A Innovating Motion





Tel.: (+34) 902 450 160 Fax: (+34) 902 433 088 <u>ermec@ermec.com</u> <u>www.ermec.com</u>

On any given day, and wherever you may be, there's probably a Johnson Electric motion solution right where you are - our motion solutions are in more than 300 applications globally.

> 1 out of 3 digital cameras incorporate a motion subsytem by Johnson Electric

runs on a Johnson Flectric motor

1 out of 4 coffee grinders is powered by Johnson Electric

in America have a Johnson Electric motion solution

4 out of 5 inkjet printers have a Johnson Electric motion system

2 out of 5 hairdryers run on a Johnson Electric motor,

4 out of 5 in America

2 out of 5 cars

have features powered by many products from Johnson Electric

1 out of 4 garden tools is powered by a Johnson Electric motor

2 out of 5 vacuum cleaners run on Johnson Electric motor

Founded in 1959, Johnson Electric pioneered manufacturing of high quality micromotors in Hong Kong. With rapid expansion, the Group has become a US\$2 billion global enterprise that is well positioned for further growth.

> 1959 Johnson Electric was established

1959 JOHNSON ELECTRIC GROUP

SAIA-BURGESS



1930

1920 Saia AG founded in Bern (CH)



Products Ltd founded in Hinckley (UK) 1936

Takeover of Saia AG by Landis & Gyr

1935

Burgess



1940

1950

1952 Burgess switch production transferred to Gateshead (UK)

1953

1st production of miniature synchronous motors by Saia AG

1960

1969

The 1st electromechanical timers are launched on the market by Saia AG



1976

Established Johnson Electric in the USA

1970

1982 Started production in China

1984

Listed on HK Stock Exchange

1988 Established Johnson Electric in Japan

1980

JOHNSON GATE 1995

ISO9002 accreditation in China 1998 QS9000 certification

1999 Acquired Electric Motor Systems from Lear Corp

Acquired Nanomotion 1990

2000

JOHNSON NHON MIN JOHNSON NANOMOTION

Acquired motor

Kautex Textron

Meritor's seat

motor business

Acquired Nihon

Mini Motor

business of

and Arvin

2004

2004

2000

saia-burgess

NARLEX

2005 Acquisition of Saia-Burgess (CH) and Parlex Corp (USA)

2005

JOHNSON MOTOR

LEDEX

DORMEYER

Launched new product brand strategy for motors, switches and solenoids

saia

BAR

burgess

th.contact

2007

1970

1979 Saia AG launched the 1st programmable logic controller

1980 1987

Saia AG

Controllers

1988

Factory opens **Burgess Micro** in Dresden for Switch Co Ltd motor production takes over

Acquisition of a production and Set-up of Saiaof a marketing/ Burgess with 3 software developbusiness areas ment company in Switches, Motors Hungary & Electronic

1999 Acquisition of Bär Electrowerke GmbH, Halver (D)

1990

1992

1998

2000 2000/2001

Acquisition of Ledex & Dormeyer Group, Vandalia (USA)

2002 Foundation of the production plant in Hatvan (HU)

2002/2003 Acquisition of TH-Contact. Reinach (CH)

2003 Takeover of activities of Otehall Switches Ltd., London (UK)

2004 Acquisition of actuator business for auto HVAC from Bühler Motor Group, Cary (USA)

2005 Foundation of the production plant in Dabrowa Górnicza (PL)

2005 Acquisition of CEI, Springfield (USA)

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The Johnson Electric Group is one of the world's largest providers of motion actuators for automotive and industrial applications.

Over the years, we have shipped billions of motors to more than thirty countries in over one hundred different motor applications. Johnson Electric has an annual production capacity of one billion motors.

At the heart of Johnson Electric's success is our commitment to make our customers successful. Our customers include many of the world's leading industrial, consumer and automotive companies. We begin by understanding our customers' business needs, and the product application requirements of the end user of our customers' products. Then we design and deliver innovative motion solutions that help our customers to differentiate their products in the marketplace. Our goal is to be instrumental in the successful launch of our customers' products in their respective marketplaces.

Our Brand Promise Johnson Electric is the most reliable partner

Johnson Electric is responsive and flexible; and has the financial stability and organizational integrity to meet all of our commitments and to support our customers' success. Product reliability and assurance of supply are our commitment.

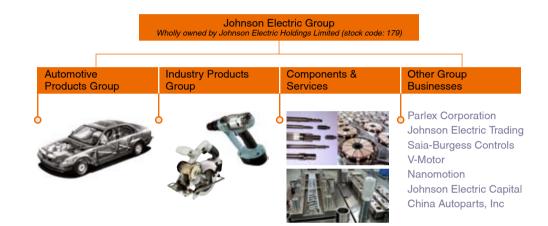
Johnson Electric delivers competitive advantage

Johnson Electric delivers differentiation and innovation through its motion products – subsystems comprising of Stepper Motors, DC Motors, AC Motors, Piezo-electric Motors, Switches, Solenoids, Flexi Circuits, Motion Control, Precision Plastics and Precision Gears.

Our business growth hinges with leading "branded" goods producers to deliver differentiation and innovation through our motion products. The core platform for delivering these solutions is a highly developed production base and focused customer support teams throughout the world. This combines scale advantages in production and procurement with skilled and dedicated motion application experts.



Johnson Electric Holdings Limited is the parent company of the Johnson Electric Group and has been listed on the Stock Exchange of Hong Kong since 1984. The Group structure consists of a number of operating divisions and business units focused on their particular customer application or product segment.



The Group's motion systems, motors and switches businesses are managed through two primary operating divisions: Automotive Products Group and Industry Products Group.

The Automotive Products Group, which consists of Johnson Electric's Automotive Motors Group and the Automotive Division of Saia-Burgess Electronics, is focused on providing customized motion solutions for major automotive application segments that include powertrain, body and chassis.

The Industry Products Group is comprised of business units that provide motion products and solutions for various commercial and industrial application sectors, including home appliances, power tools, business equipment, personal care products, medical equipment and healthcare, building automation and security, audio-visual and other industrial products.

Supporting these two operating divisions is the Group's Components & Services function which pro-

duces metal and plastic parts, tooling and production equipment for motor and motion related products. Johnson Electric is a highly vertically integrated business that manufactures an exceptionally wide range of components that form the basis for its final assembled end products. We make magnets, bearings, shafts, housings, laminations, commutators and die cast parts. We also build tools, assembly fixtures, plastic molds as well as armature winding and other production machines.

In addition to motion systems and motors, the Group also consists of a number of complementary manufacturing businesses and other subsidiary companies. These include an innovative provider of flexible printed circuits and interconnect solutions; a successful niche player in the programmable controls industry; and a rapidly growing specialty metals and trading services company. Johnson Electric's competitive advantage is built on excellence and innovation in all areas of the company, qualities that provide reassurance and differentiation for our customers.

Application Focus	Quality Focus
Business units are structured to support key market segments	Unrelenting commitment to continual improvement and to the
and deliver on our customers'	ultimate attainment of zero defects

Customer Partnerships

application requirements

Established long-term strategic relationships with world's best-known brands in the industry, providing motion solutions that last

Global Footprint

in all areas of our business

A global company that provides "local" sales and technical support to customers

INNOVATING FOR THE FUTURE



- Collaboration on-site with innovative customers – rapid new product development and prototyping
- Leverages Johnson Electric's and customers' capabilities
- Creates new products for new markets
- Creates leadership in strategic projects

Innovation Centers centers of excellence

Shajing — Motors

- Murten Actuators
- Yokneam Piezo-electric Motors
- Dresden Stepper & Synchronous Motors
- Halver Switches
- Saku Geared Systems
- Vandalia Solenoids

Technical Support Services broad, substantial

Customer validates testing results: Material Laboratories, UL certified laboratory, Acoustic Laboratory, Wind Tunnel for Cooling Fans, EMI

- Finite Element Analysis: Structural, Magnetic, Computational Fluid Dynamics
- Rapid Prototyping: SLS Technology Plastic Parts, SLA Technology Parts, KelTool Technology Parts, Vacuum Casting Technology Parts

Assurance of Supply

More than 40 years in the motion business, with a strong history of financial stability and long-term relationships with key suppliers and customers

Engineering Expertise & Flexibility

Proven reliable technical partner, with an application focus that enables us to offer value-based expertise

Scale & Speed

Constantly delivering the benefits of scale and speed to demanding customers

Unrivalled Technology & Capabilities

An array of products and capabilities that span AC, DC & stepper motors, solenoids, actuators, precision gears, precision plastics, switches and flexible circuits



Extensive programs and courses covering leadership, engineering design, environment, quality systems, operational training, work safety, prevention and maintenance

Graduates in Master of Science in Engineering, B.S. Engineering, etc.

Johnson city manufacturing excellence

30,000 employees and subcontract workers, 250,000+ square meters

Around 2,000 engineers and designers

Capacity: 3 million motors a day

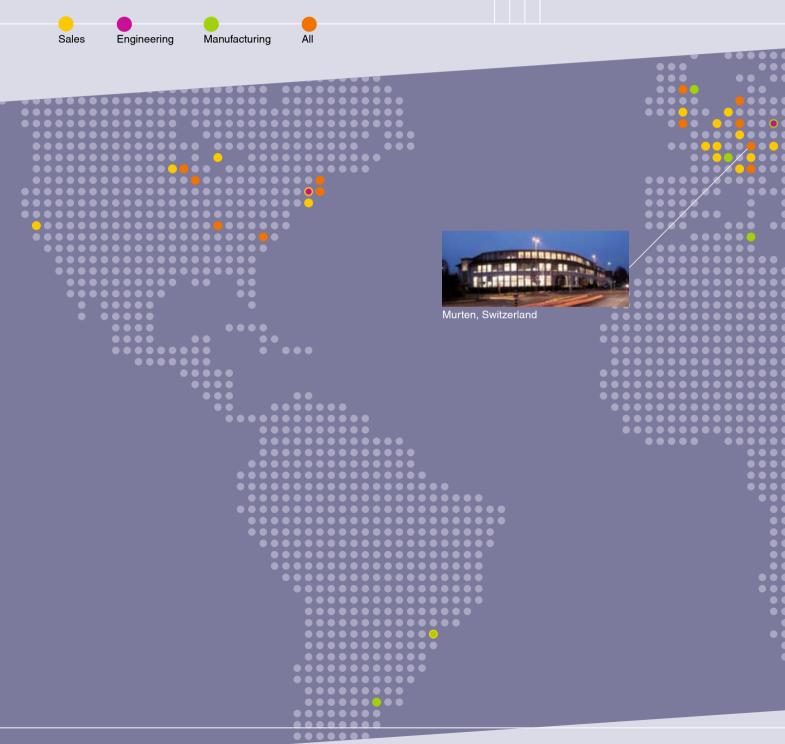
Skills Training Center

High degree of Vertical Integration: in-house components and equipment Lean Manufacturing Concepts: 3P, Cellular assembly, flexible manufacturing, Johnson Electric Production System (JEPS)

Customer Supply Chain Integration: Local Final Assembly, Local Replenishment (JIT.Kanban)

GLOBAL GROWTH

Johnson Electric is all about creating and delivering value – and growth is the primary measure to this goal. As the growth company in our industry, Johnson Electric is able to offer its employees exceptional opportunities for personal development and rewarding careers. We have over 40,000 employees and subcontract workers in 20 countries worldwide, with the majority engaged in production activities in China. Design engineering centers are located in Hong Kong, China, Japan, Israel, Italy, Switzerland, Germany and the USA, and the number is expected to increase.



A M E R I C A S Plymouth, Michigan

Shelton, Connecticut

Cary, North Carolina Vandalia, Ohio

Springfield, Tennessee

San Jose, California

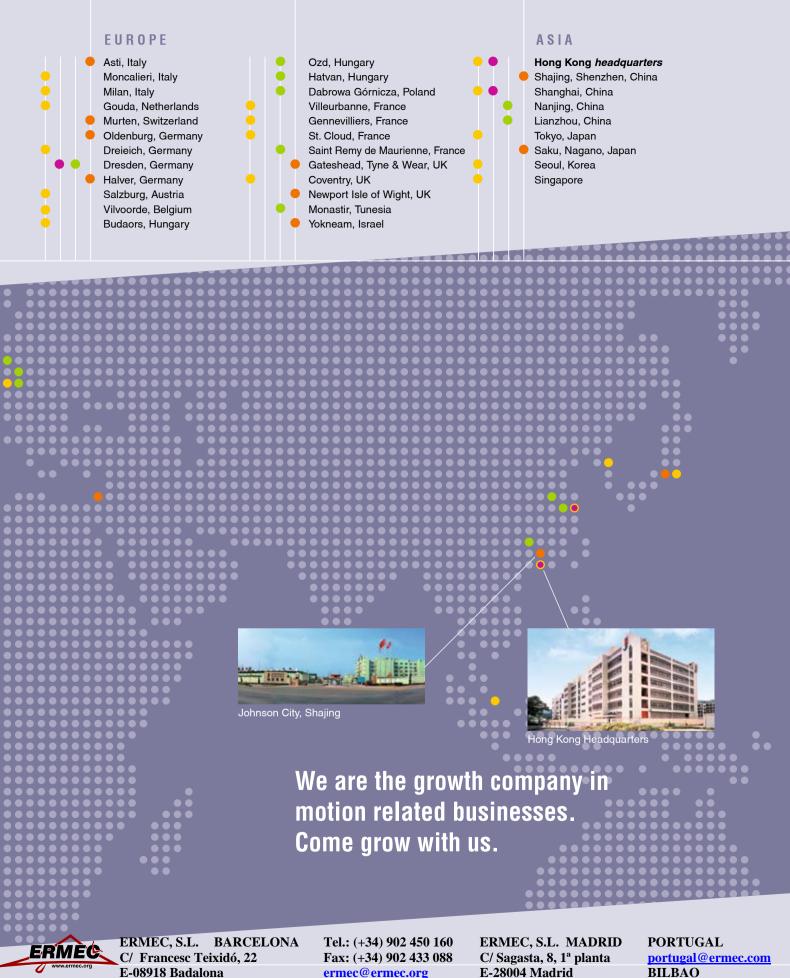
Sao Paulo, Brazil

Methuen, Massachusetts

Cranston, Rhode Island

Ronkonkoma, New York Scarborough, Ontario, Canada

Buenos Aires, Argentina



(Spain)

ermec@ermec.org www.ermec.org

E-28004 Madrid (Spain)

BILBAO bilbao@ermec.com

Motion Solutions & Actuators

Johnson Electric offers a comprehensive combination of technology, engineering and manufacturing resources that would satisfy any motion solution need. Our products are designed, built, tested, packaged, and shipped to exacting specifications.

To serve our customers, Johnson Electric invests significant resources to utilize the latest industry standards and advancements that create ongoing opportunities for quality enhancements, on-time delivery and cost reductions.

> The performance of our products in specific applications is vitally important to us. As such, we do not only invest in design and manufacturing resources but also on reliability and application specific testing such as our application based reliability (ABR) tests.

Value-added assemblies eliminate added cost to maintain multiple vendors, added manufacturing resources and additional inventory. Whether it's as simple as adding a special connector or modifying a shaft, or as complex as fabricating a complete assembly of motors or solenoids, gears, switches and electronic controls, Johnson Electric is capable and willing to work with our customers' design teams to come up with cost effective motion solutions.

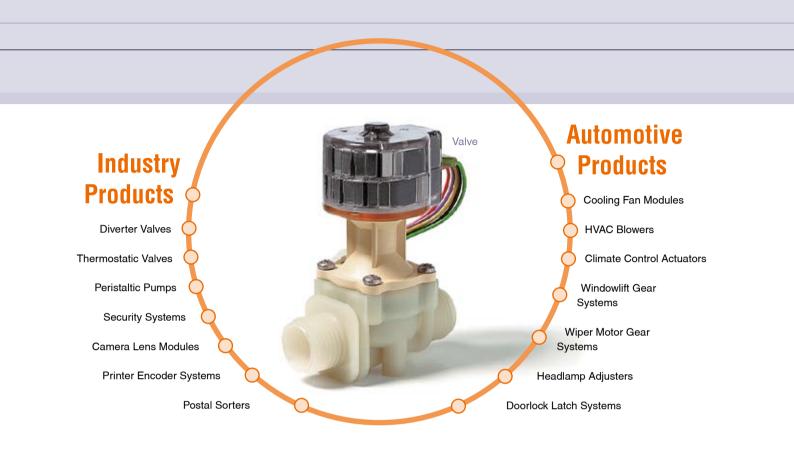
How do we develop a solution that's right for the application?

Our engineers understand designing for manufacturability and reliability, and bringing the most cost-effective solutions to our customers. We take all the requirements and formulate a design through the latest design and CAD tools available that would also allow us to simulate and analyze the performance of our products. As a result, prototypes are available more quickly and on a timely basis.

We appreciate the opportunity to collaboratively work with our customers' design teams early in the development cycle of the applications. We can respond to requirements quickly by networking our know-how across the global Johnson Electric organization and at the same time providing local support to increase efficiency, reduce costs and to streamline application development cycles.



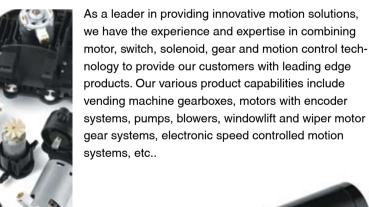
ERMEC, S.L. BARCELONA C/ Francesc Teixidó, 22 E-08918 Badalona (Spain) Tel.: (+34) 902 450 160 Fax: (+34) 902 433 088 <u>ermec@ermec.org</u> www.ermec.org ERMEC, S.L. MADRID C/ Sagasta, 8, 1^a planta E-28004 Madrid (Spain) PORTUGAL portugal@ermec.com BILBAO bilbao@ermec.com



Examples of some of the solutions that we provide:



Johnson Electric







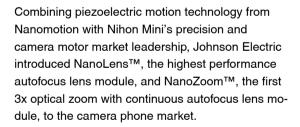
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Motion Solutions & Actuators



Our precision motion expertise in DC motor plus excellence in precision plastics and gears, have enabled us to provide innovative gear systems used in applications such as camera focus and zoom systems, power curtains and toilet seat systems, etc..



NanoLens[™] and NanoZoom[™] Camera Lens Modules from Johnson Nanomotion



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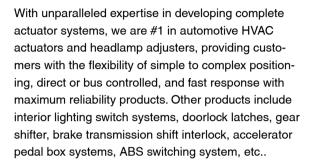
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ERMEC, S.L. MADRID C/ Sagasta, 8, 1ª planta E-28004 Madrid (Spain)

PORTUGAL portugal@ermec.com **BILBAO** bilbao@ermec.com



Actuators from Saia-Burgess





As the #1 manufacturer of automotive cooling fan modules, we are experts in fan and motor technology. We work collaboratively with our customers to develop cooling fan modules, HVAC blowers and speed controllers that are customized to their requirements.

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C/ Sagasta, 8, 1ª planta

E-28004 Madrid

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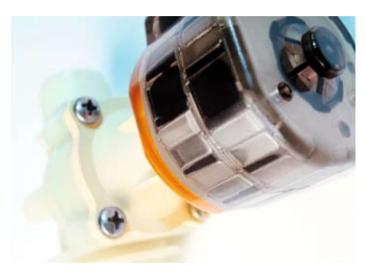


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PORTUGAL portugal@ermec.com BILBAO bilbao@grmgc.com

Motion Solutions & Actuators



With our proven expertise in stepper motion solutions, we have become #1 in providing HVAC water and gas valve solutions. Other products include level indicator, thermatic valve, squeeze pump and diverter valve.

Saia Water Valve Solutions



Ledex Solenoid Assemblies



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P R O D U C T S





JOHNSON MOTOR

- #1 provider of PMDC, brushless, AC and universal motors for power tools, home appliance, business equipment, personal care and audio-visual markets
- Motor and component technology combined with application expertise, scale and production efficiency
- 3 million motors per day capacity
- New products include high voltage DC for dishwasher drain pump, stand mixer and vacuum cleaner power brush



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P R O D U C T S

Motors



saia

- #1 in stepper motors
- Precision and efficiency
- Products include stepper and synchronous motors, stepper with gearbox used in industrial applications from 10 to 60mm diameter
- Large variety for motor-gear combination
- Customer-specific solutions-oriented with a high degree of flexibility







- #1 in piezoelectric motors and stages
- Nanomotion's product line ranges from single element motors for actuation to larger motors for driving typical stages, and they operate with no intrinsic magnetic fields and no moving parts
- Motors provide unlimited travel in a compact package, with the ability to achieve unmatched precision for linear or rotary motion
- Typical applications include semiconductor and flat panel equipment, fiber optics manufacturing, storage media manufacturing and test equipment, bio-medical and pharmaceutical manufacturing, metrology and general automation



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saia

- High volume production lines for micro switches with less than 3 mm contact gap
- High precision switch operating position, small tolerance
- High operating speed / frequency
- High electrical ratings and longer life cycles
- Snap action function with leaf-spring and coil-spring mechanisms available
- Many switch contact options (low and high current)
- Wide range of switching characteristics and terminal options
- Strong in home appliance applications
- Sure switch contacts with contact wiping



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P R O D U C T S



burgess

- · Strong in industrial automation
- · World's first snap action switch company
- Expert innovative switch solutions
- Solid products fulfill high requirements in robustness
- Largest variety in switching technologies
- Worldwide widest range of micro switches
- Low-volume capabilities



th) contact

- Panel mounted switches such as illuminated pushbutton and keylock switches, as well as joysticks and emergency stop switches for control panels
- Best modular design so that various permutations can easily be assembled
- Worldwide reseller channel





- · Innovative switch solutions for home appliances
- · Setting industry standards
- Rocker, push-button and door switches with customized styling
- Intelligent switch combined with electronic controller
- Safety and comfort solutions in switch functions for the home appliance market
- Experts in optical styling for operators and tactile feel for switches

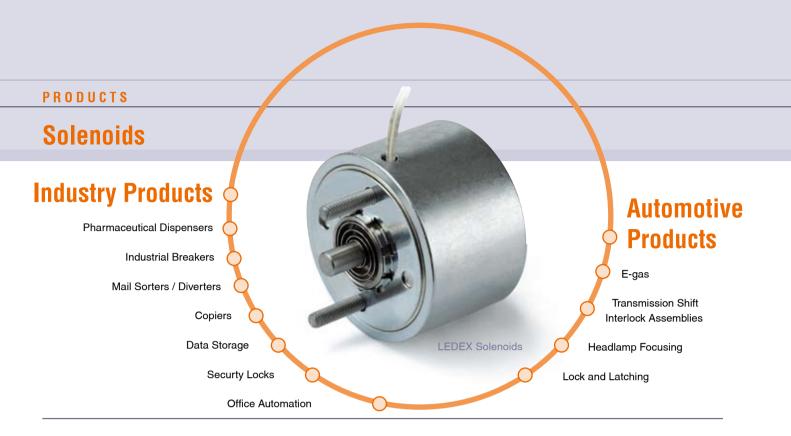
feel for switches ERMEC, S.L. MADRID C/ Sagasta, 8, 1^a planta E-28004 Madrid (Spain)

PORTUGAL portugal@ermec.com BILBAO bilbao@ermec.com



ERMEC, S.L. BARCELONA C/ Francesc Teixidó, 22 E-08918 Badalona (Spain)

Tel.: (+34) 902 450 160 Fax: (+34) 902 433 088 <u>ermec@ermec.org</u> <u>www.ermec.org</u>





LEDEX

- America's leading industrial solenoid brand for more than 60 years
- Precision electromechanical and electromagnetic solutions
- Experienced teams of design and production engineers for applications such as printers, defibrillators, ATMs, door locks and waste water pump controls
- Excellent customer service and delivery performance with our technical design advantage



DORMEYER

- Leading AC solenoid brand
- Electromechanical and electromagnetic solutions for appliance and industrial actuation applications
- Applications include garage doors, ice dispensers, beverage dispensers, garbage sanitation and washing machines
- Excellent customer service and delivery performance to support high-volume AC solenoid requirements

ERMEC, S.L. MADRID C/ Sagasta, 8, 1^a planta E-28004 Madrid (Spain) PORTUGAL portugal@ermec.com BILBA@ • ¹⁹ bilbao@ermec.com



ERMEC, S.L. BARCELONA C/ Francesc Teixidó, 22 E-08918 Badalona (Spain)

Tel.: (+34) 902 450 160 Fax: (+34) 902 433 088 <u>ermec@ermec.org</u> <u>www.ermec.org</u>

Contact Us

Headquarters

Johnson Electric Holdings Limited Johnson Building 6-22 Dai Shun St. Tai Po Industrial Estate New Territories, Hong Kong Tel: +852 2663 6688 Fax: +852 2897 2054

E-mail inquiries

salessupport@johnsonelectric.com

International Sales Headquarters

Industry Products Group

North America Shelton, Connecticut

10 Progress Drive, Shelton CT 06484, USA Tel: +1 203 447 5362 Fax: +1 203 447 5383

Europe Milan, Italy

Via Cadamosto 3 I-20094 Corsico, Milano, Italy Tel: +39 02 4869 21 Fax: +39 02 4860 0692

Asia Tai Po, Hong Kong

Johnson Building 6-22 Dai Shun St. Tai Po Industrial Estate New Territories, Hong Kong Tel: +852 2663 6688 Fax: +852 2897 2054

E-mail inquiries

commercialsales@ johnsonelectric.com

Automotive Products Group

North America Plymouth, Michigan

47660 Halyard, Plymouth MI 48170-2429, USA Tel: +1 734 392 5300 Fax: +1 734 392 5388

Europe Murten, Switzerland

Bahnhofstrasse 18, CH-3280 Murten, Switzerland Tel: +41 26 672 71 11 Fax: +41 26 672 73 33

Asia Tai Po, Hong Kong

Johnson Building 6-22 Dai Shun St. Tai Po Industrial Estate New Territories, Hong Kong Tel: +852 2663 6688 Fax: +852 2897 2054

E-mail inquiries

automotivesales@ johnsonelectric.com

For the complete listing of our worldwide sales offices, please visit www.johnsonelectric.com/about_us/locations.html



Distribución de componentes eléctricos y electrónicos Tel.: (+34) 902 450 160 Fax: (+34) 902 433 088 <u>ermec@ermec.com</u> <u>www.ermec.com</u>