

Nidec
All for dreams

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Corporate Profile

NIDEC COPAL ELECTRONICS CORP.

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NIDEC COPAL ELECTRONICS CORP.

Seeking
the Next Point of view
the Next technology
the Next value

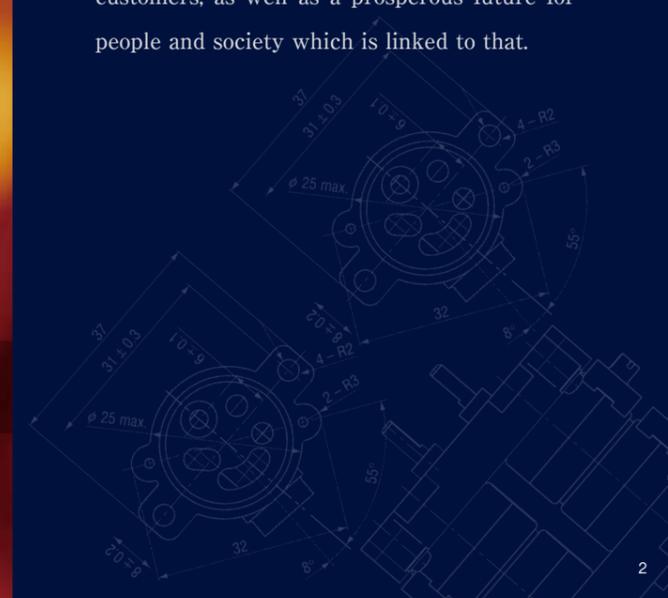
M a k e E m o t i o n s

Nidec Copal Electronics Corp. is a professional group that has over half a century of experience and technical expertise as an electronics component manufacture which covers fields from industrial equipment to consumer electronics. Our business domain extends to each field in electronic & mechanical components, sensors and actuators. We have won praise and top market shares in each category of industrial machinery. Behind our strong track record is our entrepreneurial spirit that we have inherited since our founding as part of our DNA. Our stance of constantly seeking the next point of view, the next technology and the next value, as well as taking up challenges together with our customers, remains unchanged. In the future, we will continue to produce one after another highly value-added products that meet the needs of the times and we will contribute to the manufacturing of our customers, as well as a prosperous future for people and society which is linked to that.

Management Philosophy

Our Firm has set forth the following as our basic philosophy of management and will contribute to society by achieving these.

1. We shall make proactive efforts toward our corporate social responsibility and contribute to the development and prosperity of society.
2. We shall explore new avenues in the spirit of entrepreneur and with our own strengths.
3. We shall build an open and natural corporate culture with creative freedom, and take up the challenge of self-improvement.
4. We shall continue to provide new products to the market as a development-orientated company.



Reason-*I*

The reason we are called unique

[Product]

We cover a wide range of products that meet the needs of all our customers. Among these, we have a great many exceedingly high added value products and products with no effective alternatives. These are utilized in new manufacturing and problem-solving technologies for our customers.

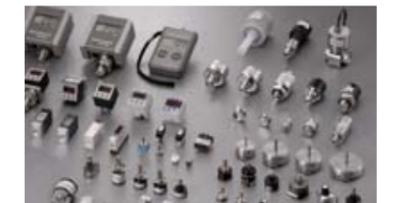
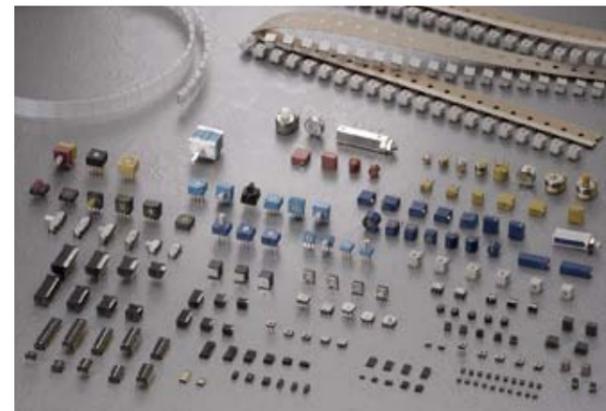
We provide unique technology that no one else can handle in niche areas



At Nidec Copal Electronics "unique" exists everywhere. For example, products that are only handled here and nowhere else in the world, as well as manufacturing and processing technologies that cannot be realized anywhere else. Our true worth is not parts that can be easily obtained, but the ability to supply the products that meet niche needs and wants. For example, our optical scanners that are used in laser printers and digital multifunction printing machines have had a contactless structure developed

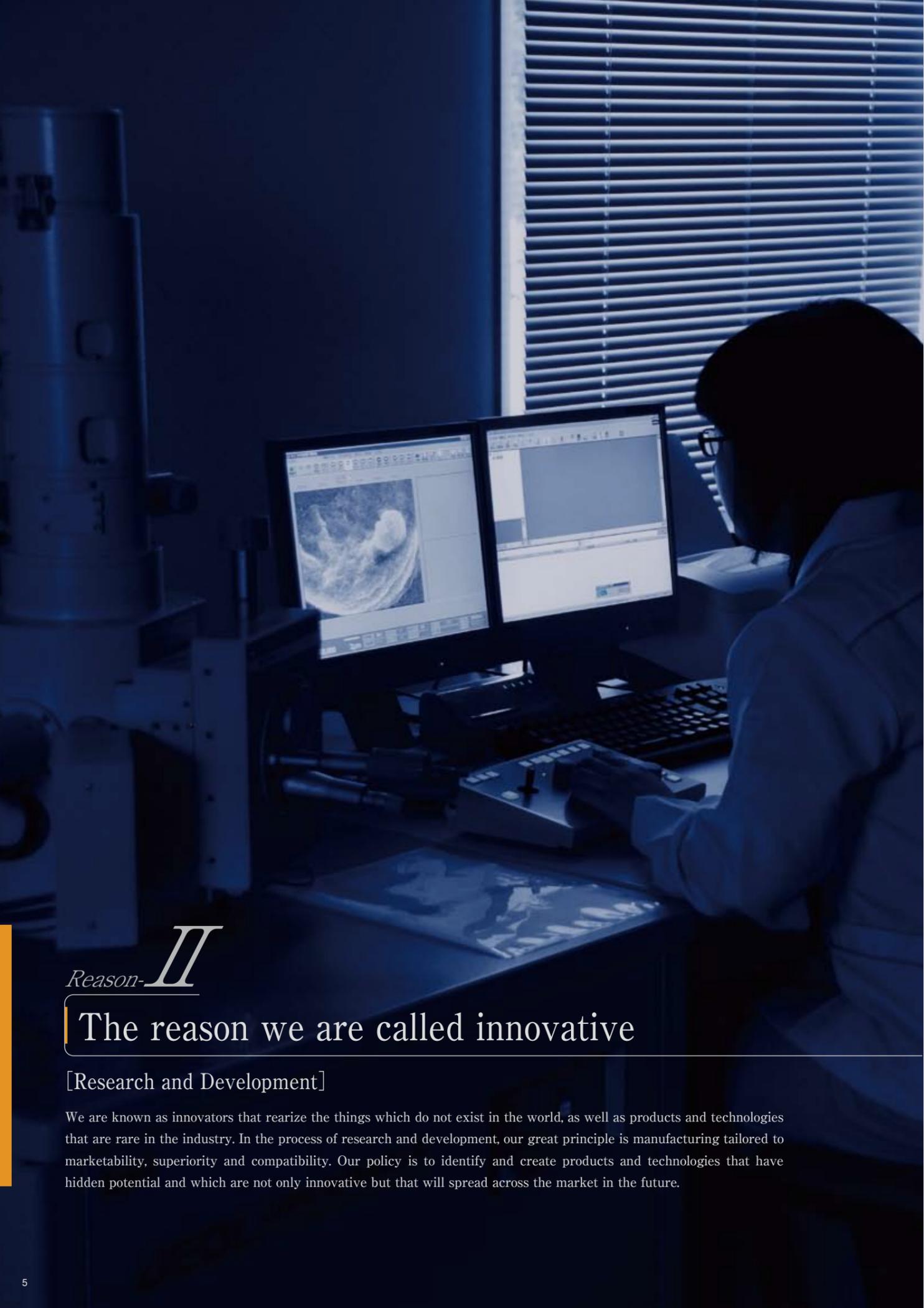
with our unique technology that supports the axis of revolution in the layer of air for the bearings. This has led to the realization of ultra-high speed, quiet and long-life devices. Furthermore, we were the first in the world to handle the manufacture of polygon mirrors through mirror surface cutting that demands ultra-high precision processing technology. Many of these high added value products are utilized in products which are a focus of our customers and support their satisfaction.

A flexible covering strength that satisfies the extensive needs and demands of our customers



One of the major features of Nidec Copal Electronics is our abundant product lineup that can respond to the various manufacturing needs of our customers. In fact, in the field of trimmer potentiometers and switches we have an extremely wide variety of approximately 13,000 different kinds. We provide choices that meet all applications and needs, up to differences in specifications, shapes, coloring and the various operational feel. Furthermore, in each category of sensors and actuators we have

prepared a wide-ranging product lineup that meets a variety of needs. In addition, we also offer flexible support for custom production with the individual development and manufacture of products in line with the requests and orders of our customers. Taking advantage of our rich experience and knowledge, we offer our customers special products that have been given exclusive designs and specifications which cannot be covered in standard goods.



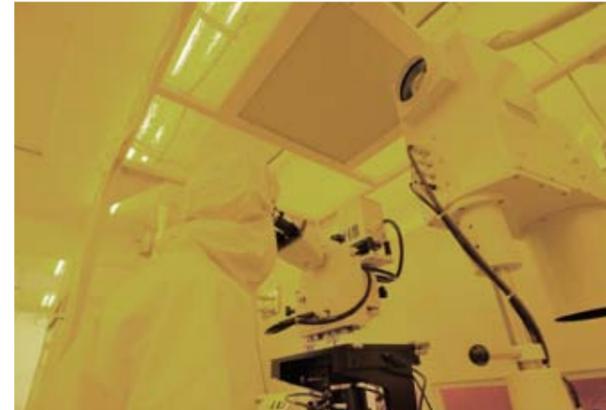
Reason-*II*

The reason we are called innovative

[Research and Development]

We are known as innovators that rearize the things which do not exist in the world, as well as products and technologies that are rare in the industry. In the process of research and development, our great principle is manufacturing tailored to marketability, superiority and compatibility. Our policy is to identify and create products and technologies that have hidden potential and which are not only innovative but that will spread across the market in the future.

Perception and foresight that accurately captures the needs and demands of the times



We have a well-honed sense that delicately reads the trends of the next era. This can be called the indispensable nature for an electronic component manufacturer that supports the technological development of society in the background. We have established a unique management system in order to accurately capture the needs of customers and market trends, and to then utilize these for product development. We build close contacts with our customers. Then, we work as one while taking on each role of the sales department team

that promptly collects together the input of the actual development site, the sales engineers that decipher new needs for each department and who then guide the realization of these, and furthermore the marketing professional group that predicts and takes an outlook on the future of the market. We then draw a product roadmap that looks to the short, medium and long-term. This development-orientated structure and process is capable of the timely development of products that meet the demands of the times.

A development environment that follows the latest trends and changes in the market



Ability to meet the market environment that is ever-changing at a remarkable momentum, development strength with a greater sense of speed is demanded in electronic component manufacturers. In response to this current, we have a Development Center to support the creation of our products. This has been established as a specialized facility to promote even faster and more effective research and development. The Development Center plays a cross-functional role beyond the boundaries of each division as a base of development with the responsibility from

basic and elemental technologies used in key products (e.g. electronic & mechanical components, sensors and actuators) and the development of new products to pioneering new business that has hidden potential in the future. This contributes to the creation of the high-quality products which are characteristic of Nidec Copal Electronics. Furthermore, research and development projects with industry-academic-government cooperation are actively pursued here and are given birth, one after another, to the latest technologies that have carefully examined future market trends.

Reason-III

The reason we are called experts

[Quality]

With outstanding high-quality and steady performance we want to live up to the trust our customers' place in us. This earnest desire of ours comes out in our strict quality control and production system. Starting with the introduction of quality management conforming to international standards, this extends to long-term reliability tests, inspection of all items in the production process and data management. We make absolutely no compromises in our pursuit of quality as a professional organization of electronic components for industrial equipment.

Quality comes first with our thorough quality and production management system



Electronic components for industrial equipment demanding high reliability and stability are located in a field which requires a high quality greatly exceeding that of consumer electronics. Against this background, we strive to pursue a quality level that is always one step ahead. We have not only put into practice quality management based on the international quality assurance standards of ISO9001 in all our divisions, we carry out quality control through environmental testing that utilizes advanced testing equipment. Furthermore, for

example, in electronic & mechanical components, we are aiming for higher quality and improvements every day by proactively adopting internal evaluations which take into account the usage environment of our customers. These include evaluations assuming the impact from soldering process, and durability testing for actuators in harsh environments. Through the accumulation of these efforts, we have acquired high product quality which constantly delivers and maintains the performance demanded of us.

Pursuing the highest quality in all production facilities



In order to keep costs down and improve productivity, an increasing number of our products are shifting from domestic to international production. However, no matter where our products are produced, our aim is always to have the highest quality. In electronic & mechanical components, almost all of our products are produced in factories in China, but in addition to the introduction of a quality control system that is the same as in Japan, we are looking to stabilize quality at a high level by adding automation equipment

into product manufacturing. Furthermore, we have developed and introduced an advanced production system that coordinates all information relating to production. We have also established a production structure in which it is possible to achieve in a short period of time high-mix, low-volume production reaching millions of units a month. The results of these efforts have been demonstrated by an exceedingly high yield. This has led to us winning the trust of our customers.

Electronic & Mechanical Components

Traditional and trusted core products that support the industrial world with a level of perfection that sets us apart from the rest.

Electronic & mechanical components are our core products that we have been manufacturing and selling since Nidec Copal Electronics was founded. From our high quality and high reliability made possible by our accumulation of mature technologies, we have reached a production level of tens of millions of units a month and we have developed into a global brand. We have a wide range of products; starting with trimmer potentiometers variable resistors which play a role in many fields of industry; these products cover from small signal switches for settings that are used in information and telecommunications equipment, and control and measurement devices, to high power switches for operations, such as push buttons and toggle switches. In recent years, the market for these products has also been expanding from the existing fields of computer peripherals, broadcasting equipment and medical equipment to the environmental and energy fields, such as smart meters and solar power generation storage batteries which are used to support smart grids. To meet this increasing worldwide demand and to keep costs down, production takes place in our bases in China, where strict quality management has been introduced. We are pursuing high quality at low prices. In our future business scheme, we are looking to open up new markets targeting environment-related fields where there is increasing product demand, and the field of infrastructure development in developing countries. In addition, we will continue to expand our circuit protection components, high-current/high-voltage components and system products as new areas of business.



●Switches



Slide switch **CFS/CFP** Slide switch **CL-SB/8SS** Detection switch **CL-DA/CL-DB** Rotary coded switch **SA-7000/SC-1000** Toggle Switch **CF-TA/8A** Lever & Rocker Switch **SLA215K/8HD**

In addition to switches used in program settings, circuit configuration and fixed switching in fields such as information systems, communications equipment, control equipment and measurement devices, we have a varied lineup of products from power switches to signal conversion and operation switches.

●Trimmer Potentiometers



Single-turn SM Trimmer **ST-32** Multi-turn SM Trimmer **SM-42** Single-turn Cermet Trimmer **FT-63**

With airtight structures, these are used in a wide range of industrial fields, including communications equipment, measurement devices, computer peripherals, broadcasting equipment, power devices and medical equipment. These products feature low noise in the contact structure and at the same time are easy to set and adjust.

●Current Sensors



Current Sensors **C-CT**

These are clamp-type AC current sensors used in measuring and monitoring electric power consumption in energy management systems such as HEMS and BEMS.

●Circuit Protection Components



Pushbutton Switch **8N/CFPB** Trigger Switch **SGEL106/108 CV-A-Z** Flat Key Board Switches **FPA016TZ** DC High Voltage Circuit Breakers **CL-L10** Circuit Protector **CR-CP/PRCP** Fast Acting Protector **C-FAP**

These are products used in electric tools for both home and industrial use.

These are switches that are compatible with all kinds of devices, including integrated structures with various circuit elements.

These are products used in the electric power infrastructure field that have achieved a reduction in the number of parts necessary due to a new contact structure.

CR-CP/PRCP are reset excess-current protection elements that use PTC thermistors. These are products which enable repeated use by eliminating the cause of excess-current. C-FAP are semiconductor excess-current protection elements which quickly respond to surge current/excess-current and then self-reset.

●Attenuators



Thermal Variable Attenuator **E-TA**

These are products used in temperature correction, such as in high-frequency power amplifiers.

●System Instruments (FUJISOKU)



Wireless Device Testers **FU-2052A-01** Short Range Radio Modules **FW** Memory Card **JF/JS**

These are perfect for services because they are compact and lightweight. These are products used in the protection of a variety of wireless communications equipment.

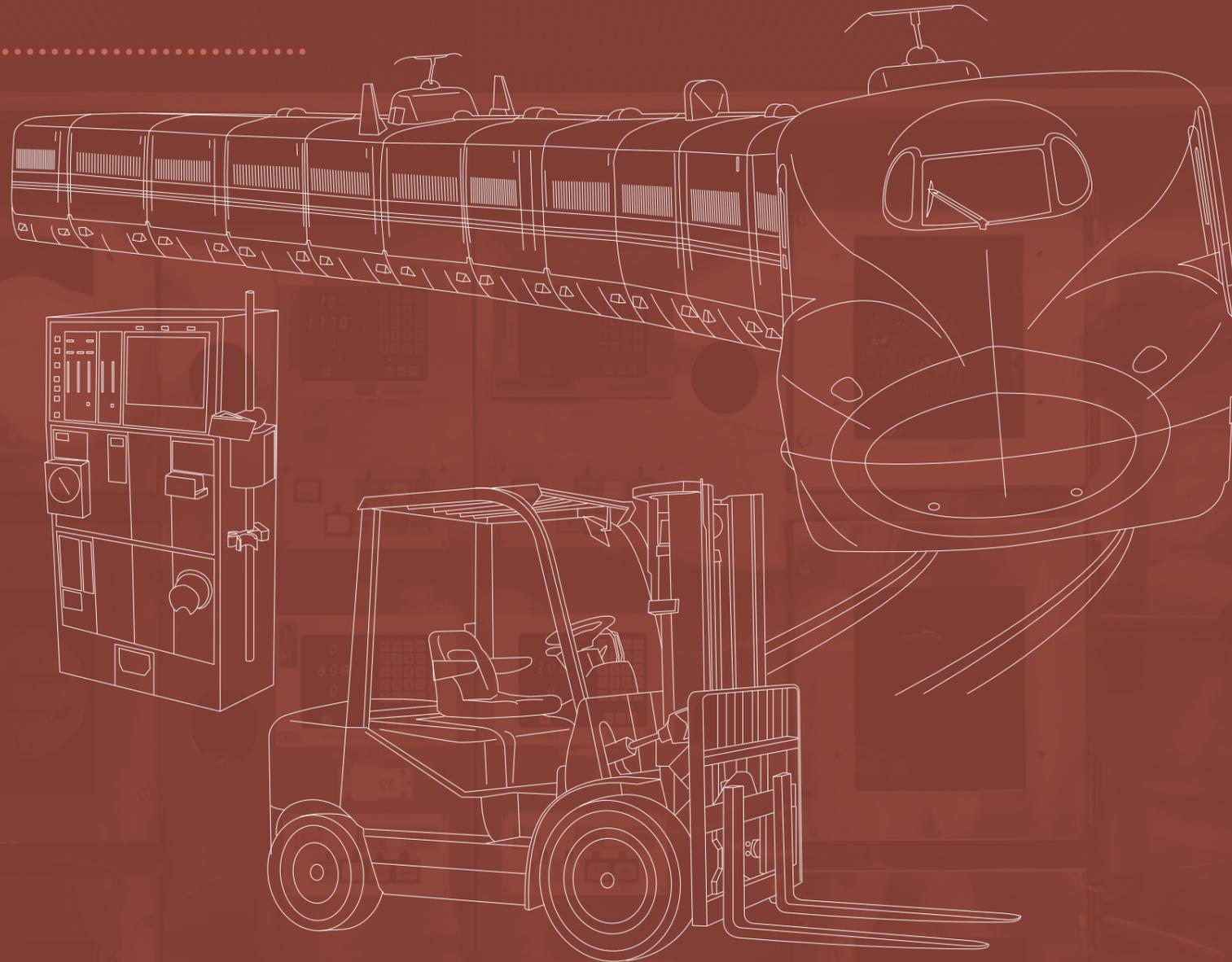
These make it possible to link up with various sensors and substrates. These are products used in residential garage shutters and energy monitoring devices.

We have assembled a lineup of flange memory and SRAM products. These are products used in OA/FA data communications equipment and measurement devices.

Sensors

Sensors with high precision and high reliability that carry the future of semiconductors, medical care and the environment.

Pressure sensors detect and measure the pressure of gases and liquids. Above all, in high-precision areas, such as semiconductor manufacturing equipment, industrial measuring instruments and medical analyzers equipment, it is our sensors that are expanding the playing field. The key to the manufacture of these high precision and high reliable products is our commitment to an in-house integrated system that works on everything from the development to the finished product of diffusive semiconductor sensor components. From this, it is possible to offer a variety of product solutions to even the most detailed specifications and requirements requested by our customers. Compared to standard products, this has become a major strength in fields with the production of many kinds of special goods according to the demands of our customers. In addition, one of our special features is our wide scope of product development. We are a manufacturer that can cover a wide area; from sensor components and sensor devices to transducers, pressure switches, pressure display devices and pressure instrumentation. Furthermore, our product lineup features fluid leak sensors used to detect fluid leaks in equipment, position and angle sensors for industrial equipment, potentiometers used for the manual setting of telecommunications equipment and measurement devices, as well as rotary encoders that have united our unique optical technology and production technology. These products are developed and manufactured under strict quality control management. In the future, we will continue focusing our attention on and responding to the growing need for high added-value products, such as high temperature sensors and clean sensors used in thin film devices and fluid pressure differential sensors employed in energy conservation and environment-related equipment.



● Pressure Sensors



Pressure Transducer

P-8505



Pressure Transducer with Amp

PA-750/758



Pressure Switch

PS83



Pressure Gauge

PG-75



Handy Manometer

PG-100N/B

● Fluid Leak Sensors



Fluid Leak Sensor

WL10

This product is used for the fluid leak detection in semiconductor manufacturing equipment. This eliminates the use of gobos and achieves highly sensitive detection.

● Rotary Encoders



Optical Rotary Encoder

RE12



Settings Optical Rotary Encoder

REC16K/L/M

These are products that have taken advantage of our unique optical technology and production technology. The optical sensor is a compact 12mm and is used in banking terminals and so on. The settings optical sensor has a 16mm-square-shaped body and is widely used in medical equipment and communications devices.

● Potentiometers



Conductive Plastic Potentiometer

MC1003



Optical Potentiometer

JT22

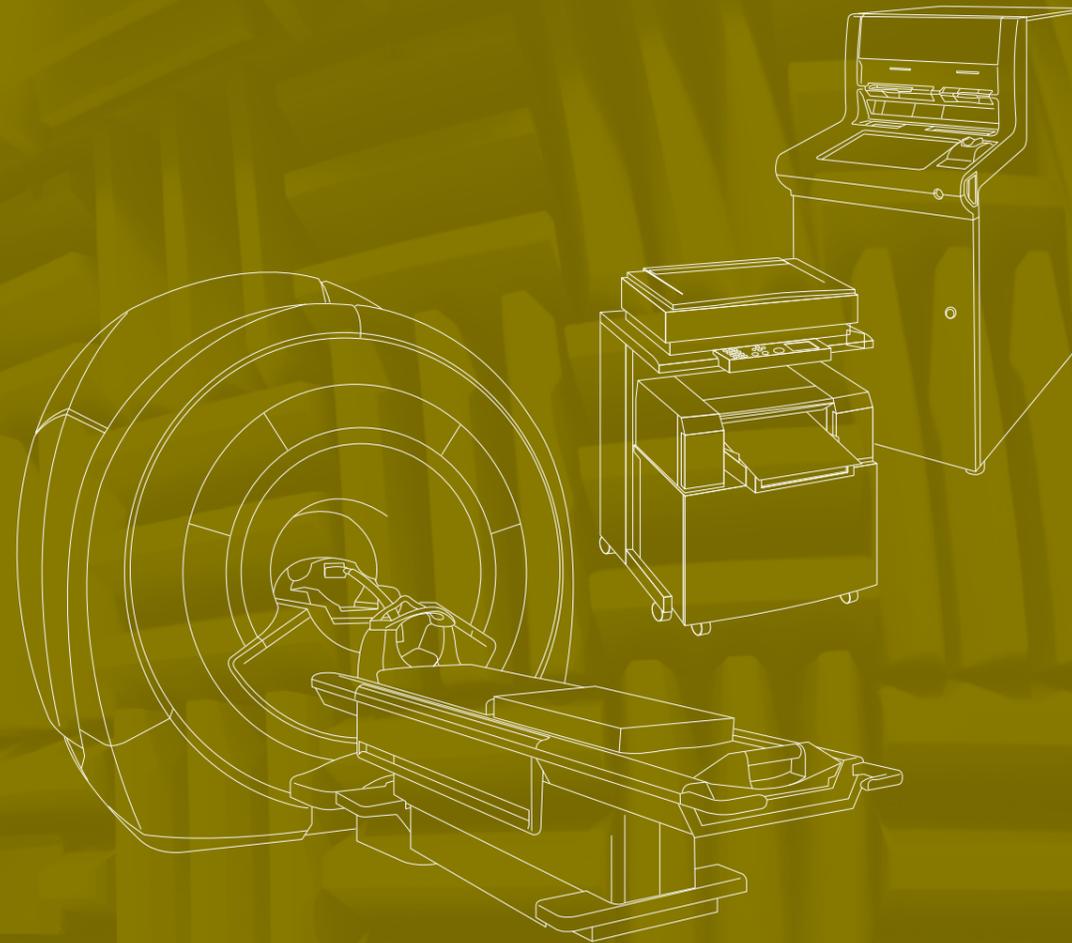
In the resistive element, we offer wire-wound, conductive plastic and non-contact types, while in the resistive shape we provide single-turn, multi-turn and straight line types. These have been adopted in measurement devices, telecommunications equipment and medical equipment as position and angle sensors.



Actuators

Resulted from sophisticated technological strength and creativeness High quality actuators opening the way to the next era

We develop and manufacture actuator products that have been focused on industrial fields with the base principally set as scanner motors used in optical devices and compact precision stepping motors used in amusement devices. Our motor manufacturing technology is backed by the aerodynamic bearing structure, which is one of the technologies and symbolizes our technological strength. With the rotating parts given a contactless structure, while ultra-high speed rotation is possible, we meet demands for high-precision and high-durability as ground-breaking technology that reduces wear, noise, vibrations and heat to the maximum possible extent. Aerodynamic bearing polygon laser scanner motors where this technology has been brought in have been introduced into office equipment, such as high-end laser printers and digital multifunction machines. In addition, high-precision ball bearing polygon scanner motors have been introduced into medical imaging devices. Furthermore we design and manufacture optical units equipped with these high-precision polygon scanner motors. In our polygon laser scanner products, we have integrated in Japan and China the production of polygon mirrors, which are essential in exceedingly advanced processing technologies. We boast the number one market share in polygon mirror standalone products. In addition, in the field of compact precision stepping motors, we cover every part of the development and manufacture from standalone motors to module units. We are also concentrating our efforts on development support for our customers, such as putting into place partnership support that takes on part of the challenge of development and engineering reports in order to effectively utilize products. Now, compact, high-flow and high static pressure turbofans that take advantage of an aerodynamic bearing structure are gathering expectations as new actuator products. We will continue to support the environment and energy conservation society with our high added value products that are essential in household fuel cells.



● Polygon Laser Scanner



Polygon Mirrors **PM** Air Bearing Polygon Laser Scanners **PT22ERG** High-precision Polygon Scanners **PD60LA** Laser Scanning Units **SU**

This is a high precision motor for laser scanning in office equipment (e.g. laser printers and digital multifunction printing equipment), medical equipment (e.g. image diagnosis equipment), digital printing machines and film damage inspectors.

● Brushless Motors



Small-sized Flat Servo Motors **MS22** Mid-sized Flat Servo Motors **MS40**

These are flat brushless motors with a thickness of 7.5mm. These are widely used in industrial equipment and analytical instruments. The MS40 has a built-in encoder.

● DC Geared Motors



DC Geared Motor **MG16B** DC Geared Motor **LC30G**

In addition to low noise and plastic gear types, we have metal gear types that increase the gear strength. These are employed in various industrial machinery and office equipment.

● Brushless DC Fans



DC Fan **F17FA**

We have the products of 16-60mm-square shapes. These feature a compact size, thin profile, high air flow and low noise.

● Stepping Motors



Linear Stepping Actuator **SPS10/20** Geared Stepping Motor **SPG20/27/33/39**

Starting with standard stepping motors used in various fields, including amusement devices, medical care analysis equipment and industrial machines, we are also offering a great many actuators with linear motion, heavy-duty deceleration gears, axis rotation detection sensors and auxiliary functions.

● Slip Rings



Integrated Motors and Slip Rings **PLR20** Axial Type Slip Rings **PLR40**

● Blower Fans



Compact High Static Pressure Turbofan **TF037E**

This is a compact and high static pressure turbofan that has achieved a long operating life and high-speed rotations through the adoption of an aerodynamic bearing structure.





Environmental Conservation Activities

Proactively developing environmental activities to create a sustainable society

We are working to build a sustainable society that will last forever. We clearly recognize the impact on the environment that accompanies our business activities and we are proactively promoting environmental activities, including compliance with environmental regulations, based on the Environment Policy we have established. As our major initiatives in the future, we will further eliminate harmful chemical substances from inside our products and in all our manufacturing processes. We will also provide information about harmful chemical substances to our customers. As measures for the prevention of global warming, in taking up the challenge toward reducing CO₂ emissions and transitioning to zero-emissions, we are continuing to work on meeting our targets of the final disposal rate and recycling rate. Furthermore, we have already acquired ISO14001 which certifies all our production bases in Japan and China. In addition, we have proactively acquired an environmental management system according to our customers and we

are aiming to improve the level of environmental protection. In this way, we will continue to promote for all eternity management focused on the environment which will lead to contributions toward local communities and the international society.



Risk Management and Compliance System

Working through compliance with laws and risk management as a corporate citizen

We are aiming to build a fair workplace and healthy business relationships, and through our work we are looking to contribute to the development of society. We have a responsibility to continue growing under a stable management base to fulfill our responsibilities to our customers, employees and the local community. As efforts for the realization of this, we are planning to maintain various systems and organizations. We are also promoting risk and compliance management. Examples of this include the implementation of risk management through the establishment of the Risk Management Committee, promotion of healthy business activities through the establishment of the Compliance Committee, prevention of fraud and harassment through an internal report system and construction of an audit system based on compliance with the SOX Law through the

establishment of the Internal Audit Department, an organization that reports directly to the President. We are striving to not only completely comply with laws, ordinances and regulations, but also to avoid all the kinds of risks that companies face.

【Risk Management and Compliance System】



Personnel Training

Education and personnel training that maximizes individual abilities

Creating an environment where it is possible for various personnel to play their parts is at the heart of the Basic Policy of NIDEC COPAL ELECTRONICS. We look to respect each individual employee who is full of the spirit of self-challenge, strives toward self-help efforts and aims for self-realization. It is our goal to treat all our employees justly and fairly. As an education system to increase individual abilities, we conduct ability development from a perspective of increasing employability (the ability of individuals to be employed) and to give maximum support to employees that wish to grow in a position of support and assistance. The base of our education and training is in the workplace. The accumulation of experience through everyday work, OJT from superiors and more experienced coworkers and self-development form the core of growth. Furthermore, as educational tools that complement these, we utilize various courses, training seminars, e-learning and distance learning. We provide an environment where important knowledge can be

acquired and absorbed, and then the required skill levels can be improved. We offer full support for development as professionals in the electronics field.





Our production and sales network covers Japan and overseas.

In order to build smooth cooperation with our customers and to achieve the harmonious supply of products and services, we deliver the high-precision and highly reliable Japanese level of quality to the world market through bases in each of Asia, Europe and America.



HEAD OFFICE



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- Head office
- Overseas subsidiary
- Overseas manufacturing subsidiary
- Overseas joint-venture company