

<Company Profile>

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URL	https://www.hasegawa-elec.co.jp/english/
No. of employees	80
Capital	41.60 million yen
Established	September 1971 (Predecessor company founded in July 1925)
Representatives	Osamu Yoshida, Chairman Yojiro Yoshida, President

<Business Overview>

Development, production, and sales of voltage detectors, phase testers, ground fault relays, zero-phase current transformers, electrical power-related measuring instruments, LED-related devices, etc.

<Technology>

To protect people and society from electric shock and ground fault accidents, we at Hasegawa Electric continue the challenges of researching and developing electrical safety-related devices!



Strict quality control and Continuously new product development

Hasegawa Electric Co., Ltd. was originally founded when the spinning industry flourished in Japan, and began as a *shosha* (trading company) that imported ground fault relays – which served to prevent dust fires resulting from ground faults (short circuits to ground), often occurring in spinning factories in those days – as well as voltage detectors used in electrical construction work.

A ground fault relay is a device that prevents accidents by detecting a condition when an electrical

current flows to ground, which occurs when a section of electrical wire makes contact with a ground surface – such as due to degraded coverings on the distribution line or snapped wires – or when a tree touches a section of electrical wire. If a ground fault (short circuit to ground) takes place, there are risks of an electrical fire caused by the voltage generated at an unexpected place and of accidents involving electric shock. However, even when a ground fault actually takes place, electric power companies cannot easily choose to shut off the electricity over wide areas – since there are important equipment and devices installed and used in such places as hospitals, office buildings, and factories. Ground fault relays are utilized to resolve such difficulties; just as they prevent a serious large-scale accident in advance by precisely detecting the occurrence of even a tiny-scale ground fault, they also help maintain a continuous supply of electricity during repair and maintenance performed after a ground fault has occurred.

A voltage detector, another product our company mainly handles, is a safety confirmation device that makes sure prior to the start of electrical work that a section of electrical wire where the work is to be performed is completely de-energized and that the section is in an absolutely safe condition. In Japan, it is even required by the Industrial Safety and Health Act to employ a voltage detector when conducting electrical work; it is a must-have device in preventing electric shock accidents.

The ground fault relays and voltage detectors produced by Hasegawa Electric are both essential instruments that not only serve to protect equipment and people from electrical risks but also contribute to stabilizing the electricity supply.

[History of Development]

To identify a ground fault, the sensitivity level of the ground fault relay must be adjusted to the correct and proper standard. Traditionally, to measure the sensitivity levels appropriate for ground fault relays, extremely dangerous performance tests involving high voltage hot-line maintenance activities (electrical work conducted while high-voltage lines are live) have been required. Yet, the ωC (omega-C) measurement type ground fault relays that Hasegawa Electric manufactures can set appropriate sensitivity levels automatically on their own, and at regular intervals; with these ground fault relays, suitable sensitivity levels can be measured without undertaking dangerous performance tests. The development process of this technology was initiated with a strong determination to prevent the same or a similar accident from ever happening again after learning a lesson from a tragic electric shock accident that occurred once during a process of measuring appropriate settings for traditional-type ground fault relays. This special ground fault relay is the successful result after around 10 years of joint research efforts.

[Originality]

Electricity is not so simple as it seems, and there are indeed various kinds, such as alternating-current (AC) electricity, which flows from wall outlets and in the distribution lines of electric power companies, and direct-current (DC) electricity, which is used in dry cells, solar power generation systems, and electric cars. The environments surrounding these kinds of electricity are changing every

year as technologies change, and electrical safety measures must also be adapted to these changes. In particular, over recent years, direct-current electricity has become a familiar part of everyday life unlike before when it was used only in very limited places. The characteristics of electricity differ depending on whether it flows as an alternating current (AC) or as a direct current (DC); it is necessary to use safety instruments such as voltage detectors and ground fault relays that are best suited for the two different types of current. We at Hasegawa Electric have added information about the characteristics of electrical currents under various different electrical environments and work environments to our knowledge base, and the ability to flexibly respond to various environments and situations based on the knowledge base we have built up is a key feature of our company.

[Future Development]

Many other nations in Asia are lagging behind in their efforts toward electrical safety, and because of that, a great number of electric shock accidents have been occurring in those nations. Against this backdrop, Hasegawa Electric, which now considers the expansion of its voltage detector business into Asian markets as an urgent task, is actively working to give away the information and knowledge on electrical safety that the company – together with other companies in the electrical power and electrical construction industries in Japan – has accumulated over a long period of time. We at Hasegawa Electric intend to deliver more safety and peace of mind to Asia's electrical industry. Meanwhile, on the technical side, by combining the world of voltage detectors and ground fault relays – which up to now have been standalone devices – with IoT and wireless technologies and the like, we plan to devote more time and energy to developing a new type of electrical safety management that can be conducted and provided via systems.

<Topics>

■ Some of Japan's foremost electrical testing equipment and systems are lined up.

A comprehensive testing facility for electrical safety

Our company possesses a comprehensive testing facility equipped with a large number of special testing equipment, such as the 300 kV high voltage generator, mock utility pole, and vibration testing machine. At the facility, simulation and severity tests concerning environments where particular products are actually used are conducted, and continuous efforts are devoted to the development of highly reliable products. At the product exhibition corner, in collaboration with our sister company Otowa Electric Co., Ltd., we help promote safety not simply for businesses but also for the general public.

■ We are actively working to exhibit our products at exhibitions overseas!

“HASEGAWA” spreads across Asia.

Every year in May, at the JECA FAIR (Electrical Construction Equipment and Materials Fair), which

is held alternatively in Osaka and Tokyo by the Japan Electrical Construction Association (JECA), our company jointly displays products as a member of the Otowa Group; at the fair, Hasegawa Electric has proposed various products that are useful for electrical safety. In recent years, our company has been working actively on presenting its products at overseas exhibitions, and Hasegawa Electric is gaining more brand recognition in such countries as South Korea, Taiwan, Vietnam, Indonesia, and Malaysia.

<Corporate History>

- 1925 Originally founded as Hasegawa Toshihiko Shokai Co. in Kita-ku, Osaka, Japan.
- 1971 Renamed Hasegawa Electric Co., Ltd. and relocated to Ohama-cho, Amagasaki City, Hyogo.
- 1995 Won the Shibusawa Award for research and development of wireless voltage detectors and phase testers.
- 1996 Won the OHM Technology Award for development of ω C measurement type ground fault relays.
- 1996 Earned the G-Mark and won the Good Design Award – the Director of the Small and Medium Enterprise Agency (SME) Special Prize for our HT-610 α Low Voltage Detector.
- 2007 Recognized as one of Japan’s 300 Most Vibrant Monozukuri (Manufacturing) Small and Medium Enterprises by the Small and Medium Enterprise Agency.
- 2013 Received the Technical Award from Japan Railway Electrical Engineering Association (JREEA) for development of non-contact AC voltage detectors.
- 2017 Moved the head office and the main factory to Shioe in Amagasaki City, Hyogo. (Newly constructed head office and main factory there)
- 2019 Certified as an Excellent Enterprise of Health and Productivity Management (an award given as part of a program conducted by the Ministry of Economy, Trade and Industry).
- 2019 Selected as one of Hyogo’s “Only-One” Companies.