

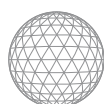


Think Automation and beyond...



FOOD AND PACKAGING

Industry Solutions



APEM
an IDEC company



FOOD AND PACKAGING INDUSTRY

The food and packaging industry faces the challenge of constantly pursuing technological innovations to meet food hygiene and safety requirements while also aiming for lower costs, greater efficiency, and less labour, all while tracking consumer needs. IDEC is identifying trends and developing highly-reliable products that can offer added value so as to open up new food-related business areas and meet diverse consumer needs while retaining an emphasis on food safety and peace of mind.



Food and Packaging Industry and IDEC

SAFER AND MORE HYGIENIC MACHINERY

IDEC has supplied the food and packaging industry with many products designed to meet international ISO/IEC machinery safety standards. We also offer a wide range of products that help boost food hygiene—for which there has been a growing need in recent years—through features such as easy-to-clean protective housing which inhibits surface accumulation of foreign objects, and excellent corrosion resistance through the use of SUS.

CONSTANT PURSUIT OF QUALITY

IDEC has spent more than 75 years developing and improving products with a constant focus on ease of use and quality. Our lengthy experience in the food and packaging machinery industry has made us acutely aware of the environmental resistance and durability needed to withstand a demanding environment as we continue to hone our product quality. IDEC is the trusted brand of many customers in the industry, and many of our products are used in food machinery controls worldwide.

IDEC AND THE FUTURE OF FOOD AND PACKAGING INDUSTRY

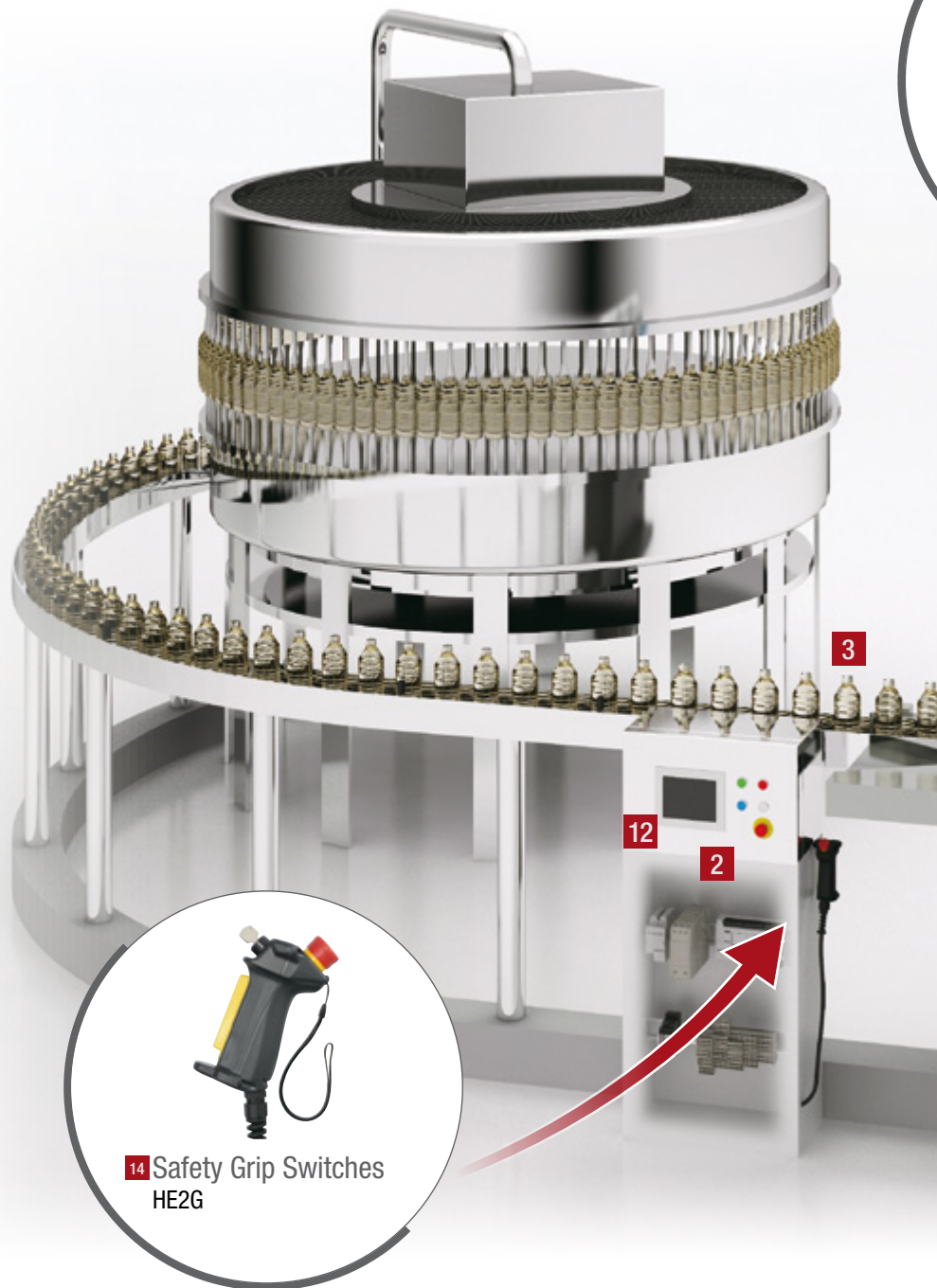
COVID-19 is taking food hygiene awareness to new levels. IDEC will contribute to the future of food and packaging industry by developing products to meet new safety and hygiene needs as they arise while maintaining our focus on user-friendliness.



Building a more hygienic, safer, and productive food processing plant

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14 Safety Grip Switches
HE2G

Improving the safety of equipment and preventing accidents



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Emergency Stop Switches
X Series



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Illuminated Buzzers
HW1Z



15
Non-Contact Interlock Switches
HS7A



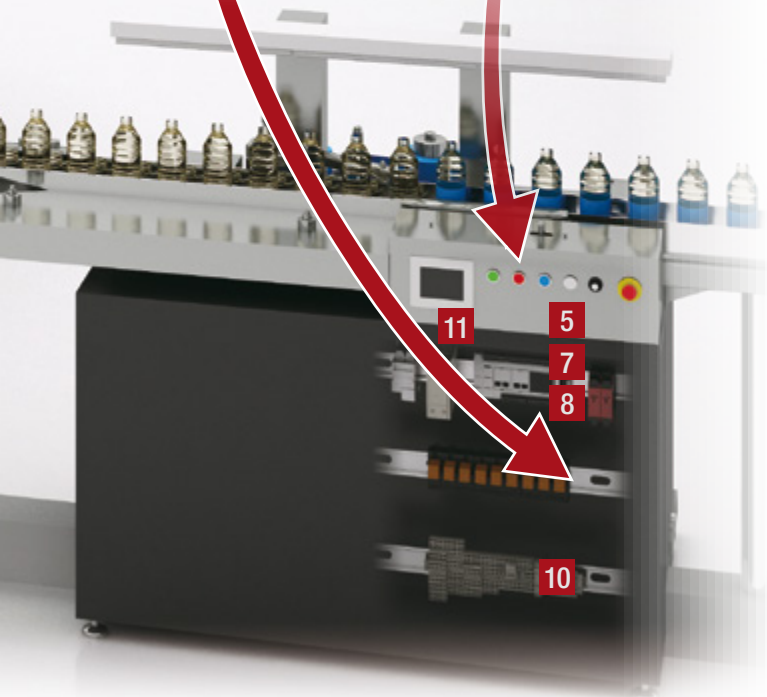
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HS6B / HS6E



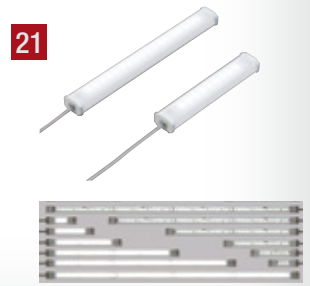
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Force Guided Relays
RF2



Maximizing the efficiency of production lines



Smooth operations panel provide a hygienic surface



New

KW2D



Smart RFID Reader

User authority and log control with RFID

- Low profile prevents build-up of dust and dirt.
- Standard $\varnothing 22$ mm panel cut-out enables easily installation.
- User authorization can be set on standard RFIDs such as employee ID cards.
- Device equipped with **verification function**. Easy tag registration using software program.
- Ethernet communication ((Modbus TCP, EtherNet/IP, CC-Link IE Field Basic) allows **easy integration** with existing devices.



Series	Model	Rated Input Voltage Power Consumption	Operating Temperature	Storage Temperature	RFID Interface Specification	Supported Tags	
						Card	KEYFOB
KW2D	Without holder: KW2D-R100Q4E	24V DC 2.4W max.	-25 to +55°C	Front unit: IP65/67 Back unit: IP20	ISO/IEC14443 Type A (Type A), ISO/IEC18092 (Type F), JIS X6319-4 (Type F), ISO/IEC 15693 (Type V)	ISO/IEC14443 Type A, ISO/IEC18092, JIS X6319-4, ISO/IEC15693	ISO/IEC14443 Type A
	With holder: KW2D-RH100Q4E						

Log control and authorization management for operators

BEFORE

Do not know when and who was involved in the production process



AFTER

Log history of operators enables detailed hygiene management.

An RFID reader is mounted on an operation panel with $\varnothing 22$ mm panel cut-out. The reader is then used to register workers and authenticate their ID cards.



New

Safety Commander™

Tablet Mount Safety Device

Safety features (emergency stop switch / enabling switch) added to commercially available tablet for use as a remote controller or teaching pendant

- The device can be attached on **8 to 11-inch** tablets for flexible mounting depending on the required display size.
- Ergonomic grip design ideal for long and **fatigue-free** operation.
- Pivoting mechanism allows the tablet to be used **vertically** or **horizontally**, to display a variety of content such as drawings, tables, and graphs.
- Dedicated accessories** enable wall mount installation in limited spaces when the device is not used.



*) The above photo shows the device mounted on a commercially available tablet.
 *) The tablet must be prepared by the user.

Series	Operating Temperature	Operating Humidity	Degree of Protection	Supported Tablet Size	Supported Tablet Thickness	Switches
Safety Commander	-20 to +55°C, (-20 to +35°C (*1))	45 to 85% RH	IP54	8 to 11 inches	Up to 24mm	Emergency stop switch: XA1E-LV302Q4R Enabling switch: HE5B-M2PY

* The data above does include tablets.
 *1) USB power supply

Safety added to tablet operation during maintenance

BEFORE

Safety issues may occur when tablets are used



AFTER

Tablets are equipped with safety controls.

Emergency stop switches and enabling switches can be operated while holding the tablet with one hand.



Control using a tablet

X Series

Emergency Stop Switches

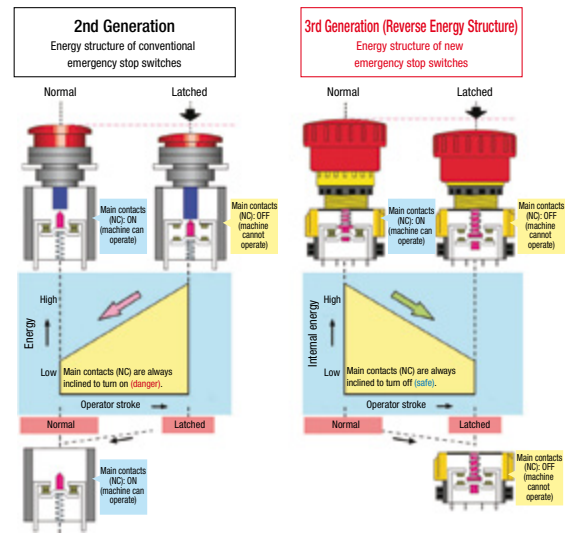


Designed to prevent build-up of dust and dirt

- Hygienic and easy to clean. Smooth design prevents dust build up.
- Reverse energy structure and Safe Break Action minimize dangerous failure.
- E-stops can be reset by **turn reset** or **pull reset**, preventing failure caused by incorrect reset operation.

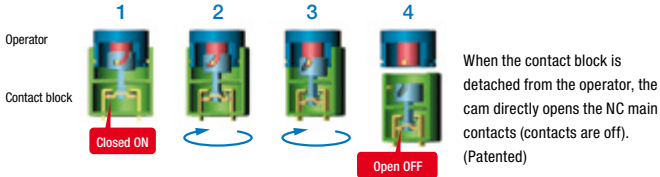
Reverse Energy Structure

With X series, the potential energy level of the latched status is lower than that of normal status. In the event the switch is damaged due to excessive shocks, the NC contacts will turn off, thus stopping the machine (patented design)



Safe Break Action

When the contact block is detached from the operator, the NC contact opens (OFF).



Series	Mounting Hole Size (mm)	Head Size (mm)	Terminal Style					IP Rating	Rated Continuous Current	International Standards				
			Solder	Solder/Tab	PC Board	M3 Screw	Connector			UL	CSA	TÜV	CCC	CE
XW	ø22.3	ø40 ø60	●		●	●	●	IP65 IP67	Gold Plated Silver Contacts: 5A (30V DC / 125V AC / 250V AC) (connector type: 2.5A)	●	●	●	●	●
XW (round form)	ø22.3	ø38				●		IP65	Gold Plated Silver Contacts: 5A (30V DC / 125V AC / 250V AC)	●	●	●	●	●
XA (unibody)	ø16.2	ø29 ø40	●	●				IP65 IP40	Gold Plated Silver Contacts: 5A (30V DC / 125V AC / 250V AC)	●	●	●	●	●
XA (removable contact block)	ø16.2	ø30 ø40	●		●			IP65	Gold Plated Silver Contacts: 5A (30V DC / 125V AC / 250V AC)	●	●	●	●	●
X6	ø16.2	ø30 ø40	●	●				IP65	Gold Plated Silver Contacts: 5A (30V DC / 125V AC / 250V AC)	●	●	●	●	●

Application: Operation panels

Hygienic design



CW Series



Flush Silhouette Switches

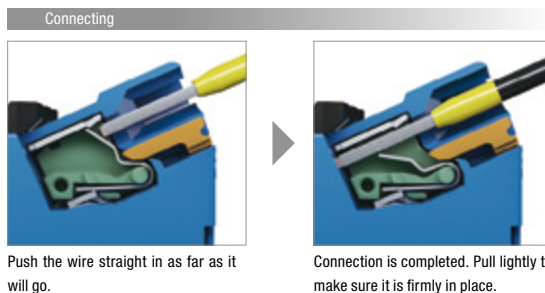


Flush silhouette switches prevent build-up of dust and dirt.
Push-in and screw terminals available

- With only a bezel height of **2.5mm**, the low projection from the panel surface prevents dust and other particles from accumulating and makes regular cleaning and maintenance easy.
- When used with a transparent silicon boot (CW9Z-D1*), the waterproof IP ratings are **IP66** to withstand powerful water jets, and **IP67** to withstand submersion, suitable for washdown applications. Also, smooth surface prevents build-up of foreign objects.
- The selector switch is **IP66** and **IP67** rated, suitable for protection against washdown.
- Wiring is completed by simply inserting a solid wire or ferrule into the push-in terminal. No need for retightening, increasing efficiency of equipment mass production.

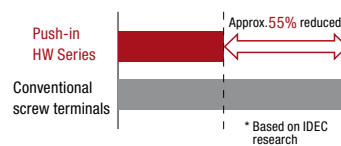
Time saving & efficient

Reduce wiring time



Wiring Procedure

Push-in connections are made simple by inserting the wire, reducing wiring time by approximately 55% compared to conventional screw terminals.



Transparent silicon boot



CW9Z-D11



CW9Z-D12

Series	Mounting Hole Size (mm)	Bezel Size (mm)	Terminal Style		IP Ratings	Rated Continuous Current	International Standards				
			Screw	Push-in			UL	CSA	TÜV	CCC	CE
CW	ø22	ø30	●	●	Pushbuttons: IP65 (with cover: IP66, IP67) Selector switches: IP66 IP67	Gold Contacts: 10A (24V DC/ 120V AC/240V AC)	●	●	●	●	●

Application: Control panels

Improve wiring efficiency with push-in technology



MW Series

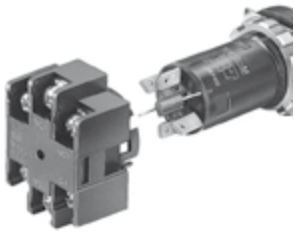
Control Units

Waterproof and dust-proof structure

- With the sliding part on the surface covered with rubber, its **hygienic** design prevents entry and build-up of dirt and dust.
- IP66** rated to withstand powerful water jets. Suitable for washdown applications.
- Reliable** operation with high operating load.



Dedicated screw terminal sockets available



Series	Mounting Hole Size (mm)	Terminal Style	IP Ratings	Switch Type	Operating Temperature	Rated Continuous Current
MW	ø22	Solder/tab terminal #187 Screw terminal (option socket)	IP66	Flush pushbuttons Mushroom pushbuttons Knob operator selector switches Lever operator selector switches	-25 to +75°C	Gold contacts: 10A (24V DC / 125V AC)

Application: Operation panels

Prevents entry of contaminants, withstands high-pressure washdowns



AV/PBA Series

Metal Switches

Metal switches with robust and air-tight structure

Robust, durable, and stylish metal switches with smooth surface. Stainless steel structure prevents **corrosion**.

The flat actuation surface of Piezo switches are completely sealed, preventing intrusion of liquids or other contaminants and achieving a **hygienic** structure. **IP68** and **IP69K** ratings achieve protection from powerful water jets.



Series	Output	Mounting Hole Size (mm)	IP Rating	Life Expectancy
AV	Contact	Ø22 to Ø30	IP65 (IP69K for some models)	1 million cycles
PBA	Pulse	Ø16 to Ø30	IP68, IP69K	50 million cycles

Application: Control panels

Prevents intrusion of liquids and other contaminants



Q Series

LED Indicators

LED indicators with outstanding protection performance, suitable for a wide temperature range



- **Stainless steel** body material for corrosion resistance.
- Available in sizes ranging from **ø6 to 22mm**.
- IP67 protection suitable for use in environments exposed to water.
IP69K rated models resistant to powerful water jets.
- Suitable for use in wide temperatures ranges from **-40 to +85°C**, such as near high-temperature ovens and freezers (reed line type).
- **RGB** options provide 7 colors for single indicator, ideal for various use such as replacing signal towers.

Series	Mounting Hole Size (mm)	Bezel Shape	Terminal Style	LED Brightness
Q	ø6, 8, 10, 12, 14, 16, 19, 22	Prominent, flush, recessed, chamfer	solder lug, faston, pin, reed wire	110 mcd to 1250 mcd

Application: Kitchen equipment, food processing machines, food packaging machines, status indicator

Achieves high visibility



Multimec™ Series

Tactile Switches

Highly-protected tactile switches suitable for a wide range of temperature applications

- Endures operation of **10 million** cycles with secure tactile feedback. Improves **durability** of operation panels.
- Suitable for use in wide temperatures ranges from **-40 to +160°C**, such as near high-temperature ovens and freezers.
- Multimec™ switches are highly durable and **IP67 rated** (except PCB) even if the sealing on the panel surface deteriorates and the oil penetrates inside.



Series	Terminal Style	Life Expectancy	IP Rating	Contact Ratings
Multimec™	Solder Through-hole	10 million cycles	IP67	0.5 to 50mA (24V DC)

Application: Kitchen equipment

Achieving comfortable operation



IA/IX Series

Pushbuttons

Surface sealed switches prevent entry of contaminants

- **Hygienic**, flat design with flat actuation surface prevents build-up of dust and dirt.
- **Compact** size suitable for use in limited spaces.
- IA with **IP67** ratings can be used in environments exposed to water. IX with **IP69K** ratings are resistant to powerful water jets.
- Can be used for applications in a wide range of **low-temperature and high-temperature environments**
 IA: -20 to +65°C
 IX: -40 to +85°C



Series	Mounting Hole Size (mm)	Terminal Shape	Electrical Life	Mechanical Life	IP Rating
IA	Ø16.2	Reed wire	1 million times	1 million times	IP65/IP67
IX	Ø12	Reed wire Solder terminal	1 million times	1 million times	IP67/IP69K

Application: Operation panels

Prevents entry of contaminants



HW1Z

Illuminated / Non-Illuminated Buzzers

Light and sound. Two functions integrated into one

- The operator's attention can be drawn effectively by integrating the functions of a buzzer and indicator.
- **IP65** from the front of the panel. Installing an optional terminal rubber boot upgrades the terminal's waterproof characteristics to **IP54** without the need to use an enclosure.
- Panel depth of **19.7mm** achieves downsizing of equipment.



Series	Rated Voltage Current	Buzzer Sound	IP Ratings	Boot Specification
HW1Z	12 to 24V DC	Illuminated type: Steady Non-illuminated: Steady / Intermittent	Panel front: IP65 Panel back IP40, IP54 (with terminal rubber boot)	Terminal rubber boot: Nitril rubber

Application: Notifies of abnormal status of equipment

Waterproof buzzer suitable for food manufacturing facilities



RL Series

Power Relays

Suitable for controlling low voltage and high current loads



High switching performance. 1-pole: 250V AC / 30A, 2-pole: 250V AC / 25A. Suitable for **kitchen equipment** requiring AC single-phase control.

Stable and **continuous operation**, even with an instantaneous 50% drop in supply voltage, ideal for use in areas with unstable voltage conditions.

Mounts in all directions, enabling **downsizing** of equipment.

Enables flexible mounting

DIN rail mount

- Easy installation. Snaps-on to DIN rails
- Compact size helps reduce installation space
- Optional parts are not required, reducing the number of parts

Series	Contact Allowable Current	Contact Material	Electrical Life (rated load)	Mechanical Life (without load)	International Standards			
					UL	CSA	TÜV	CE
RL	1-pole: 250V AC, 30A 2-pole: 250V AC, 25A	Ag alloy	100,000 operations min Operation frequency (1,200 operations per hour)	1 million operations min Operation frequency (10,800 operations per hour)	●	●	●	●

Application: Microwave ovens, refrigerators, freezers, kitchen equipment, electric water heaters

Compact size allows installation in limited spaces



FT1A

Controllers

Powerful controller with integrated I/O for optimal control

- Touch, Pro, and Lite: **3 models** to provide flexible support for a variety of applications
- **Touch panel + controller** (Touch) compact unibody fits into tight spaces through the integration of operation unit and control unit.
- Support for a wide variety of interfaces, including **Ethernet, USB, and RS232C**, allows communications a variety of hosts.
- 2 independent axes can be controlled with **2 pulse outputs**
(Pro/Lite models only).
- 2 types, **relay output** and **transistor output**, are available to be used for applications that switch frequently.

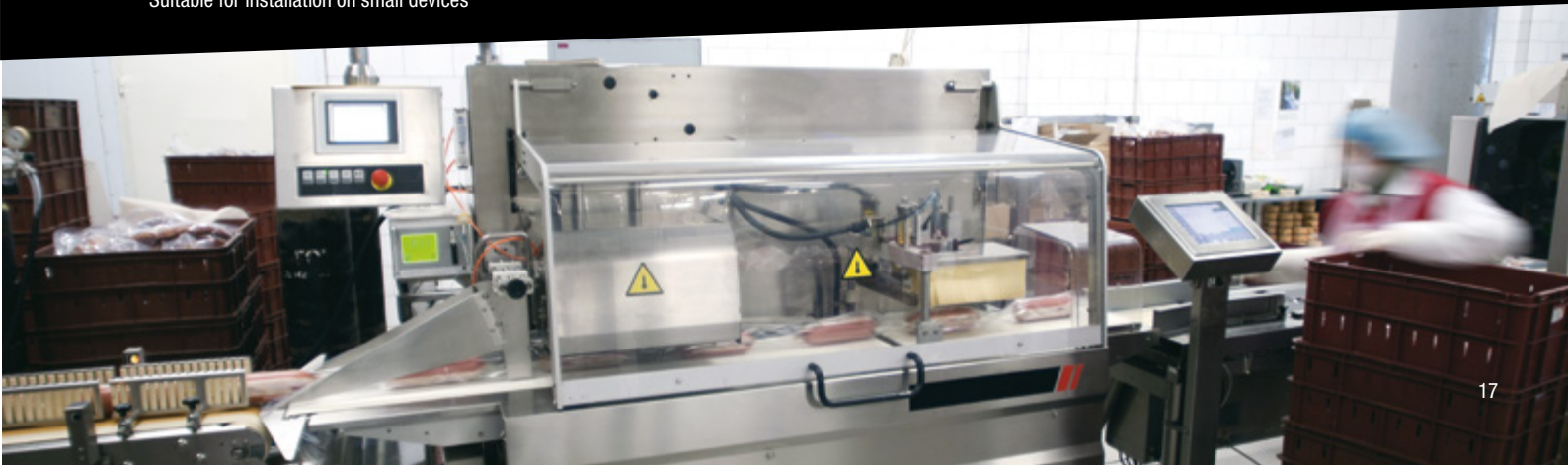


Series	Built-in Output Points (*1)						International Standards			
	No. of Inputs		No. of Digital Outputs				No. of Analog Output Points	UL	CSA	CE
	Digital	Analog	Relay Output		Transistor (Sink Output)	Transistor (Source Output)				
			10A Relay	2A Relay						
FT1A Touch	6 points	2 points	4 points	–	4 points	4 points	2 points			
FT1A Pro	6 to 30 points	2 to 8 points	4 points	4 to 12 points	4 to 18 points	4 to 18 points	–	●	●	●
FT1A Lite	6 to 30 points	2 to 8 points	4 points	4 to 12 points	4 to 18 points	4 to 18 points	–			

*1) Combination of I/O points varies according to the part no.

Application: Building a control circuit for equipment and peripheral devices

Suitable for installation on small devices



HG Series

Operator Interface

Water-resistant and robust touch panels

- **IP66F/IP67F** ratings prevent ingress of oil, suitable for washdown applications.
- Hard coat used on the display of the touch panel achieves excellent **durability** and prevents damages.
- **WEB** server function allows HG touch panel screens to be displayed on a tablet or smartphone for wireless and **hygienic** operation and monitoring from a remote location.
- Data inside operator interfaces can be sent by CSV file or screenshot using the email function to allow **monitoring** of devices, **factor analysis**, and **early alerts** to operators
- **Remote maintenance** is possible by using the FTP server and client function to transfer project data and read history data.



Series	Display Size	Touch Switch	Communication / Memory Interface	Video / Audio Interface	Rated Voltage	International Standards		
						UL	CSA	CE
HG1G	4.3 inch	Analog resistive	COM, LAN, USB1, USB2		12 / 24V DC	●	●	●
HG2G-V	5.7 inch	Analog resistive	COM1, COM2, LAN, USB1, USB2, SD, EXT		24V DC	●	●	●
HG2G-5T	5.7 inch	Analog resistive	SERIAL, LAN, USB, USB2		12 / 24V DC	●	●	●
HG3G-V	10.4 / 8.4 inch	Analog resistive	COM1, COM2, LAN, USB1, USB2, SD, EXT	VIDEO IN1, VIDEO IN2, AUDIO OUT	24V DC	●	●	●
HG4G-V	12.1 inch	Analog resistive	COM1, COM2, LAN, USB1, USB2, SD, EXT	VIDEO IN1, VIDEO IN2, AUDIO OUT	24V DC	●	●	●
HG5G-V	15 inch	Analog resistive	COM1, COM2, LAN, USB1, USB2, SD, EXT	VIDEO IN1, VIDEO IN2, AUDIO OUT	24V DC	●	●	●

Application: Operation panels

Touch panels suitable for food manufacturing environments



FC6A



Programmable Controllers

PLC suitable for the IoT era

- Web server function enables easy construction of a **remote monitoring** system.
- Data inside operator interfaces can be sent by CSV file or screen shot using the email function allowing **tracing** of devices, **factor analysis**, and sending **early alerts** to operators.
- **Remote maintenance** can be performed by using the FTP server and client function to transfer project data and read history data.
- Supports standard communication protocols in the industrial industry with CPU modules, communication modules, and communication cartridges. The communication monitoring function **reduces debugging time** and achieves easy communication with peripheral devices.
- **Temperature control** allows optimization of auto-tuning and can be visualized on WindLDR.



Series	Program Size	Max. I/O Points
FC6A	FC6AAII-in-one: 640KB max . (80,000 steps) FC6APlus: 800KB (100,000 steps)	FC6AAII-in-one: 520 points max. FC6APlus: 2060 points max. (including 511 analog points max.)

Application: Equipment Control

Achieving equipment control and IoT at the same time



HE2G

Safety Grip Switches

Easy-to-grip ergonomic design

- **Compact design** enables a firm hold. Suitable for hold-to-run operations such as jog operation for filling machines.
- Ergonomic **3-position structure** stops machines safely by pushing in or releasing.
- **Lightweight** structure suitable for long operations.

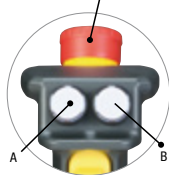


Select from a wide variety of models

Equipped with different control units for various functions.

HE2G-21SHE-L-L

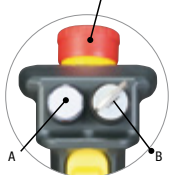
Emergency stop switch
XA1E-BV3U02R



A: Momentary pushbutton (white)
AB6M-M2PLW
B: Momentary pushbutton (white)
AB6M-M2PLW

HE2G-21SHE-L-K

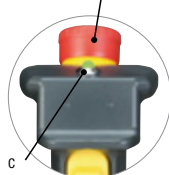
Emergency stop switch
XA1E-BV3U02R



A: Momentary pushbutton (white)
AB6M-M2PLW
B: Key selector switch
AS6M-2KT2PA

HE2G-21SHE-P-0

Emergency stop switch
XA1E-BV3U02R



C: Pilot light (green)
UP9P-2498G

Series	Rubber Boot Material	IP Rating	International Standards				
			UL	CSA	TÜV	CCC	CE
HE2G	Silicon rubber: Y (yellow), B (black) NBR / PVC polyblend rubber boot color: gray	IP67	●	●	●	●	●

Application: Jog operation during maintenance, enabling operation

Improving operability with ergonomic design

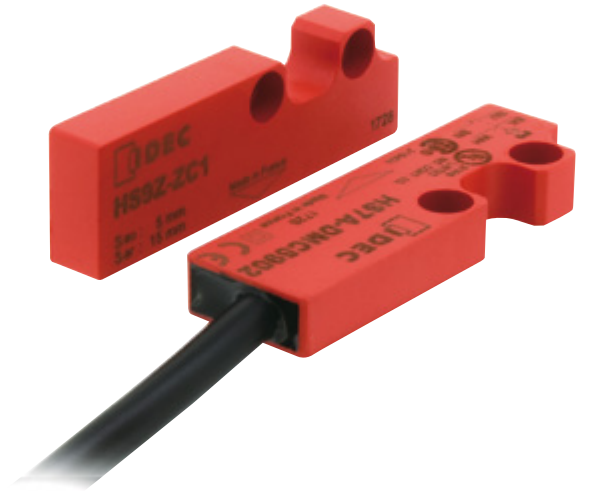


HS7A

Non-Contact Interlock Switches

Ensuring safety during remote operation

- Compact size ideal installation in **tight spaces**. Easy mounting and adjusting on rattling doors.
- **IP67** protection suitable for use in wet areas.
- Operating temperature range from **-25 to +85°C**. Ideal for use in high and low temperature environments.



Series	Safety Category	Performance Level	Terminal Style	IP Rating	International Standards
HS7A	Use with relay modules achieves safety category 4	PLe	Reed wire	IP67	IEC/EN60947-5-1 UL508 (UL listed) CSA C22.2 No. 14

Application: Door interlock

Prevents generating particles



HS6B/HS6E

Interlock Switches / Interlock Switches with Solenoid

Easy installation in tight spaces

- **Compact** size for installation in limited spaces.
- Integrated cable model **minimizes wiring**.
- Angled connection cable reduces installation **space**.
- **IP67** rated ideal for use in environments exposed to water.
- Two types can be selected depending on the application: without lock (HS6B), and with lock (HS6E).



Series	Series	Electrical Durability	IP Rating	International Standards				
				UL	CSA	TÜV	CCC	CE
HS6B	Non-locking	100,000 operations min. (AC-12 250V/1.5A, DC-12 250V/0.2A), 1,000,000 operations min. (24V AC/DC, 100mA) (operating frequency 1200 operations/h)	IP67	●	●	●	●	●
HS6E	Solenoid locking/ Release type	100,000 operations min. (AC-12 250V/6A) 1,000,000 operations min. (24V AC/DC, 100mA) (operating frequency 900 operations/h)	IP67	●	●	●	●	●

Application: Door interlock

Thin and compact interlock switches suitable for small devices



HS5D/HS5L

Interlock Switches / Interlock Switches with Solenoid

Easy to install on small doors

- **Compact design** for flexible installation.
- **Head removal detection function** detects removal of the head by signals to ensure safety.
- **Lock monitoring marking** can be used for circuits with a small number of contacts (HS5L).
- Two types can be selected depending on the application: without lock (HS5D), and with lock (HS5L).



Series	Mechanical Durability	Terminal Style	IP Rating	International Standards				
				UL	CSA	TÜV	CCC	CE
HS5D	100 million times (GS-ET-15)	Screw	IP67	●	●	●	●	●
HS5L	2 million times min. (Operation frequency 900 times/hour, actuator insert/remove, solenoid operation) 100,000 times min. when using HS9Z-SH5/EH5L/DH5 (actuator insert/remove)	Spring clamp	IP67	●	●	●	●	●

Application: Interlock detection for protective doors and covers

Small size, high reliability



HR5S

S³ Safety Relay Modules
CONNECT

Category 2 safety relay module Compliant to international standards



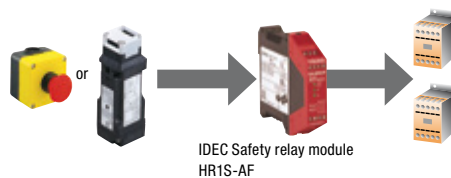
- Low risk, category 2 safety circuit for food processing machines.
- In a category 2 circuit, the output device does not require redundancy. Saves **cost** and **wiring** compared to category 3.
- Category 2 architecture enables construction of **PL = c** and **PL = d** control systems.

Category 2 system configuration

The circuit is monitored but the output device does not require redundancy. If the safety function is impaired due to failure, the alarm (light or buzzer) is output by a fault detection.

Before: Category 3 system configuration

- Dual channel circuit with cross monitoring.
- Two output devices are required. A single fault does not lead to the loss of the safety function.



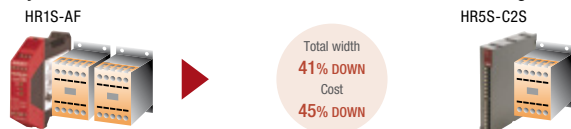
After: Category 2 system configuration

- Input device or output device does not require redundancy.
- When the output device detects a failure, the alarm (light or buzzer) is output.



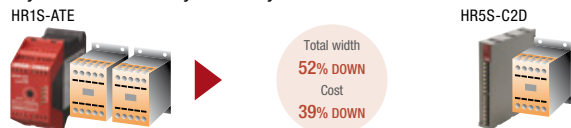
Performance of Category 2 system

System that eliminates short-circuit fault detection when wiring from an input device



Total width
41% DOWN
Cost
45% DOWN

System with off-delay control system



Total width
52% DOWN
Cost
39% DOWN

Series	Variation	Mean time to dangerous failure (MTTFD)	Diagnostics coverage (DCavg)	Mission time (TM)	Performance of Category 2 system (*1)		International Standards				
					System that eliminates short-circuit fault detection when wiring from an input device Total width 41% DOWN Cost 45% DOWN	System with off-delay control system Total width 52% DOWN Cost 39% DOWN	UL	CSA	TÜV	CCC	CE
HR5S	Simple model (instantaneous) Standard model (instantaneous) Off-delay model	330 years (100 years: When the limit value from EN ISO 13849-1 is applied) (MTTFD of fault output: 210 years)	Medium (90% minimum) (EN ISO 13849-1)	20 years (EN ISO 13849-1)			●	●	●	●	●

Application: Safety circuit for machines

Reduction of cost and man-hours to introduce safety systems in low-risk machines



RF2

Force Guided Relays

2-pole force guided relays reduce cost and installation space

- **2-pole** relays achieve easy configuration of a safety circuit.
- Mechanical indicator allows easy confirmation of the contact status.
- **Push-in**, screw, or PC board terminal sockets enable relays to be easily replaced during maintenance.



Series	Socket	Allowable Switching Current	Electrical Life	Mechanical Life	International Standards			
					UL	CSA	TÜV	CE
RF2	PC board terminal, Screw terminal, Finger-safe screw terminal, Push-in terminal	6A	NO contact: 100,000 operations minimum (operating frequency 1,800 per hour) at 240V AC / 6A resistive load or 2A inductive load (power factor 0.4) 100,000 operations minimum (operating frequency 1,800 per hour) at 24V DC / 6A resistive load or 1A inductive load (time constant 48ms) NC contact: 100,000 operations minimum (operating frequency 1,800 per hour) at 240V AC / 3A resistive load or 2A inductive load (power factor 0.4) 100,000 operations minimum (operating frequency 1,800 per hour) at 24V DC / 3A resistive load or 1A inductive load (time constant 48ms)	10 million operations min. (operating frequency 18,000 per hour)	●	●	●	●

Application: Safety circuits

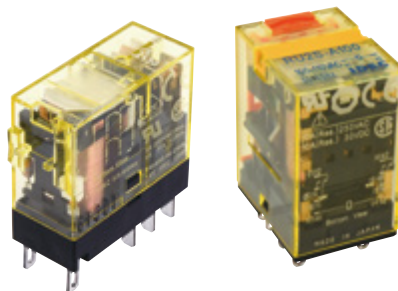
Improving maintainability



RU/RJ/RV8

Slim Relays / Universal Relays

**Slim, compact relays
save installation space**

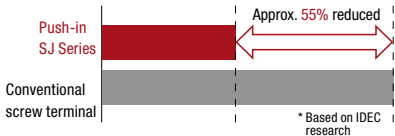


- **Compact** size with excellent durability and high switching power.
- Circuit check can be performed without energizing the coil, enabling check up **before applying power** to the relay. (RU)
- The release lever easily holds and removes the relay and push-in terminals, reducing **wiring time**. (RU, RJ)
- Space-saving **6mm** RV8 ideal for high density mounting. (RV8)

Time saving & efficient

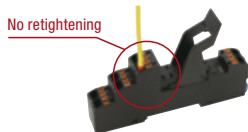
Save up to 55% in wiring time

Wiring time reduced greatly compared with conventional screw terminals. (Compared with IDEC products)



Reduce maintenance work

Push-in terminals eliminate the need for torque maintenance such as tightening of screws because screws are not used.



Safe & easy

Equipped with a release lever

The release lever easily holds and removes the relay.



Series	Allowable Contact Current	Contact Material	Electrical Life	Mechanical Life	International Standards			
					UL	CSA	TÜV	CE
RJ	1-pole: 12A 2-pole: 8A 2-pole (bifurcated contacts): 1A	AgNi (*1) AgNi (Au clad) (*2)	•AC: 200,000 operations min. DC: 100,000 operations min. Operation frequency 1800 operations/h (*1) •AC: 100,000 operations min. DC: 200,000 operations min. Operation frequency 1800 operations/h (*2)	•AC : 30,000,000 operations min. DC: 50,000,000 operations min. Operation frequency 18,000 operations/h (*1) •AC : 10,000,000 operations min. DC: 20,000,000 operations min. Operation frequency 18,000 operations/h (*2)	●	●	● (VDE)	●
RU	2-pole (RU2): 10A 4-pole (RU4): 6A 4-pole (RU42 bifurcated contacts): 3A	2-pole (RU2): Ag alloy 4-pole (RU4): Ag (Au-clad) 4-pole (RU42 bifurcated contacts): Ag-Ni (Au-clad)	2-pole (RU2): 100,000 operations min. (250V AC, 10A/resistive load) 500,000 operations min. (250V AC, 5A/resistive load) 4-pole (RU4): 50,000 operations min. (250V AC, 6A/resistive load) 4-pole (RU42 bifurcated contacts): 100,000 operations min. (250V AC, 3A/resistive load)	2-pole (RU2) / 4-pole (RU4): AC: 50,000,000 operations min. DC: 100,000,000 operations min. 4-pole (RU42 bifurcated contacts): 50,000,000 operations min.	●	●	●	●
RV8	6A	AgNi+Au plated	30,000 operations min. (NO contact) 10,000 operations min. (NC contact) (*3)	10,000,000 operations min. (Operation frequency 18,000 operations/h)	●	●	● (VDE) (*4)	●

*1) 1-pole, 2-pole *2) 2-pole (bifurcated contacts)

*3) 250V / DC30V AC, 6A resistive load, operation frequency 1800 operations/h

*4) RV1H only

Application: Control circuit structure for a device

Compact size with high-capacity contacts, reducing installation space



LF1B-N/LF2B

LED Lightings

Wide range of selections including compact size for flexible installation

LF1B-N has a rated voltage of 24V DC, 6 lengths, and 6 color variations. RGB types can be used as an indicator lamp.

LF2B available with 100 to 240V AC and 24V DC voltages ideal for export to global destinations.



LF2B

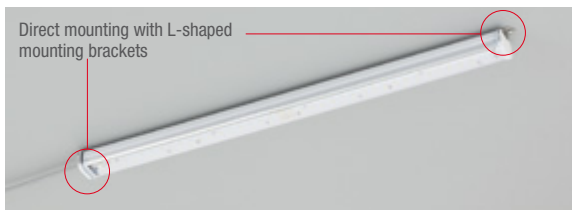


LF1B-N

Two easy mounting styles

Quick and easy installation

Dedicated brackets (2 types) available for mounting



Series	Lens	IP Rating	Rated Voltage	International Standards		
				UL	CSA	CE
LF1B-N	Diffusing / condensing	IP65	24V DC	●	●	●
LF2B	Diffusing / condensing	IP65	24V DC 100 to 240V AC	● (*1)	● (*1)	●

*1) 12/24V DC type only

Application: Inspection

Long-lasting and water resistant



LD6A

LED SignalLight Towers

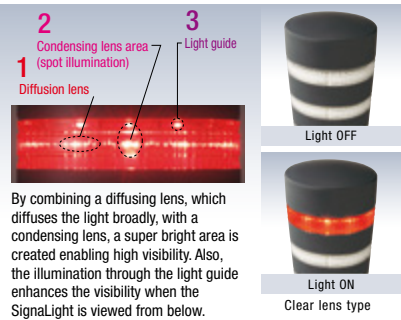
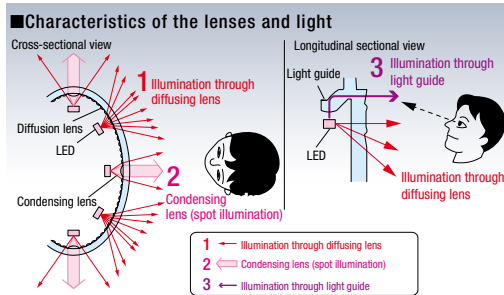
Compact design reduces installation space on equipment

- Universal design with oval shape and striped design enhances **visibility**.
- LD6A can be stacked and changed individually and make it variety of mounting patterns by **plug-in** terminals of the LED elements.
- Steady / flashing (flashing cycle compliant with **IEC** standards / alarm types available).
- Unique powerful design with 360-degree sound field. Two **alarm** sound patterns available.



Unique lens offers high visibility

Three different illumination methods and a unique lens shape enable high visibility from all directions.



Series	Rated Voltage	Power Consumption		Flashing Cycle (IEC60073)	LED Life	Alarm Volume	International Standards		
		LED	(Buzzer)				UL	CSA	CE
LD6A	24V AC/DC	0.6W (R,Y) 0.75W (S, G) 0.5W (W)	110mA max.	Approx. 105 flashes per minute (1.75Hz)	Approx. 30,000 hours	70 to 90dB, at 1m (volume adjustable)	●	●	●

Application: Displaying machine status

Alarming machine malfunctions



LH1D series

LED indicators

Surface mount LED Indicators for direct mounting on equipment



- **IP67** rated. Can be used in environments subject to washdown.
- Integrated cable wiring ensures waterproof characteristics. 1m, 3m, and 5m cables available.
- **Slim** design well suited for installation in small spaces.
- **Excellent visibility** from the front and from the side.

Series	Color Variations	Cable Length	Rated Voltage	IP Rating	International Standards			
					UL	CSA	TÜV	CE
LH1D	1-color 2-color alternate 3-color alternate (*1)	Cable type: 1m, 3m, 5m M12 connector type (*1) : 30cm	Cable type: 24V AC/DC M12 connector type (*1) : 24V DC	IP67	●	●	●	●

Application: Packaging machine, filling machine, slicer, mixer

Easy to surface mount



We make the point of contact, where people interface with machines, easy, safe and secure. We create new possibilities.

One of our corporate principles is to conduct business with consideration for social contribution. Since its founding, IDEC has developed and introduced the world to numerous products and services centered on its control technology. Today, our products are used not only in factories, but in a wide range of settings in people's everyday lives where customers desire safety, ease of use, reliability and a smaller environmental footprint.





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