

**SanRex**

CORPORATE  
PROFILE

**SANSHA ELECTRIC MFG. CO., LTD.**

# Bringing a brighter future through Power Electronics:

As a manufacturer of power semiconductors and power supply products, we shall remain a contributor to society with innovative power electronics.





## Global Power Solution Partner

**We strive to be a partner to our customers and answer the call to satisfy their expectations with a solution.**

Since our development of arc power supplies for movie projectors in 1933, we have been a pioneer in the industrial world as a manufacturer of power semiconductors and power supply products. Along with rapid technological innovation in recent years, customer requests have become more sophisticated and diversified.

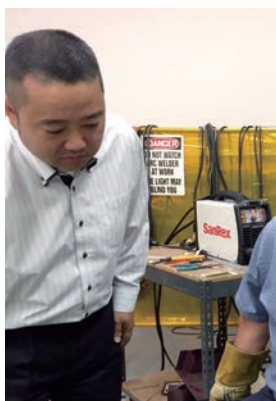
With the vision of “Global Power Solution Partner ~Always trying to be a partner who can meet the expectation of solutions~”. We will always remain close to our customers by supplying technology and quality to realize a richer society. We hope to continue to be a company that creates new value for our customers.

Based on our company’s philosophy, which has not changed since our founding: “We will continually strive to create products that meet market demands, our innovative and high quality products must always make a positive contribution to social and economic development,” we are going to solve social problems by developing secure, safe, and reliable products. Moreover, we will continue to make every effort to improve customer satisfaction and increase corporate value.

We sincerely ask for your kind support in the future.

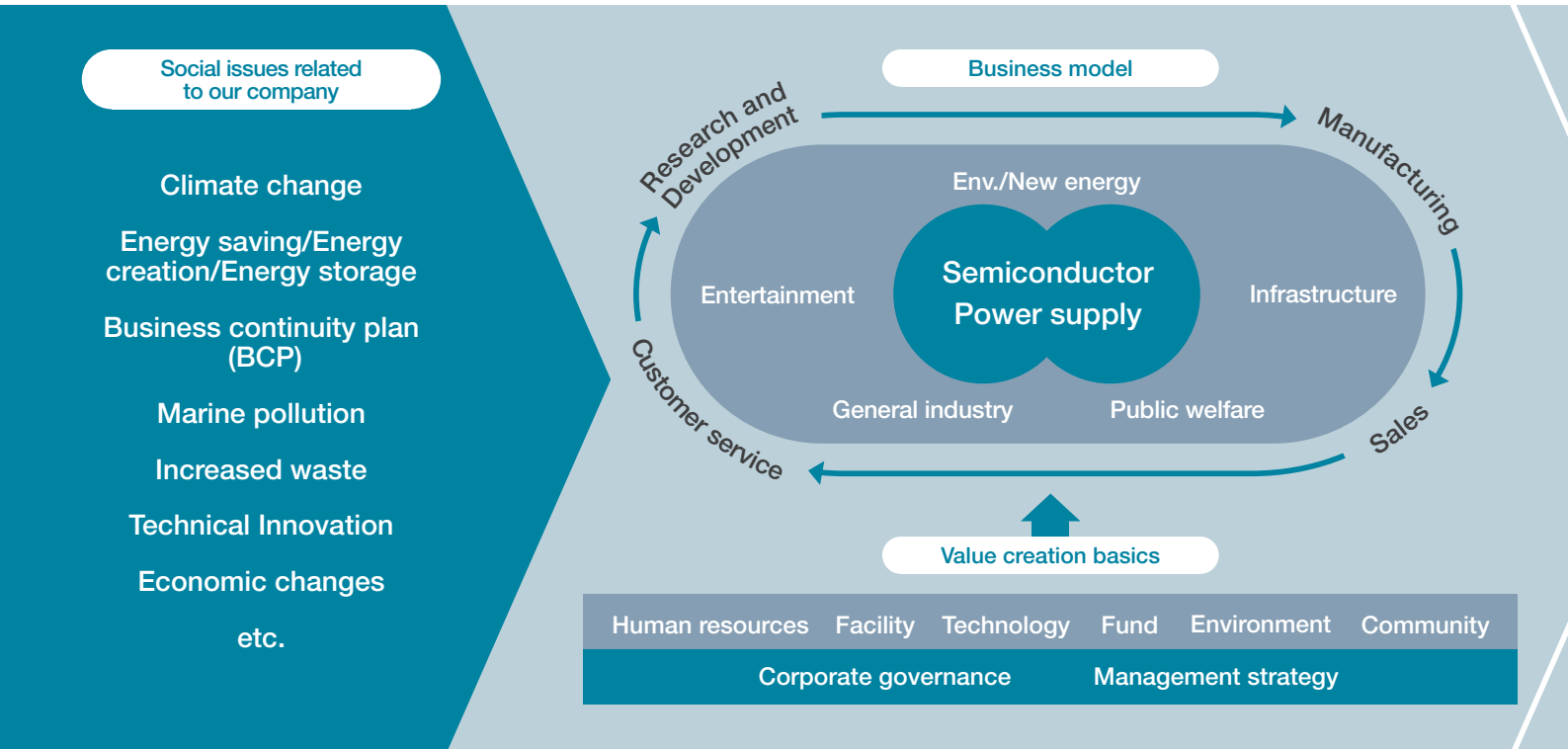
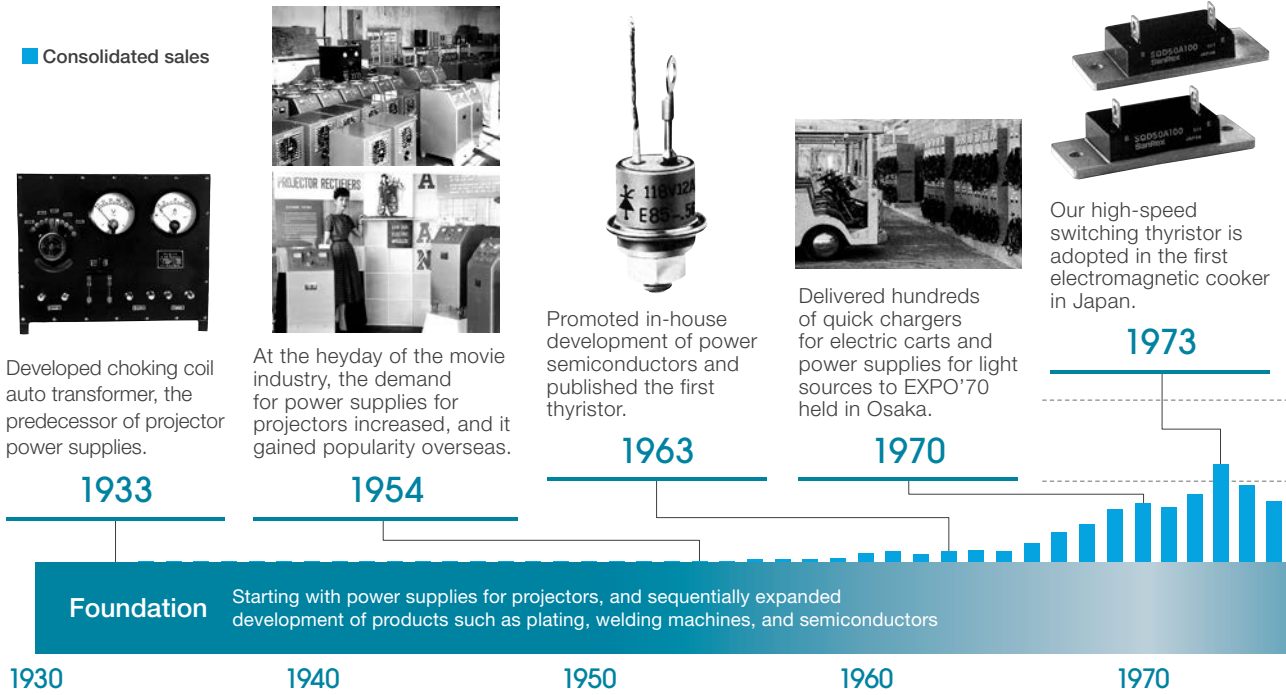
Kunio Shikata  
Representative Director, Chairman of the Board

Hajimu Yoshimura  
Representative Director, President



# Value Creation

The most important social responsibility of the Sansha Electric Group is in “Manufacturing” that is valuable to society. Through “Manufacturing”, we aim to realize customer satisfaction and create social value to continue achieving sustainable growth.



Management philosophy

All SanRex Products shall be highly serviceable and utile for users.



Developed the first uninterruptible power supply (UPS) for unexpected disasters and accidents.

1982



Developed solar power conditioner ahead of the times. Delivered to Rainbow Bridge in Tokyo.

1993



Sales of battery charging / discharging devices increased significantly in response to a rapid increase in demand for storage batteries.

2007



Expanded the market share of projector power supplies by responding rapidly to the spread of digital cinema.

2010

¥100M (100 million yen)

350

300

250

200

150

100

50

0

Expand Business Base

Expand overseas and domestic production bases

Period of Change

Expand the quality and scope of products and services

1980

1990

2000

2010

Fiscal year

Major social values as seen from the SDGs



Contributing to hydrogen society with power conditioners for fuel cell



Contributing to industry with power conversion technology



Development of high-efficiency power conditioner for next generation power grid



Contributing to environmental issues in waste treatment with plasma power supply for ash melting



Energy-saving technology using renewable energy



Development of power supply for ballast water treatment system to solve ship water treatment problems.

Increase corporate value

Sustainable management



SDGs (Sustainable Development Goals)

SDGs are 17 goals for realizing a sustainable world by 2030, adopted by UN member states in September 2015.

The Sansha Electric Group will contribute to achieving these goals through our business.

Vision

Global Power Solution Partner

OUR  
STRENGTH

# Fusion of Power Semiconductors and Power Supply

## Semiconductor



The environment surrounding society is undergoing remarkable changes due to the emergence of power semiconductors that can handle high power. Our products play an important role in evolving semiconductor device technology into a wide variety of product groups and supporting the central part of production facilities and management systems in various scenes.

### Uniqueness / competitive advantages

1

**High voltage resistance and large current along with the feature of low loss**

Compared to the current mainstream planar type chip in the semiconductor industry, it uses a mesa type chip that has both high voltage resistance and low loss in the same chip area.

2

**Unique process and package technology for high reliability**

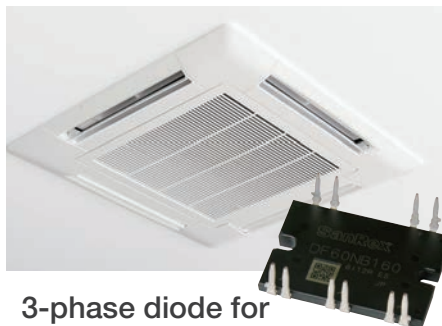
Our unique process and packaging technology has been highly evaluated in industrial applications where long-term reliability is required.

### Main application



#### Thyristor module for industrial robot

The power supplies for servo motors used in industrial robots are frequently turned ON / OFF, so our durable packages adopting transfer-mold process are used by many customers. It has been well received by customers especially seeking compactness.



#### 3-phase diode for commercial air conditioners

Our 3-phase diode which outputs DC current is small sized and excellent in long-term reliability. This diode is used in inverter circuit to control motor of electrical equipment such as commercial air conditioners.



#### High-speed diode for railway

Our high-speed diodes are used as auxiliary power supplies that are necessary to create in-car environments such as railways. In order to handle large volumes of electricity for lighting, air conditioning and electronic panels and others, our products have been adopted overseas as well as in Japan thanks to their great performance in that field.

Power semiconductors are able to finely control current flow and the up-down of voltage, such as converting DC to AC. The devices are essential for improving power efficiency and saving energy. Leading the power electronics industry by providing various power semiconductors and all kinds of industrial power supplies from large to small power in Japan and overseas based on the concept of “fusion of power semiconductor and power supply technology”.



# Power supply

Since developing a power supply for projector that stabilizes the screen image of a movie theater in 1933, we have provided a wide variety of power supplies such as metal surface treatment, welding machines, and power supplies for light source. We support industries with our technology to freely manipulate and efficiently convert electricity.

## Uniqueness / competitive advantages

1

### High-efficiency power conversion technology

Our strength is low-loss power conversion technology. We lead the industry by developing power conditioners for fuel cell and power supplies for hydrogen generation equipped with SiC (silicon carbide).

2

### Wide range of development from small custom-made to large industrial power supplies

We will support design and development based on customer specifications from small custom-made to large industrial power supplies.

## Main application



### Power supply for surface treatment

Metal surface treatment requires efficient and accurate control of current. Our rectifiers are used in many factories because of their stable output and long-term reliability.



### Power supply for hydrogen generation

We develop a power supply for generating hydrogen expected as next-generation energy, and a power conditioner for fuel cell that produces electricity from hydrogen.



### Uninterruptible power system (UPS)

Power supply trouble such as power outage can cause serious disruption to society. Our UPS protects devices that require high reliability in every situation from unexpected accidents.

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Founded	March, 1933

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