All data and figures used in that Product Overview show examples of our engineering performance and may be used as a guideline only. It is strongly recommended that specific operating conditions are clarified with Johnson Electric before individual application.

Johnson Electric Terms and Conditions apply.

All data may be subject to change without notice.

© Johnson Electric 2011
About Johnson Electric
Johnson Electric is one of the world’s largest providers of motors, solenoids, microswitches, human machine interfaces, flexible printed circuits and control systems. Our technology leadership, application expertise and global footprint make Johnson Electric the ideal partner for custom product development projects. Johnson Electric is an international company that is committed to making our customers successful by providing product differentiation and supply chain excellence.

Switches Mission
To create, design and produce innovative switch systems & solutions that complement motion systems.

Specialized Switching Solutions
Custom Engineered Solutions at Johnson Electric means much more than conceptual design. The combined expertise and innovative power of our experts create products that meet the market and financial goals of our customers.

We are specialists
In switching solutions & systems for:
- HVAC
- Home Technologies
- Beverage Dispensing Systems
- Infrastructure Equipment & Security
- Forklift Trucks, Material Handling & Specialized Vehicles
- Power & Garden Tools
- Automotive
- Specialized Applications

Approval Certificates
Johnson Electric products meet International standards according to customer needs.

Brands
Our product range consists of different brands. Each brand specializes in particular areas. The Johnson Electric house of brands is the safe choice for specialized switching solutions.
Excel in Execution
Johnson Electric’s customers expect the highest standards of quality and performance. We work not only to meet those expectations but also to exceed them through continuous cycles of learning.

Partnering Skills
Johnson Electric provides you with the complete switching solution that you are looking for, removing the need to interface with multiple suppliers of switches, electronics, printed circuit boards, mechanical parts and actuators. Our engineering, production and sales specialists support your project team wherever you are in the world.

Engineering Skills
Our skilled engineering team relies on fully equipped laboratories and the following expertise:
- Haptics design
- CAD artwork
- CAE simulation & optimization
- Material analysis
- Rapid prototyping
- Tool engineering
- Electronics development
- Reliability & approval testing
- Production preparation process
High tech processing

Our production facilities use the latest machinery and technology capabilities

- Twin-shot plastic molding
- High speed die-cutting
- Automatic assembly of leads & cables
- OEM crimp tools for connector assembly
- Solder & solderless connection technologies
- Laser soldering on flexible printed circuits and leadframe
- Automatic or manual assembly
- Embedded solutions with customized harnesses and connectors
- Assembly of auxiliary parts for actuation and fixing
- Potting and overmolding with polymer
- One piece flow production
- Specific end of line testing

- Robust brake pedal assembly for specialized vehicles
Functional Reliability
Highly reliable switching solutions for building automation and HVAC. Used as power switches and position sensors in boilers, valves, air dampers, flaps, control panels, and electric actuators. Environmentally protected from heat, dust and humidity. Custom engineered solutions for the world’s leading HVAC manufacturers.

- **Precision electromechanics**
  - Electric actuator position controls subsystem
  - Low actuating force – high precision

Highest environmental protection
- IP67 sealed switch solutions
- ATEX (IEC 60079-11) capable
- Precision sensing

Highest current in smallest space
- Boiler power switches
- Rotary or pushbutton switch solutions
- Made for ease of integration

Our Performance & Technology Approach
- User interface solutions
- Precision solutions for position sensing
- Subsystems with cable harness, PCB, FPC, customized plastic & metal parts
- Customized systems with actuators, flaps & valves
Switching, Sensing, Comfort

Switching solutions designed specifically for use in White Goods & Appliances, such as washing machines, dryers, dishwashers, refrigerators, ranges, range hoods, vacuum cleaners and many small appliances. Our switching systems & solutions offer unique haptics & design, aid in energy saving and meet the specific market standards & approval requirements.

Intelligence
- Energy saving products
- Auto power-off technology
- Exceeds EuP requirements

Emotion
- Designed to make appliances more attractive
- Custom engineered color & haptics
- Integration of electronics

Our Performance & Technology Approach
- Application specific haptics
- Internationally approved, GWIT IEC 60335-1 Ed. 4 compliant
- Customized solutions with harness, PCB, FPC and custom engineered components
- Intelligent auto power-off technology that removes any stand-by losses

- Microswitches
- Momentary switches
- Manually op. switches
- Auto power-off
- Customized systems & solutions
Switching, Sensing, Comfort
Johnson Electric switching systems are used for coffee grinding, whipping milk, cleaning valves, ejecting filter sets, detecting fluid levels and during self cleaning processes. Our subsystems with actuators and switches control and dispense ingredients and intelligent (green) switches help to save energy and remove stand-by losses.

TIPPMATIC Technology
- Intelligent pushbutton switches
- Energy savings by auto shut-off
- Single & double disconnect

Our Performance & Technology Approach
- User interface switches & subsystems
- Custom engineered design, color & haptics
- Microswitch subsystems for actuator switching & position sensing
- Intelligent auto power-off technology that avoids any stand-by losses

TIPPMATIC means Green
- Intelligent auto power-off series
- Full functionality of power switch
- Exceeds Eco Design Directive requirements
Compact, Robust, Safe
Reliable switching solutions for building automation, circuit breakers and smart metering, specially designed for the rapidly growing demands of these market segments. Johnson Electric switching systems & solutions are always the safe choice for applications.

Our Performance & Technology Approach
- Highest current in the smallest package
- Reliable switching after periods of inactivity
- Contact systems capable for AC & DC loads as well as both high & low currents
- Subsystems with harness, PCB, FPC, electronics and custom engineered components

- Sensing
  - Application specific auxiliary switches
  - Highest reliability for circuit breakers

- User interface
  - User friendly design & haptics
  - Embedded electronics & piezo switches
  - Easy to design into controls

- Application tolerance friendly
  - Position sensing & actuator switching
  - High inrush currents capable
  - Long overtravel
Best Performance
Switching solutions designed specifically for use in severe environments. In dust, heat or high humidity, Johnson Electric systems are reliable task masters whether in: drive controls, cockpits, panels, cabin doors, transmitting positional signals to pedals or detecting the position of major parts. Leading brands rely on our expertise.

Heavy duty capability
- Application tolerance friendly
- Highly stable switch mechanism
- Unaffected by aggressive substances

Robustness
- IP67 waterproof & sealed from cement dust
- Salt spray protected
- High electrical rating

Compactness
- iF product design award
- One of the smallest E-stops in the World
- Approved EN 60947-1, -5-1, -5-5

Our Performance & Technology Approach
- Human Machine Interface solutions for cabin & cockpit
- Highly reliable, environmentally protected microswitches
- Resistant to heat, shock, vibration, cement dust, water, gasoline, oil, battery acid etc.
- Switching systems combined with harness, connectors and customized parts
Power & Garden Tools

Powerful and Highly Reliable
Johnson Electric has long experience in professional switch applications with the highest functional reliability and protection against severe surrounding conditions in harsh environments. Consequentially our focused solutions are used in chainsaws, trimmers, cutters, grinders, drills, and lawn-mowers for switching, sensing, and safety functions.

Our Performance & Technology Approach
- Application specific haptics
- Environmentally protected solutions
- Custom engineered subsystems with harness, electronics, and tailor-made components
- Switching solutions for gasoline & electric driven tools, DC & AC, high & low current

Solutions for power tools
- Embedded harness & electronics
- Completely sealed units

Solutions for gasoline tools
- Sealed IP67
- Resistant to oil & gasoline
- Highly resistant to heat, shock & vibration

Solutions for cordless tools
- DC trigger switches
- Sealed switch mechanism
- Low and high current differentiation

Push button switches
Microswitches
Sealed microswitches
Customized microswitch solutions
Comfort, Safety, Reliability
High tech switching solutions specifically designed for selective automotive applications that guarantee comfort & safety everyday. Our solutions are used in interior lights, dashboards, hood latches, tailgate handles, door locks, and closure systems. Environmental protection combined with resistance to shock & vibration ensures the highest reliability and long life.

Stable characteristics over life
- Integration in closure systems & multiple automotive applications
- Long overtravel compensates tolerances in application

Minimal installation space
- Robust switches with cable harness
- Precision snap-action mechanism
- Potted or overmolded cable entry

User Interface Solutions
- Customized design & haptics
- Switches signal currents & high lamp loads

Aligned switch solutions
- Robust & application tolerance friendly
- Custom engineered bracket & fixation

Our Performance & Technology Approach
- Application specific haptics for user interfaces
- Embedded solutions with switches, harness, boards, and custom engineered components
- Solder & solderless connection methods
- Polymer overmolding & potting technologies

Pushbutton switches  Sealed microswitches  Custom engineered solutions
Simplifies your system design
Johnson Electric sets the standards in custom engineered subsystems combining switches, actuators, flexible circuit boards, connectors, and tailored housings for closure systems in global automotive platforms. Our solutions meet both comfort and safety requirements amongst other things such as highest functional reliability, optimized weight, reduced operating noise and the essential electric needs of the latch.

Power closure systems
- Multiple connection technologies
- Optional embedding of actuators

Systems for hood latches & tailgate handles
- Application tolerance friendly
- Unit completely sealed IP67

Our Performance & Technology Approach
- Complex plastic housings & high tech metal die-casting parts
- Various connection technologies: PCB, FPC, leadframe, solder & solderless termination
- Laser soldering on leadframe & FPCs
- Integration of switches, connectors, motor terminals and motors in one latch system
Easy Solution

Johnson Electric also focus on dedicated applications in other industry segments, such as Business Equipment, Gaming, Vending, Ticketing, and Healthcare & Medical. We continue to discover opportunities for product and customer value enhancement. Our depth of application knowledge allows our switching solutions to be tailored towards future customer requirements.

Our Performance & Technology Approach

- Application tolerance friendly solutions
- Microswitch subsystems with cable harness and connectors
- Custom engineered solutions with electronics and application specific components
- Highly resistant solutions for use in severe environments

Ease of termination
- Environmental protected IP67
- High temperature version 120°C

Ease of connection
- Sealed microswitch subsystem with cable harness & integrated electronic components
- ISO 13485 manufacturing capability

Ease of integration
- Integrated PCB & connector unit
- Quick termination
The Johnson Electric name embodies 50 years of experience in the development and manufacture of electromechanical systems for motion applications. Long term partnerships at customer and supplier level, local presence and worldwide round the clock support are significant success factors.

As a Johnson Electric customer, you benefit from highly flexible resources in development and manufacture. Experienced teams of development and production engineers ensure the success of your product with solutions which are worthy of the title “best in class”. Johnson Electric customers benefit from the latest manufacturing technologies and efficient, modular product designs create a basis for flexibility and economy from small batches to large production volumes.

Johnson Electric provides a total life cycle solution, combining global manufacturing with regional technical and commercial support.

We look forward to hearing from you!