
- Assembly of custom made accessories


# Saia microswitch series


high precision switch operating position, small tolerance  
 high operating speed / frequency  
 high electrical ratings and longer life cycles  
 wide range of switching characteristics and terminal options


	<b>XC</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Saia Submini Micro switch 19.9 x 9.5 x 6.4 mm <ul style="list-style-type: none"> <li>wide range of forces and variants</li> <li>long mechanical and electrical life</li> <li>solder, faston and PCB terminals</li> </ul>	250 VAC, 10 A max.	plunger mushroom plunger reset plain lever simulated roller lever / cam follower roller lever	ENEC UL cUL CSA


	<b>X4</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Saia Submini Micro switch 19.9 x 9.7 x 6.4 mm <ul style="list-style-type: none"> <li>thermoplastic housing</li> <li>long mechanical and electrical life</li> <li>solder, faston and PCB terminals</li> </ul>	250 VAC, 12 A max.	plunger plain lever cam follower lever roller lever	ENEC UL CSA CQC

	<b>V4N</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Saia Submini Micro switch 20 x 10.3 x 6.4 mm <ul style="list-style-type: none"> <li>sealed IP67</li> <li>solder, faston and PCB terminals 2.8 mm faston</li> <li>pre-wired option</li> </ul>	250 VAC, 5 A	plunger plain lever roller lever simulated roller lever / cam follower	ENEC UL CSA

	<b>V4NC</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Saia Submini Micro switch 20 x 10.3 x 6.4 mm <ul style="list-style-type: none"> <li>wide variety of levers</li> <li>peg mounting option</li> <li>pre-wired option</li> <li>sealed IP6K7</li> <li>solder, faston and PCB terminals</li> </ul>	250 VAC, 5 A	plunger plain lever roller lever simulated roller lever	none

	<b>XG</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Saia Miniature Micro switch 27.8 x 15.9 x 10.3 mm <ul style="list-style-type: none"> <li>wide range of forces and ratings</li> <li>long mechanical and electrical life</li> <li>solder, faston and PCB terminals</li> </ul>	250 VAC, 26 A max.	plunger plain lever roller lever simulated roller lever	ENEC UL cUL CSA

	<b>X3</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Saia Miniature Micro switch 27.8 x 15.9 x 10.3 mm <ul style="list-style-type: none"> <li>8 mm creepage and clearance distance to the actuator</li> <li>long mechanical and electrical life</li> <li>solder, faston and PCB terminals</li> </ul>	250 VAC, 21 A max.	plunger straight lever roller lever simulated roller lever	ENEC UL cUL CSA CQC

	<b>G3</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Saia Miniature Micro switch 28 x 15.9 x 10 mm <ul style="list-style-type: none"> <li>low operating force, high current capacity</li> <li>&lt; 15 cn operating force option</li> <li>&gt; 3 mm contact gap, changeover mechanism option</li> </ul>	up to 250 VAC, 18 A	plunger ramp plunger	ENEC UL CSA


# Bär manually operated switch series


innovative switch solutions for home appliances


setting industry standards


rocker, push-button and door switches with customized styling


intelligent switch combined with electronic controller


	<b>3670</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Baer Rocker switch various <ul style="list-style-type: none"> <li>single pole, on/off</li> <li>illuminated/non-illuminated</li> <li>snap-in mounting</li> <li>faston terminals</li> <li>momentary function (optional)</li> <li>temp. 100/55°</li> </ul>	250 VAC, 6 (2) A 250 VAC, 12 (2) A 125 VAC, 12 A	rocker (different shapes/colours)	ENEC cUL

	<b>3672</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Baer Rocker switch various <ul style="list-style-type: none"> <li>single pole</li> <li>on/off</li> <li>illuminated/non-illuminated</li> <li>snap-in mounting</li> <li>solder terminals</li> <li>PCB terminals</li> <li>faston terminals</li> <li>momentary function</li> <li>temp. 85/55°</li> </ul>	250 VAC, 6 (2) A 125 VAC, 7.5 A	rocker (different shapes/colours)	ENEC UL

	<b>3673</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Baer Rocker switch various <ul style="list-style-type: none"> <li>single pole</li> <li>change-over (with or without „zero-position“)</li> <li>snap-in mounting</li> <li>faston terminals</li> <li>μ-gap</li> <li>temp. 100/55°</li> </ul>	250 VAC, 6 (3) A 125 VAC, 10 A (for version with „zero“ position)	rocker (different shapes/colours)	ENEC cUL

	<b>3680</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Baer Rocker switch various <ul style="list-style-type: none"> <li>single pole</li> <li>on/off</li> <li>illuminated/non-illuminated</li> <li>snap-in mounting</li> <li>momentary function (optional)</li> <li>temp. 85/55°</li> </ul>	250 VAC, 6 (2) A 125 VAC, 7.5 A	rocker (different shapes/colours)	ENEC UL CSA

	<b>3600 TIPPMATIC®</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Bar Auto Shutt off Rocker switch <ul style="list-style-type: none"> <li>integral timer function</li> <li>different times available</li> <li>single pole</li> <li>on/off</li> <li>illuminated/non-illuminated</li> <li>snap-in mounting</li> <li>temp. 100/55°</li> </ul>	250 VAC, 12 (4) A 125 VAC, 15 A	standard rocker 24.4 x 10.7 mm	ENEC cUL

	<b>3292</b>	<b>Rating</b>	<b>Actuators</b>	<b>Approvals/Quality</b>
	Baer Push Button switch 13.5 x 19 mm <ul style="list-style-type: none"> <li>single/double pole</li> <li>on/off</li> <li>faston</li> <li>PCB terminals</li> <li>extended life (5E4)</li> <li>customised mounting</li> <li>momentary or latching</li> </ul>	250 VAC, 16 (4) A 1E4, T100 250 VAC, 10 (10) A, 1E4, T100 250 VAC, 8 (8) A, T125 125 VAC, 16 A, ¼ hp. T85	plunger square 6 mm	ENEC cUL US



### 3293

Baer Push Button switch  
13.5 x 19 mm

- single/double pole
- on/off
- faston
- PCB terminals
- customised mounting
- momentary or latching
- $\mu$ -gap

Rating	Actuators	Approvals/Quality
250 VAC, 8 (8) A, 1E4, T100	plunger	ENEC
250 VAC, 10 (4) A, 1E4, T100	square 6 mm	



### 3200

Baer Push Button switch  
12.5 x 12.5 x 19.5 mm

- illumination optional
- single pole
- change-over
- PCB terminals
- customised mounting
- momentary or latching
- $\mu$ -gap

Rating	Actuators	Approvals/Quality
12 VDC, 2 A	square 10.4 mm	none



### 1427

Baer Momentary switch  
various

- single pole
- faston
- snap-in mounting or centre-fixing

Rating	Actuators	Approvals/Quality
250 VAC, 0.2 [0.2] A 1E5	plunger	ENEC
250 VAC, 0.25 A		cUL



### 1430

Baer Momentary switch  
various

- single pole
- faston
- snap-in mounting

Rating	Actuators	Approvals/Quality
250 VAC, 0.2 [0.2] A 5E4	lever	ENEC



### 1429

Baer Momentary switch  
various

- single pole
- snap-action function
- faston
- snap-in mounting
- type of protection according to IEC 60079-15:1987

Rating	Actuators	Approvals/Quality
250 VAC, 0.2 [0.2] A 2E5	plunger	ENEC



### XKA

Baer Momentary switch  
28 x 20 x 15 mm

- long overtravel
- snap-action CO
- snap-in mounting
- type of protection according to IEC 60079-15:1987

Rating	Actuators	Approvals/Quality
250 VAC, 1 (1) A 5E4, T85	plain lever	ENEC
	round lever	UL
		CSA



### 4022

Baer Rotary switch  
30 x 14 x 15.3

- single pole with on/off or step function
- double pole with on/off function
- solder, faston and PCB terminals
- high temp. 100°

Rating	Actuators	Approvals/Quality
250 VAC, 12 (2) A	cam	ENEC
125 VAC, 10 A	square access hole 3.25 mm <sup>2</sup>	UL
		CSA

## Burgess switch series

solid products fulfill high requirements in robustness  
largest variety in switching technologies  
expert in innovative switching solutions  
strong in industrial automation

	<p><b>F1</b> Burgess Ultraminiature Micro switch 16 x 6 x 6.5 mm</p> <ul style="list-style-type: none"> <li>■ small size</li> <li>■ high current</li> <li>■ long mechanical life</li> <li>■ PCB mounting</li> </ul>	<p><b>Rating</b> 250 VAC, 5 A</p>	<p><b>Actuators</b> plunger plain lever simulated roller lever / cam follower</p>	<p><b>Approvals/Quality</b> UL CSA</p>
	<p><b>F4</b> Burgess Ultraminiature Micro switch 12.8 x 10 x 5 mm</p> <ul style="list-style-type: none"> <li>■ small size</li> <li>■ long mechanical and electrical life</li> <li>■ solder</li> <li>■ PCB terminals</li> </ul>	<p><b>Rating</b> 250 VAC, 5 A</p>	<p><b>Actuators</b> plunger plain lever simulated roller lever / cam follower</p>	<p><b>Approvals/Quality</b> UL CSA</p>
	<p><b>F5</b> Burgess Ultraminiature Micro switch 12.8 x 7 x 5 mm</p> <ul style="list-style-type: none"> <li>■ small size</li> <li>■ long mechanical and electrical life</li> <li>■ PCB mounting</li> </ul>	<p><b>Rating</b> 250 VAC, 5 A</p>	<p><b>Actuators</b> plunger plain lever simulated roller lever / cam follower</p>	<p><b>Approvals/Quality</b> UL CSA</p>
	<p><b>F1NS</b> Burgess Ultraminiature Micro switch 16 x 6.5 x 6 mm</p> <ul style="list-style-type: none"> <li>■ small size</li> <li>■ low current</li> <li>■ long mechanical life</li> <li>■ PCB mounting</li> <li>■ sealed IP54 (option)</li> </ul>	<p><b>Rating</b> up to 250 VAC, 1 A</p>	<p><b>Actuators</b> plunger plain lever simulated roller lever / cam follower</p>	<p><b>Approvals/Quality</b> none</p>
	<p><b>F6</b> Burgess Ultraminiature Micro switch 14.7 x 9 x 5.4 mm</p> <ul style="list-style-type: none"> <li>■ small size</li> <li>■ sealed IP6K7</li> <li>■ PCB mounting</li> </ul>	<p><b>Rating</b> 12-30 VDC, 5-300 mA</p>	<p><b>Actuators</b> plunger plain lever</p>	<p><b>Approvals/Quality</b> none</p>
	<p><b>FK4</b> Burgess Ultraminiature Micro switch 18 x 8 x 5 mm</p> <ul style="list-style-type: none"> <li>■ double break switching</li> <li>■ long mechanical and electrical life</li> <li>■ solder, faston 2 mm and PCB mounting</li> <li>■ snap-action</li> </ul>	<p><b>Rating</b> 250 VAC, 5 A</p>	<p><b>Actuators</b> plunger plain lever simulated roller lever / cam follower</p>	<p><b>Approvals/Quality</b> UL CSA</p>
	<p><b>V4L</b> Burgess Submini Micro switch 20 x 11 x 6.4 mm</p> <ul style="list-style-type: none"> <li>■ long overtravel of 2.2 mm minimum</li> <li>■ sealed to IP6K7 option</li> <li>■ pre-wired option</li> <li>■ solder terminals</li> </ul>	<p><b>Rating</b> 250 VAC, 5 A</p>	<p><b>Actuators</b> plunger plain lever ice break lever</p>	<p><b>Approvals/Quality</b> ENEC UL CSA</p>
	<p><b>V3S</b> Burgess Sealed Miniature Micro switch 32 x 24 x 10 mm</p> <ul style="list-style-type: none"> <li>■ sealed IP67</li> <li>■ flying leads</li> <li>■ robust construction</li> </ul>	<p><b>Rating</b> 250 VAC, 5 A</p>	<p><b>Actuators</b> plunger plain lever roller lever</p>	<p><b>Approvals/Quality</b> ENEC UL CSA</p>

	<p><b>PN4</b> Burgess Standard Micro switch 49 x 22 17.5 mm</p> <ul style="list-style-type: none"> <li>■ precision switching</li> <li>■ long mechanical life</li> <li>■ screw terminals</li> </ul>	<p>Rating 250 VAC, 15 A</p>	<p>Actuators plunger plain lever roller lever</p>	<p>Approvals/Quality UL CSA</p>
	<p><b>3BR</b> Burgess Sealed Standard Micro switch 53.1 x 20.6 x 30.8 mm</p> <ul style="list-style-type: none"> <li>■ choice of IP54 or IP67 sealed versions</li> <li>■ precise movements and exceptional repeat accuracy</li> <li>■ flying lead version available</li> <li>■ long overtravel</li> </ul>	<p>Rating 250 VAC, 10 A max.</p>	<p>Actuators plunger</p>	<p>Approvals/Quality UL CSA</p>
	<p><b>K5</b> Burgess Standard Double Break Switch 41 x 19 x 15.5 mm</p> <ul style="list-style-type: none"> <li>■ double break switching</li> <li>■ long mechanical life</li> <li>■ high electrical rating</li> <li>■ faston terminals</li> </ul>	<p>Rating 250 VAC, 16 A</p>	<p>Actuators plunger plain lever roller lever ramp plunger</p>	<p>Approvals/Quality UL CSA</p>
	<p><b>V9N</b> Burgess Sealed Miniature Limit switch 42 x 24.5 x 15.5 mm</p> <ul style="list-style-type: none"> <li>■ sealed IP67</li> <li>■ metal housed</li> <li>■ screw terminals or flying leads</li> </ul>	<p>Rating 250 VAC, 10 A max.</p>	<p>Actuators plunger plain lever roller lever reverse action lever</p>	<p>Approvals/Quality UL CSA</p>
	<p><b>4BR</b> Burgess Sealed Limit switch 53.1 x 20.6 x 29.2 mm</p> <ul style="list-style-type: none"> <li>■ choice of IP54 or IP67 sealed versions</li> <li>■ precise movements and exceptional repeat accuracy</li> <li>■ robust metal housing</li> <li>■ flying lead version available</li> <li>■ long overtravel</li> </ul>	<p>Rating 250 VAC, 15 A max.</p>	<p>Actuators plunger</p>	<p>Approvals/Quality UL CSA</p>
	<p><b>BVM3</b> Burgess Positive Action Momentary Switch 28 x 16 x 10.5 mm</p> <ul style="list-style-type: none"> <li>■ positive-action (forced break) contacts</li> <li>■ &gt; 3 mm contact gap at full travel</li> <li>■ internationally recognized V3 housing</li> <li>■ faston terminals</li> </ul>	<p>Rating 250 VAC, 10 A</p>	<p>Actuators plunger plain lever roller lever</p>	<p>Approvals/Quality ENEC cUL CSA</p>
	<p><b>KB5</b> Burgess Positive Action Double Break Momentary Switch 41 x 19.5 x 15.5 mm</p> <ul style="list-style-type: none"> <li>■ positive-action forced double break switching</li> <li>■ &gt; 3 mm contact gap at full travel</li> <li>■ high electrical rating</li> <li>■ faston terminals</li> </ul>	<p>Rating up to 250 VAC, 25 A</p>	<p>Actuators plunger plain lever roller lever</p>	<p>Approvals/Quality UL CSA</p>





### XP

Burgess Double Break Momentary Switch  
30 x 32 x 12 mm

- double break switching
- positive-action force break (option)
- > 3 mm contact gap at full travel (option)
- faston terminals

Rating	Actuators	Approvals/Quality
400 VAC, 16 A	plain plunger mushroom plunger reset plunger with external spring (for increased reset security)	ENEC UL CSA



### XT


Burgess Double Break Momentary Switch  
30 x 32 x 12 mm


- 8 mm contact gap, creepage and clearance distances
- double break contacts


Rating	Actuators	Approvals/Quality
400 VAC, 16.5 A max.	shrouded plunger optional key plain plunger	ENEC UL cUL CSA


# th-contact panel mounted products


th-contact panel mounted switches such as illuminated push-button and keylock, joysticks and emergency stop switches for control panels  
th-contact with best modular design so that various permutations can easily be assembled  
th-contact has worldwide reseller channels

	Rating	Actuators	Approvals/Quality
 <p><b>TP2</b> th-contact Push Button panel switch 18 x 24 mm 18 x 18 mm Ø 18 mm Ø 25 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 16.2/22.5 mm</li> <li>■ momentary or latching</li> <li>■ sealed IP40, IP65 or IP67</li> <li>■ wide range of bezels</li> <li>■ with/without illumination</li> <li>■ NO, NC, CO</li> <li>■ gold plated single or double pole contact blocks</li> </ul>	250 VAC, 5 A	lenses in different shapes and colours	UL CSA VDE

	Rating	Actuators	Approvals/Quality
 <p><b>TP5</b> th-contact Push Button panel switch 18 x 24 mm 18 x 18 mm Ø 18 mm Ø 25 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 16.2/22.5 mm</li> <li>■ momentary or latching</li> <li>■ sealed IP40 or IP65</li> <li>■ wide range of bezels</li> <li>■ shallow mounting depth</li> <li>■ with/without illumination</li> <li>■ NO, NC</li> <li>■ gold plated contact blocks</li> </ul>	250 VAC, 5 A	lenses in different shapes and colours	UL CSA VDE

	Rating	Actuators	Approvals/Quality
 <p><b>TP4</b> th-contact Push Button panel switch 18 x 24 mm 24 x 24 mm Ø 24 mm Ø 30 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 16.2/22.5 mm</li> <li>■ mushroom</li> <li>■ momentary or latching</li> <li>■ sealed IP40 or IP65</li> <li>■ wide range of bezels</li> <li>■ NO, NC</li> <li>■ gold plated contact blocks</li> </ul>	250 VAC, 5 A	mushroom cap in different shapes and colours	UL CSA VDE

	Rating	Actuators	Approvals/Quality
 <p><b>TP8</b> th-contact Push Button panel switch Ø 25 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 22.5 mm</li> <li>■ momentary</li> <li>■ sealed IP67</li> <li>■ round metal bezels</li> <li>■ 1 NO + 1 NC, 2 NC, 2 NO</li> <li>■ gold plated contact blocks</li> </ul>	230 VAC, 6 A	button and housing in different colours	none

	Rating	Actuators	Approvals/Quality
 <p><b>TP9</b> th-contact Push Button panel switch Ø 18 mm Ø 25 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 16.2/22.5 mm</li> <li>■ momentary short stroke switch</li> <li>■ sealed IP65 or IP67</li> <li>■ round metal bezels</li> <li>■ NO</li> <li>■ snap-in mounting option Ø 22.5 mm (IP65 only)</li> </ul>	50 VAC/VDC, 50 mA	button and housing in different colours	none

	<p><b>TP7</b> th-contact Push Button panel switch Ø 18 mm    Ø 36 mm Ø 25 mm    Ø 48 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 16.2/22.5/30.3/43.3</li> <li>■ piezo technology</li> <li>■ momentary</li> <li>■ sealed IP68</li> <li>■ with/without illumination, two colours</li> <li>■ solid state output</li> <li>■ NO</li> </ul>	<p><b>Rating</b> 3 to 35 VAC/VDC, 200 mA</p>	<p><b>Actuators</b> housing in different colours</p>	<p><b>Approvals/Quality</b> none</p>
	<p><b>TE8</b> th-contact Emergency Stop panel switch Ø 27 mm    Ø 40 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 16.2/22.5 mm</li> <li>■ meets EN418 directives (Ø 27 mm only)</li> <li>■ sealed IP66 or IP67</li> <li>■ rotary pull or key reset</li> <li>■ yellow disk bezel (optional)</li> <li>■ 1 NO + 1 NC or 2 NC</li> </ul>	<p><b>Rating</b> 250 VAC, 6 A</p>	<p><b>Actuators</b> red mushroom cap (Ø 27 mm only) reset by KABA key (Ø 40 mm only)</p>	<p><b>Approvals/Quality</b> IEC947-5-1/947-5-5 (Ø 27 mm only)</p>
	<p><b>TE1</b> th-contact Emergency Stop panel switch Ø 25 mm    Ø 30 mm Ø 40 mm (on request)</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 16.2/22.5 mm with adapter option</li> <li>■ NC contact with 3 mm contact gap</li> <li>■ &lt; 20 mm behind panel depth</li> <li>■ rotary, reset mechanism</li> <li>■ sealed IP65</li> <li>■ 1 NO + 1 NC or 2 NC</li> </ul>	<p><b>Rating</b> 250 VAC, 2 A</p>	<p><b>Actuators</b> red mushroom cap</p>	<p><b>Approvals/Quality</b> EN 60947-1 EN 60947-5-1 EN 60947-5-5</p>
	<p><b>TI2</b> th-contact Indicator for panel 18 x 24 mm    Ø 18 mm 18 x 18 mm    Ø 25 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 16.2/22.5 mm</li> <li>■ illuminated</li> <li>■ sealed IP40, IP65 or IP67</li> <li>■ wide range of bezels</li> <li>■ midget groove lamp/LED</li> </ul>	<p><b>Rating</b> 60 VAC/VDC max.</p>	<p><b>Actuators</b> lenses in different shapes and colours</p>	<p><b>Approvals/Quality</b> UL CSA VDE</p>
	<p><b>TI5</b> th-contact Indicator for panel 18 x 24 mm    Ø 18 mm 18 x 18 mm    Ø 25 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 16.2/22.5 mm</li> <li>■ illuminated</li> <li>■ sealed IP40, IP65 or IP67</li> <li>■ wide range of bezels</li> <li>■ midget groove lamp/LED</li> </ul>	<p><b>Rating</b> 60 VAC/VDC max.</p>	<p><b>Actuators</b> lenses in different shapes and colours</p>	<p><b>Approvals/Quality</b> UL CSA VDE</p>
	<p><b>TI9</b> th-contact Indicator for panel Ø 25 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 22.5 mm</li> <li>■ illuminated</li> <li>■ sealed IP67</li> <li>■ round metal bezels</li> <li>■ red LED</li> <li>■ green LED</li> <li>■ red-green LED</li> </ul>	<p><b>Rating</b> 24 VDC, 20 mA</p>	<p><b>Actuators</b> aluminium housing in different colours</p>	<p><b>Approvals/Quality</b> none</p>

	<p><b>TK2</b> th-contact Key switch for panel 18 x 24 mm 18 x 18 mm Ø 18 mm Ø 25 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out Ø 16.2/22.5 mm</li> <li>■ 2 and 3 position</li> <li>■ sealed IP40 or IP65</li> <li>■ wide range of plastic or aluminium bezels</li> <li>■ NO, NC</li> <li>■ gold plated single or double pole contact blocks</li> <li>■ key trapping options</li> </ul>	<table border="1"> <thead> <tr> <th>Rating</th> </tr> </thead> <tbody> <tr> <td>250 VAC, 5 A</td> </tr> </tbody> </table>	Rating	250 VAC, 5 A	<table border="1"> <thead> <tr> <th>Actuators</th> </tr> </thead> <tbody> <tr> <td>key KABA MICRO</td> </tr> </tbody> </table>	Actuators	key KABA MICRO	<table border="1"> <thead> <tr> <th>Approvals/Quality</th> </tr> </thead> <tbody> <tr> <td>UL CSA VDE</td> </tr> </tbody> </table>	Approvals/Quality	UL CSA VDE
Rating										
250 VAC, 5 A										
Actuators										
key KABA MICRO										
Approvals/Quality										
UL CSA VDE										
	<p><b>E1</b> th-contact Key switch for panel 18 x 16 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out 15.1 x 15.1 mm</li> <li>■ tamper proof</li> <li>■ 2 positions</li> <li>■ key trapping options</li> <li>■ gold plated contacts</li> <li>■ PCB terminals</li> </ul>	<table border="1"> <thead> <tr> <th>Rating</th> </tr> </thead> <tbody> <tr> <td>250 VAC, 100 mA</td> </tr> </tbody> </table>	Rating	250 VAC, 100 mA	<table border="1"> <thead> <tr> <th>Actuators</th> </tr> </thead> <tbody> <tr> <td>plastic key</td> </tr> </tbody> </table>	Actuators	plastic key	<table border="1"> <thead> <tr> <th>Approvals/Quality</th> </tr> </thead> <tbody> <tr> <td>none</td> </tr> </tbody> </table>	Approvals/Quality	none
Rating										
250 VAC, 100 mA										
Actuators										
plastic key										
Approvals/Quality										
none										
	<p><b>M1</b> th-contact Key switch for panel 18 x 16 mm body style A 18 x 18 mm body style E</p> <ul style="list-style-type: none"> <li>■ panel cut-out 15.1 x 15.1 mm</li> <li>■ double pole change-over or three circuit selector switching functions</li> <li>■ key trapping options</li> <li>■ two body style options</li> <li>■ gold plated contacts</li> <li>■ PCB terminals</li> </ul>	<table border="1"> <thead> <tr> <th>Rating</th> </tr> </thead> <tbody> <tr> <td>250 VAC, 100 mA</td> </tr> </tbody> </table>	Rating	250 VAC, 100 mA	<table border="1"> <thead> <tr> <th>Actuators</th> </tr> </thead> <tbody> <tr> <td>key (common or differs)</td> </tr> </tbody> </table>	Actuators	key (common or differs)	<table border="1"> <thead> <tr> <th>Approvals/Quality</th> </tr> </thead> <tbody> <tr> <td>none</td> </tr> </tbody> </table>	Approvals/Quality	none
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250 VAC, 100 mA										
Actuators										
key (common or differs)										
Approvals/Quality										
none										
	<p><b>K2</b> th-contact Key switch for panel Ø 22 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out 19.1 mm</li> <li>■ choice of on/off or change-over centre off or spring return options</li> <li>■ key trapping options</li> <li>■ solder terminals</li> </ul>	<table border="1"> <thead> <tr> <th>Rating</th> </tr> </thead> <tbody> <tr> <td>up to 250 VAC, 2 A</td> </tr> </tbody> </table>	Rating	up to 250 VAC, 2 A	<table border="1"> <thead> <tr> <th>Actuators</th> </tr> </thead> <tbody> <tr> <td>key (common or differs)</td> </tr> </tbody> </table>	Actuators	key (common or differs)	<table border="1"> <thead> <tr> <th>Approvals/Quality</th> </tr> </thead> <tbody> <tr> <td>UL CSA</td> </tr> </tbody> </table>	Approvals/Quality	UL CSA
Rating										
up to 250 VAC, 2 A										
Actuators										
key (common or differs)										
Approvals/Quality										
UL CSA										
	<p><b>P2</b> th-contact Key switch for panel Ø 22 mm</p> <ul style="list-style-type: none"> <li>■ panel cut-out 19.1 mm</li> <li>■ up to 12 contact pairs</li> <li>■ 2 security options with key actuation</li> <li>■ from 2 to 4 switch positions</li> <li>■ key trapping options</li> <li>■ solder terminals</li> </ul>	<table border="1"> <thead> <tr> <th>Rating</th> </tr> </thead> <tbody> <tr> <td>250 VAC, 2 A</td> </tr> </tbody> </table>	Rating	250 VAC, 2 A	<table border="1"> <thead> <tr> <th>Actuators</th> </tr> </thead> <tbody> <tr> <td>key (common or differs)</td> </tr> </tbody> </table>	Actuators	key (common or differs)	<table border="1"> <thead> <tr> <th>Approvals/Quality</th> </tr> </thead> <tbody> <tr> <td>UL (optional)</td> </tr> </tbody> </table>	Approvals/Quality	UL (optional)
Rating										
250 VAC, 2 A										
Actuators										
key (common or differs)										
Approvals/Quality										
UL (optional)										

**P5**

th-contact Key switch for panel  
 Ø 38.1 off-on  
 Ø 38.1 CO

- panel cut-out 20.6 mm
- high electrical rating
- key trapping options
- choice of off/on, change-over with spring return or change-over with separate circuits

Rating	Actuators	Approvals/Quality
up to 125 VAC, 10 A	key (common or differs)	UL
up to 250 VAC, 5 A		CSA

**TR2**

th-contact Rotary switch for panel  
 18 x 24 mm  
 18 x 18 mm  
 Ø 18 mm  
 Ø 25 mm

- panel cut-out Ø 16.2/22.5 mm
- 2 and 3 position rotary switch
- sealed IP40 or IP65
- plastic or aluminium bezels
- NO, NC
- gold plated single or double pole contact blocks

Rating	Actuators	Approvals/Quality
250 VAC, 5 A	black knob with white indicating bar	UL CSA VDE

**700**

th-contact Joystick with Micro switch  
 55 x 55 x 57.2 mm miniature microswitches  
 41.3 x 41.3 x 57.2 mm subminiature microswitches

- panel cut-out Ø 22 x 20 mm
- single/double pole
- choice of directional gating options
- miniature or subminiature microswitch types

Rating	Actuators	Approvals/Quality
up to 250 VAC, 15 A miniature microswitches	knob	ENEC UL
up to 250 VAC, 6 A subminiature microswitches		CSA (switch only)

**J8**

th-contact Joystick with Micro switch  
 up to 74.5 x 74.5 x 105 mm  
 up to Ø 60 x 60 x 103.5 mm

- panel cut-out Ø 22.5 mm
- choice of directional gating options
- choice of microswitch functions

Rating	Actuators	Approvals/Quality
up to 250 VAC, 16 A	knob	ENEC UL
up to 250 VAC, 5 A		CSA (switch only)



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