

74th Fiscal Term Annual Report

From April 1, 2020 to March 31, 2021

HRS HIROSE
ELECTRIC
CO.,LTD.

HIROSE ELECTRIC CO.,LTD.

We will expand our “connecting business” based on our growth in FY2020.

During FY2020, there were various restrictions on activities throughout the year due to the novel coronavirus disease (COVID-19), but for performance, orders and sales both reached their highest level thus far thanks to the effort of everyone involved, such as employees.

In particular, products for the general industrial equipment and automotive markets have recovered since the second half, and the three primary areas, which includes the smartphone, consumer market, exceeded initial expectations. This has been a year in which we have had to seek new corporate activities, such as the usage of IT tools as the conventional face-to-face sales activities have become difficult due to movement restrictions because of COVID-19.

Although new initiatives are being advanced, R&D and capital investment have decreased from previous years, and have been deemed as insufficient for our original activities.

Moreover, even amid these circumstances, we recognize that the speed at which the macroenvironment changes is accelerating further, and that difficulties are increasing in the competitive environment.

We will further advance the strengthening of measures for the future based on growth in FY2020.

■ For ongoing growth in the medium to long term

Difficulties in the business environment are continuing, but the advancement of digital transformation and IoT have accelerated due to lifestyle changes.

We believe that the connector industry, which is a connecting business, has a lot of potential as the next generation will be a generation where everything is connected.

The market where connectors can play an active role is currently expanding, from smartphones, which everyone has on hand, to the infrastructure that supports society.

We believe that it is important to refine our ability to ascertain the technologies that may lead the next generation as new technology continues to be created regularly throughout the world.

We will increase our ability to sense and respond so that we do not overlook promising points of change in the market in the future, and respond with a sense of urgency to create new business opportunities.

Moreover, for ongoing growth, we are aiming to establish a corporate structure that is capable of responding to changes due to its well-balanced business structure.

HIROSE ELECTRIC works to be able to respond to a variety of customers' needs as it has a wide-variety of connectors, from those for the familiar consumer devices to those for automobiles and industrial infrastructure.

Furthermore, we are working to increase its ability to propose advanced and cutting edge products and the differentiated products through cross-cutting activities between fields.

With the aim of sustainable corporate growth, we will strengthen ESG response and advance initiatives to achieve SDGs.

Connectors contribute to resource conservation and a low-carbon society as they play the roles of maintaining and extending electronic equipment.

We will continue to work so that HIROSE ELECTRIC's connectors can be even more helpful for a sustainable society in the future.

■To Our Shareholders

We announced the new shareholder return policy in May.

We will aim to reduce equity and achieve ROE of 8% by FY2024 by improving profitability in accordance with the Mid-term Growth Strategy, and expanding investments in order to further expand business and shareholder return policies.

The shareholder return policy is carried out with a basic policy of (1) having a dividend payout ratio of 50% for FY2021 to FY2024 and (2) acquiring treasury shares between FY2021 and FY2024 with an upper limit of ¥40.0 billion.

Furthermore, the Company will transition to a company with Audit & Supervisory Committee.

This transition aims to establish an audit and supervisory committee, the majority of whose members are Outside Directors, and further enhance corporate governance through the strengthening of the supervisory function of the Board of Directors and the strengthening of the audit and supervisory functions for the legality and appropriateness of business execution by granting voting rights in the Board of Directors to Directors who are audit and supervisory committee members.

Due to the impact of COVID-19, the end of which is still unable to be seen, many of you have spent your time enduring a lack of freedom.

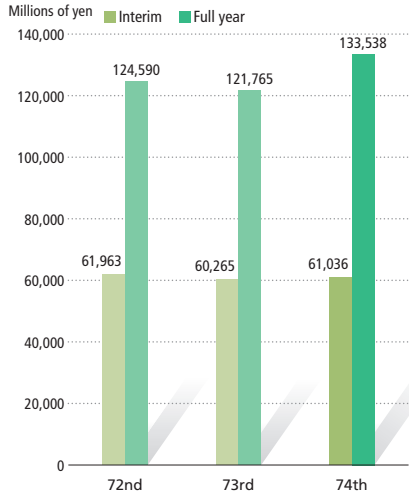
First, we hope that all of you can give the utmost consideration to your health.

We also express our heartfelt sympathies to those who have been affected by COVID-19, and pray that everyone will recover as soon as possible.

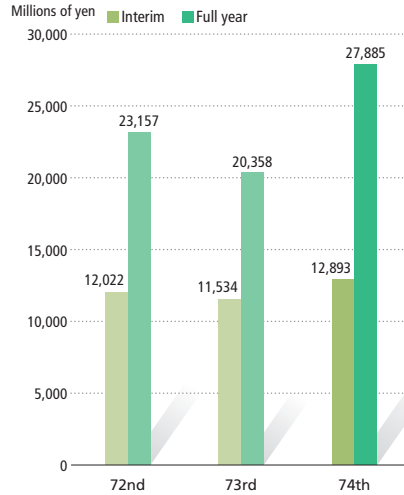
Kazunori Ishii, President and Representative Director



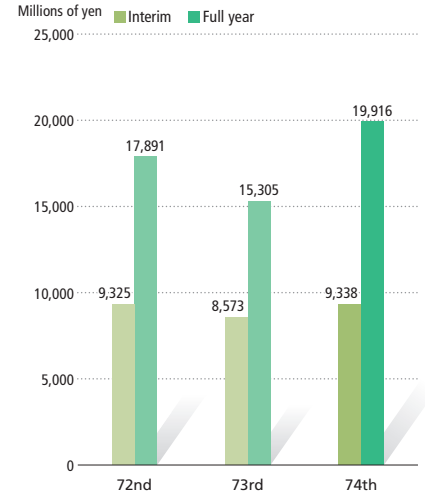
Sales



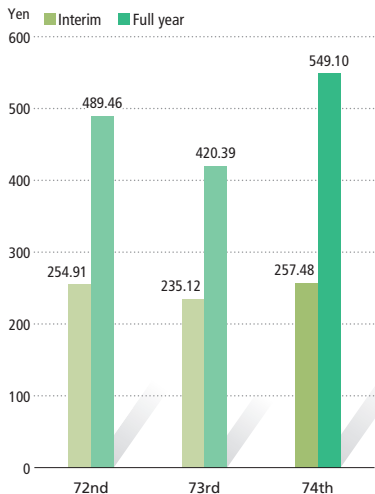
Operating profit



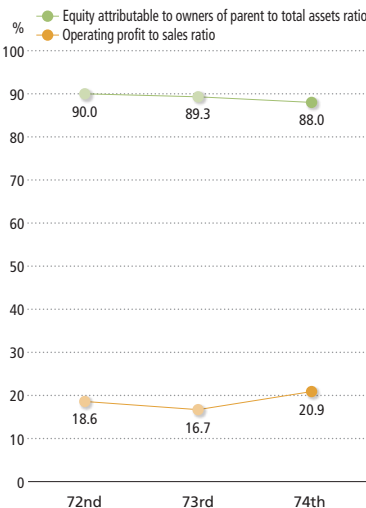
Profit attributable to owners of parent



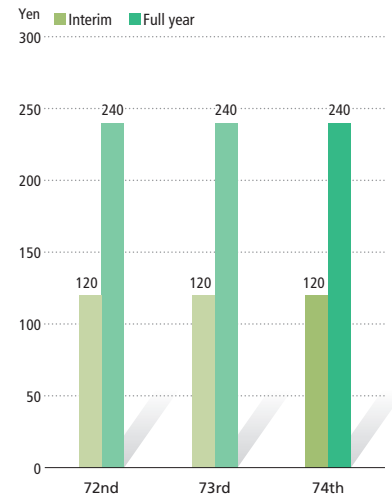
Basic earnings per share



Equity attributable to owners of parent to total assets ratio & Operating profit to sales ratio

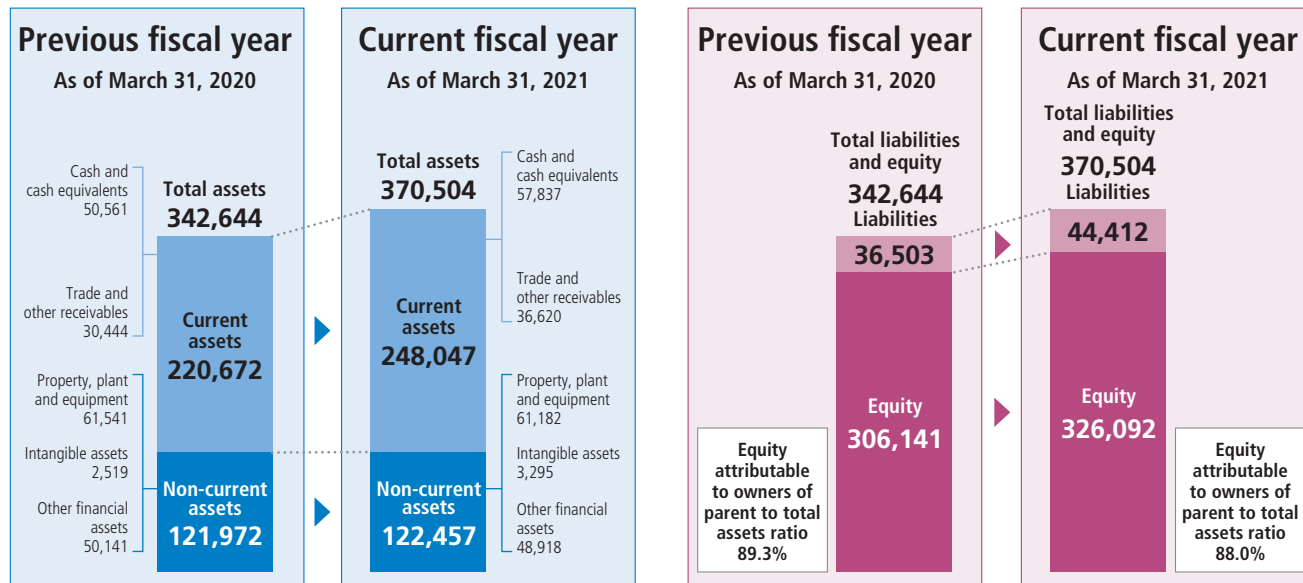


Dividends per share



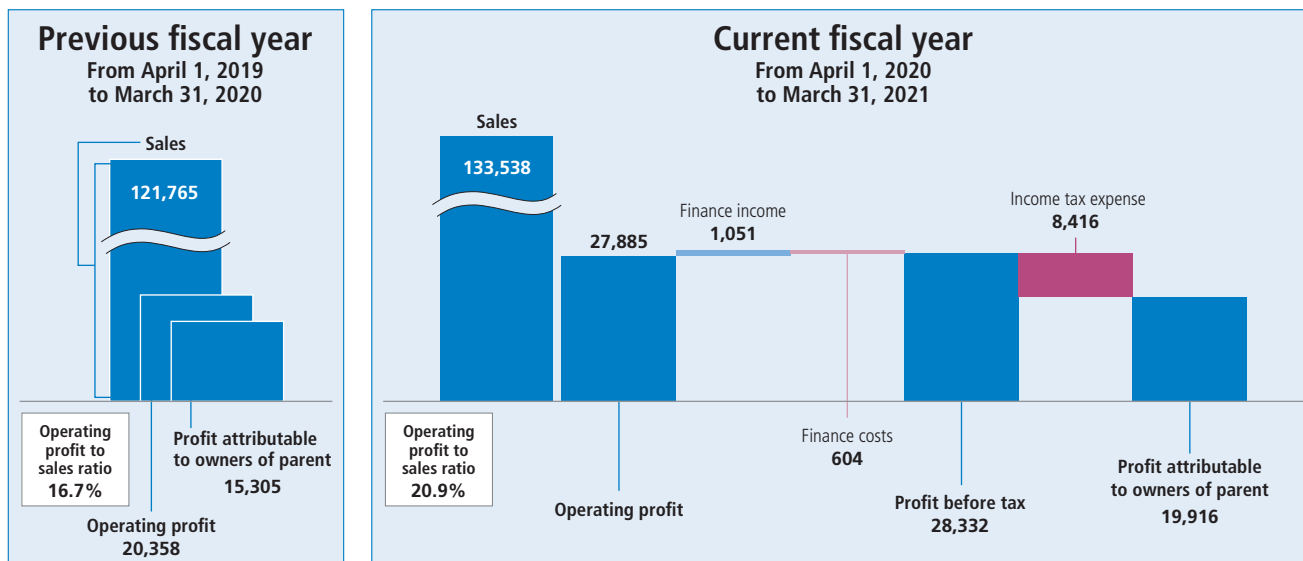
Overview of Consolidated Statements of Financial Position

(Millions of yen)

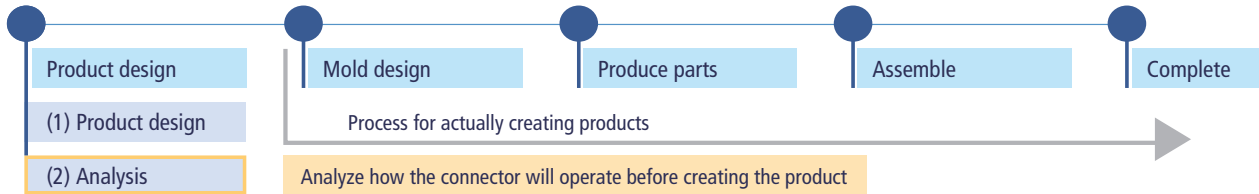


Overview of Consolidated Statements of Income

(Millions of yen)



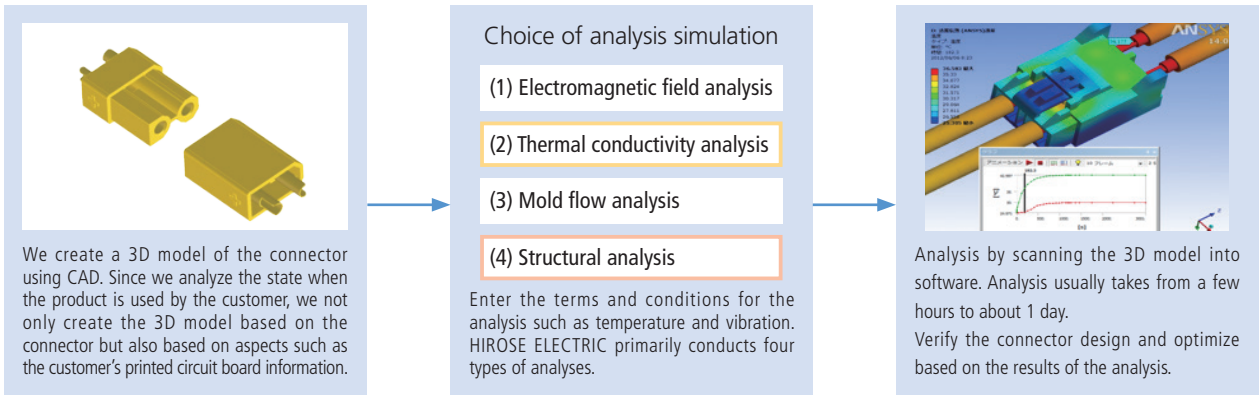
Steps to creating a connector



What is analysis?

The connector's role is to correctly connect electronic equipment to signals and electricity regardless of the environment such as heat, cold or vibration. In the analysis, before actually creating products, we conduct a virtual test of the connector's characteristics for the anticipated environment in which the customer's equipment will be used, verify the design and analyze the cause of malfunction. Some people may have seen endurance tests on television, etc. for what happens when products are dropped. The analysis is undertaken by creating a 3D model of the connector and using software to conduct various tests such as this. Undertaking the analysis before creating the product reduces the risk, which also leads to a reduction in cost and lead time for product development. It is an important part of the design process.

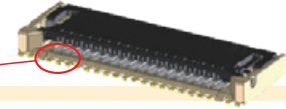
Analysis process



Even though analysis is undertaken by software...

The type of metal and spring properties for the connector differ according to the product. For example, when using a connector with metal of a particular spring property, it may deform and break depending on the usage conditions. Unless data suitable for HIROSE ELECTRIC's connector design is measured and set as a condition in the software, the results may differ from when measured with the actual connector. Many steps are required before starting the analysis such as measuring and entering parameters in order to generate more accurate results of the analysis as well.

■ We analyze this type of thing!

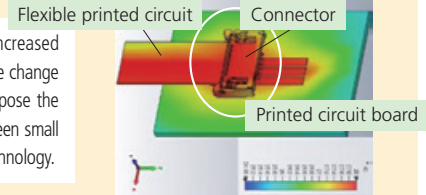


Thermal conductivity analysis

Customers want connectors that are small and can also cope with rapid charging!

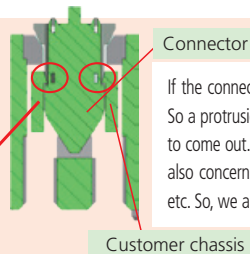
Connectors use **metal pins** to conduct electricity. When electric current flows through the pins such as when recharging, the pins become hot because they are made of metal. Small connector pins are as small as 0.2mm in width and are very thin pieces of metal. The smaller the metal, the easier their heat retention, while rapid charging means there are large currents flows. In other words, the temperature of the connector tends to rise. If the connector generates heat, it can lead to fire in nearby electronic components, so we analyze the state for increased temperature.

We also create a 3D model of the printed circuit board that is connected to the connector for analysis of increased temperature in the vicinity of the connector. We change the magnitude of the current with the software and check the change in temperature. We repeat the analysis to suppress the temperature rise to within the customer's request, and propose the best current magnitude and number of pins, etc. Demand for rapid charging has recently increased. The struggle between small connectors and heat continues, but we resolve each and every problem faced by the customer with high analytical technology.



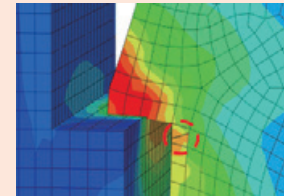
Structural analysis

Customers want the connector lock to be strengthened while also wanting ease of plugging and unplugging!



If the connector becomes unplugged, the signal and current will not pass and be the cause of a malfunction. So a protrusion known as a latch is attached to the connector in a way that makes it difficult for the connector to come out. While there are advantages in making this lock strong to reduce the risk of malfunction, there are also concerns that making it too strong could lead to damage when unplugging the connector for servicing, etc. So, we analyze what sort of cracking occurs according to the level of added strength.

To reduce the time taken to conduct an analysis, we analyze by modeling only the latch component which is the part we want to learn about concerning the addition of strength. First, we investigate what level of strength needs to be applied to damage the connector. Then, we analyze where the cracks start to form depending on where the strength is applied. If we know the cause, we test various forms for both the connector and the customer chassis respectively. We search for a form that does not easily start to crack and determine the best form.



■ The future for HIROSE ELECTRIC's Simulation Section

In future, we will conduct wide-ranging analysis not just of connectors, but including customer equipment that uses connectors. We must win the trust of customers in HIROSE ELECTRIC's analysis by increasing the accuracy of analysis. To this end, we need to accumulate a track-record in the verification of external research information and the results of actual measurements. Collecting data allows us to forecast various phenomenon that occur with connectors, which will enable us to make proposals that highlight aspects such as contact reliability and waterproof characteristics of connectors as points of differentiation when choosing HIROSE ELECTRIC's connectors. Analysis is an extremely important process for "visualization" of malfunctions that had not been visible before, as if it were noise. The Simulation Section will also make a major contribution in future to creating higher quality connectors in a shorter period of time.

Multi-Pin Connectors

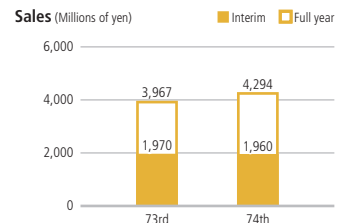
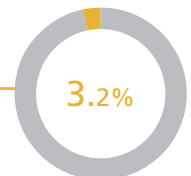
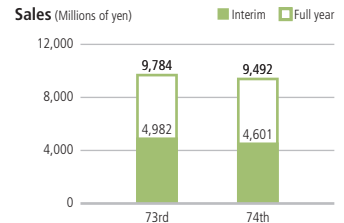
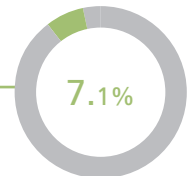
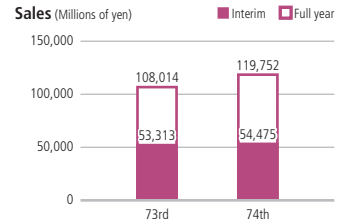
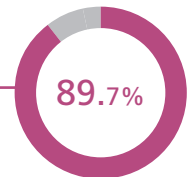
Sales **¥119,752 million** (up 10.9% year on year)



Our flagship multi-pin connectors include a variety of connector types such as circular and rectangular connectors, connectors for ribbon cables, connectors used for printed circuit boards including FPCs (flexible printed circuit boards) and nylon connectors.

The major applications of these connectors include a wide range of fields such as smartphones, communications equipment and automotive electronics, as well as industrial fields such as measuring and control equipment, FA equipment and medical electronics equipment. Further expansion in demand is expected along with the further development of a sophisticated information and communications networked society and an eco-friendly, energy conservation-oriented society.

Segment sales for the year under review increased by 10.9% year on year to ¥119,752 million and operating profit increased by 35.5% year on year to ¥26,295 million.



Coaxial Connectors

Sales **¥9,492 million** (down 3.0% year on year)



Coaxial connectors are a special type of high-performance connector used primarily for microwave and other high-frequency signals. Their applications include antenna connections for wireless LAN and Bluetooth communication used in smartphones and PCs, and as GPS antenna connections for automobiles as well as for connecting high-frequency signals in wireless communication devices and electronic measuring equipment. Optical fiber connectors and coaxial switches are also included in this segment.

Segment sales for the year under review decreased by 3.0% year on year to ¥9,492 million and operating profit increased by 68.7% year on year to ¥1,412 million.

Other Products

Sales **¥4,294 million** (up 8.3% year on year)



The other products segment includes micro switches and instruments for connectors. Segment sales for the year under review increased by 8.3% year on year to ¥4,294 million and operating profit increased by 54.5% year on year to ¥178 million.

Introduction of Our Products

ZH05 Series

The ZH05 Series is a board-to-cable connector that adopts the industry's first short/electric shock prevention structure in addition to in-vehicle quality of heat resistance up to 125°C and high-vibration resistance. Demand for electric vehicles and storage batteries has surged as a sign of the realization of a carbon neutral society, and the battery pack is one key device. When manufacturing the battery pack, it is assembled stored with electricity, so the safety and reliability of the connection operations is an issue. ZH05 Series has a proprietary structure that can prevent damage and unforeseen fire accidents from shorting between adjacent pins and can also prevent electrical shock should an operator touch a pin. We are contributing to the realization of a carbon neutral society by resolving issues in the manufacture of key devices such as battery packs.



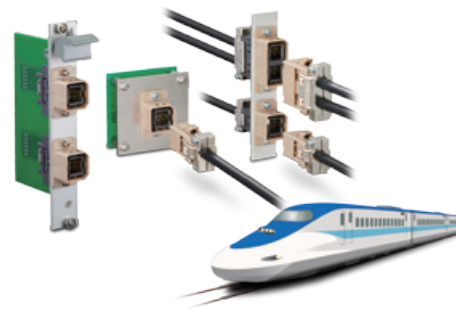
FH58 Series

IoT equipment and wearable devices continue to evolve and the data processing volume in each type of module and semiconductor used in terminals is growing. There is a growing need for multi-pin FPC connectors as well as a growing need for multifunctionality and space reduction in the internal design of such terminals. This product pursues reduced space with pins in a staggered array structure of 0.2mm pitch (mounting pitch 0.4mm) and narrow depth. We are achieving “excellent handling properties” and “high reliability” based on our track-record in development of the traditional back-flip type. In addition, giving considering to mounting in high density areas, we can also simultaneously propose FPC insertion and moveable opening/closing jigs. Currently, we are considering further multipolarisation and contributing to the multifunctionality and smaller size of wearable devices as a standard connector for reduced spaces.



TJ*L Series

This Series was developed as an interface connector for the ethernet communication networks for railways. It has been adopted by the new Shinkansen N700S, which was first put into service by the Central Japan Railway Company in July 2020. The traditional connectors used in trains are mainly made of metal and locked through tightening, but they are hard to operate and the screw tightening requires management. This Series improves the operability with a snap-in lock eliminating the need to manage screws that become loose, which is a concern with the screw fastening type. In addition, because the connector is made of resin, we contribute to the reduction of the weight of the mounted equipment. HIROSE ELECTRIC's connectors have been used in many Shinkansen and conventional trains apart from the N700S, so we also contribute to the railroad sector, which in turn supports peoples' lives.



◎ Domestic bases

TOHOKU HIROSE ELECTRIC CO., LTD.



ICHINOSEKI HIROSE ELECTRIC CO., LTD.



KORIYAMA HIROSE ELECTRIC CO., LTD.



West Japan Sales Office

Kansai Branch

Chubu Sales Office

Kitakanto Sales Office

Gotanda Office



Kikuna Office



Head Office



◎ Overseas bases

HIROSE ELECTRIC EUROPE B.V.



HIROSE ELECTRIC (SUZHOU) CO., LTD.



HIROSE ELECTRIC (DONGGUAN) CO., LTD.



HIROSE ELECTRIC INDIA. PVT. LTD.



HIROSE ELECTRIC MALAYSIA SDN. BHD.



HIROSE ELECTRIC SINGAPORE PTE. LTD.



P.T. HIROSE ELECTRIC INDONESIA



Hirose Electric (China) Co., Ltd.



HIROSE KOREA CO., LTD.



HIROSE ELECTRIC TAIWAN CO., LTD.



HIROSE ELECTRIC (U.S.A.), INC.



HIROSE ELECTRIC HONG KONG CO., LTD.
HIROSE ELECTRIC HONG KONG TRADING CO., LTD.



Company Profile (As of March 31, 2021)

Trade name	HIROSE ELECTRIC CO., LTD.
Date of incorporation	June 15, 1948
Number of employees	Consolidated: 4,859 (excluding part-timers)
Capital stock	¥9,404,379,401

Directors (As of June 25, 2021)

President and Representative Director	Kazunori Ishii
Senior Managing Director	Mitsuo Nakamura
Director	Yukio Kiriya
Director	Hiroshi Satoh
Director	Shin Kamagata
Director	Jun Inasaka
Director	Sang-Yeob Lee
Outside Director	Kensuke Hotta
Outside Director	Tetsuji Motonaga
Outside Director	Masanori Nishimatsu
Director (Standing Audit & Supervisory Committee Member)	Yoshikazu Chiba
Outside Director (Audit & Supervisory Committee Member)	Terukazu Sugishima
Outside Director (Audit & Supervisory Committee Member)	Kentaro Miura

Note:

Outside Directors Kensuke Hotta, Tetsuji Motonaga, Masanori Nishimatsu, Terukazu Sugishima and Kentaro Miura are Independent Officers who are unlikely to have any conflicts of interest with general shareholders, and are required to be designated by the Tokyo Stock Exchange.

Accounting Auditor

KPMG AZSA LLC

Stock Information (As of March 31, 2021)

Total number of shares issued	36,284,695 shares
(Excluding 1,891,247 shares of treasury shares)	
Number of shareholders	3,573

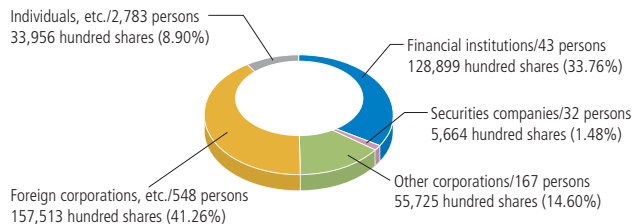
Major Shareholders (Top 10)

Name of shareholder	Number of shares held
Hirose Foundation	31,476
State Street Bank and Trust Company 505223	29,513
The Master Trust Bank of Japan, Ltd. (Trust Account)	25,601
JPMorgan Chase Bank 380055	25,005
Custody Bank of Japan, Ltd. (Trust Account No. 4)	19,936
Custody Bank of Japan, Ltd. (Trust Account)	16,320
HS Kikaku Co., Ltd.	12,215
Mizuho Trust & Banking Co., Ltd. Trust Account 0700093	8,707
Mizuho Trust & Banking Co., Ltd. Trust Account 0700094	8,652
National Mutual Insurance Federation of Agricultural Cooperatives	8,146

Note: In addition to the 10 major shareholders above, the Company owns 18,912 hundred shares of treasury shares.

Distribution of Shares

Distribution of Shares by Shareholder Type



Shareholder information

Fiscal term	From April 1 of a calendar year to March 31 of the next calendar year
Ordinary General Meeting of Shareholders	June every year
Record date	Ordinary General Meeting of Shareholders: March 31 every year Year-end dividend: March 31 every year Interim dividend: September 30 every year (As required, another record date may be decided with prior public notice.)

[Share-related notifications and inquiries regarding change of address, etc.]

Shareholders who have accounts at securities companies are requested to direct their notifications and inquiries regarding change of address, etc., to their respective securities companies where shareholders have their accounts. Shareholders who do not have accounts at securities companies are requested to call the telephone number as stated below.

Number of shares in one voting unit 100

Method of public notices The Company's Web site below shall be used for its public notices.
(<https://www.hirose.com/corporate/ja/ir>)
If an electronic public notice should fail due to accident or any other unavoidable circumstances, the Company shall post a public notice in the Nihon Keizai Shimbun.

Shareholders' register manager and account management institution for special accounts Sumitomo Mitsui Trust Bank, Limited
4-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo

Handling office of shareholders' registry administrator Securities Agency Department,
Sumitomo Mitsui Trust Bank, Limited
4-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo

(Mailing address) Securities Agency Department,
Sumitomo Mitsui Trust Bank, Limited
8-4, Izumi 2-chome, Suginami-ku, Tokyo 168-0063
0120-782-031 (Toll free, available only in Japan)

Phone:

URL: <https://www.smtb.jp/personal/agency/index.html>

[Special accounts]

For shareholders who was yet to have used JASDEC (Japan Securities Depository Center, Inc.) by the share certificate dematerialization date, the Company opened a transfer account (hereinafter "special account") at Sumitomo Mitsui Trust Bank, Limited, as mentioned above, which serves as the shareholders' registry administrator. You are requested to use the above telephone number when making inquiries about the special account and notifications of matters such as change of address.

Recommended Contents of the HIROSE Website

1. Hirose Virtual Discovery EXPO 2021
(Available for a limited time)



2. Optimal Solutions for Electrical Equipment in Buildings Introduction Example of EF2 Series



3. Connector Q&A Teach me! Dr. H



By scanning the QR code, you can access the website!