

HMI (Human-Machine Interface)

Priority business measures

Creating the optimum environment for humans and machines as a leading company of HMI

Since 1958 when we began sales of industrial switches, we have supplied diverse HMI products supporting human-machine interactions. Our products and the years of design and quality enhancements we have made to them have enabled us to build up a strong market share. When France's APEM joined our Group in 2017, our line-up expanded with not only more industrial switches, but also new offerings such as joysticks, LED indicators, and keyboards. In a world where an enormous array of products are needed to serve different regions, applications, and settings, we are enjoying the strong synergy generated by the combination of IDEC's and APEM's diverse product features and sales channels.

Whereas IDEC focuses mainly on supplying standard products to factory automation (FA)-centric markets, APEM's

offerings lean toward special vehicles, such as construction and agricultural machinery, and various products serving the material handling and new mobility industries. Roughly 75% of APEM's sales are from customized products, which are found at work in many different industries since they are tailored to each customer's needs. This focus on customizing products for a wide range of applications is underpinned by APEM's superb design and development capabilities, generating high-quality products that robustly perform under challenging environmental conditions. We are working to produce even greater synergies between IDEC and APEM by optimizing manufacturing, sales, and logistics centers to lower costs and streamline operations, exchanging talent, and localizing sales strategies.

IDEC

FA-centric markets



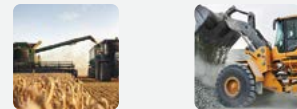
Semiconductors Machine tools Automotive



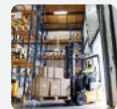
Robotics AGV/AMR

APEM
an IDEC company

Special vehicles, new mobilities, material handling, etc.



Agricultural machinery Construction machinery



Material handling

Developing next-generation HMI products to realize HMI-X

Seeking to become the world's No.1 leader in HMI, the IDEC Group develops products that respond to new needs emerging in the global market. Today, environments where people and machines work together are changing. Under HMI-X, a new concept we put forward in 2022, we are aiming to optimize those environments by bringing greater interactivity to machine control. To do this, we have been launching new products—such as smart RFID readers for managing machine access and operation logs, safety commanders that can be attached to tablets used at manufacturing sites to ensure worker safety,

and touchless switches that address needs for contactless solutions—and have been expanding the line-up of APEM products to better serve diverse customer needs.

In order for us to continue growing in a landscape where megatrends and market changes are transforming customer needs in many ways, we must develop next-generation HMI products that offer new features. Going forward, we will continue creating new HMI products to further grow our business and help realize safety, ANSHIN, and well-being.

IDEC



Smart RFID reader "KW2D series"



Safety commander "HT4P series"



Touchless switch "CW1H/4H series"



Operator interface "HG2J series"

APEM
an IDEC company



Panel solutions



Switch components



Joysticks

HMI (Human-Machine Interface)

IDEC Touchless switches to reduce risk in environments where switches are operated by many people

To accommodate the need to make switches operated by many people contactless, we launched touchless switches that can be used indoors or outdoors in 2022, and we also added a short-range detection type to the line-up in 2023.

In addition to preventing the spread of infections, touchless switches are suitable for a wide range of situations, such as ensuring hygiene in food processing, reducing machine operator fatigue when operating switches at high frequency, as a measure to extend the service life of switches, or as a replacement for photoelectric sensors.



Touchless switch "CW1H/4H series"

IDEC Operator interface with high visibility and excellent environmental resistance

The "HG2J series" 7-inch medium-sized operator interface does away with the resin film applied to the touch panel surface in conventional products and instead features a glass-top construction using a projected capacitive (PCAP) type touch panel. This ensures the display can maintain high visibility for a long time without degradation due to whitening.

It also features excellent environmental durability with IP66F and IP67F water and dust resistance in addition to operating temperatures ranging from -20°C to 60°C, making it suitable for a wide range of applications.

It is packed with distinct features that embody the HMI-X concept, including the ability to transmit audio information by connecting a USB speaker, and highly flexible machine placement due to wireless communication when a Wi-Fi dongle is connected.



Operator interface "HG2J series"

APEM The new "IG series" allows for post-assembly customization

The IG series is the latest addition to APEM's "I series" product range, offering unparalleled flexibility and scalability for grip applications like joysticks and armrests. This series stands out for its late-stage customization capabilities, allowing design changes at any project stage. The "IG series" boasts a compact design with a snappable actuator, providing strong tactile feedback and easy integration into various environments.

It offers exceptional resistance and durability, ideal for harsh environments, with sealing levels up to IP69K (front) and IP67 (rear). The "IG series" is customizable with options like integrated LED illumination, laser or hot stamping markings, and color choices, making it suitable for diverse applications on joysticks, belly boxes, and handheld devices.



Control switch "IG series"

Leader's Message



Pursuing excellent environmental durability and high-level design qualities

Susumu Umeda

Leader, Electronics & Automation Product Development Department, IDEC CORPORATION

In designing the "HG2J series" operator interface we faced strong demands to make the housing thinner, and spend a huge amount of time studying heat dissipation. We adopted a wide type LCD panel for the display component, and to make best use of its original appearance, focused on using a glass-topped capacitive touch panel instead of a conventional analog touch panel. As this type of touch panel was not mainstream for control devices, before it could be commercialized we had to perform studies and evaluations as we went, taking into account construction, noise resistance, cost and supply aspects.

Manager's Message



The evolution from the "I series" to the "IG series"

Stéphane Martel

Engineering Manager, APEM SAS (France)

The development of our new "IG series" was challenging as we aimed to merge the robust environmental features of our "I series", introduce customization options during the final assembly, and enhance symbol illumination. APEM SAS mechanical and electrical teams worked together to design this new pushbutton, integrating an electronic board positioned just below the sturdy cap with an outfitting sealing membrane.

Manager's Message



Unique customizability tailored to customer needs

Vivien Rineau

Head of Product Marketing, APEM Components Ltd. (UK)

With the "IG series", we simplify life for our customers with post-assembly customized options, while reducing production pressure through a platform approach. Our design is based on a common structure that enables customers to select, and even personally install, the cap of their choice. In short, it's a win-win approach which doesn't compromise on the cap's robust fastening.