IDEC

Think Automation and beyond...

ELEVATORS
Industry Solutions

IDEC CORPORATION

ELEVATOR INDUSTRY

In their role as a public transport vehicle, elevators must be updated to respond to social changes, comply with laws and standards, and adapt to the latest technologies. Leveraging our expertise and long history of supplying customers in the elevator industry with proven products, IDEC will rise to the challenge of meeting the latest trends in this industry while continuing to offer reliable products that add values for our customers.

Elevators and IDEC

IMPROVING SAFETY

Elevator standards such as EN81-20 and ISO8100 have been introduced to meet strict safety requirements. IDEC helps to improve elevator safety with products and solutions that comply with safety standard requirements, from illuminated buzzers installed under elevator cars to interlock switches for ladder detection in elevator pits.

ENHANCING QUALITY

IDEC has spent more than 75 years developing and improving products with a constant focus on ease of use and quality. The trusted brand of many customers in the industry, a variety of IDEC products are used in the elevators today. We continue to supply products that meet customers' quality demands, helping to keep elevators in service for many years to come.

SERVING THE FUTURE

Since 2020, the COVID-19 pandemic has transformed the elevator industry. IDEC is working with the industry to respond swiftly and adapt to changes. We will identify future demands from the elevator community, provide our customers with solutions, including those that enhance hygiene and safety, and contribute to the future of elevators.

Enhancing Elevator Safety to Reduce Future Business Risks

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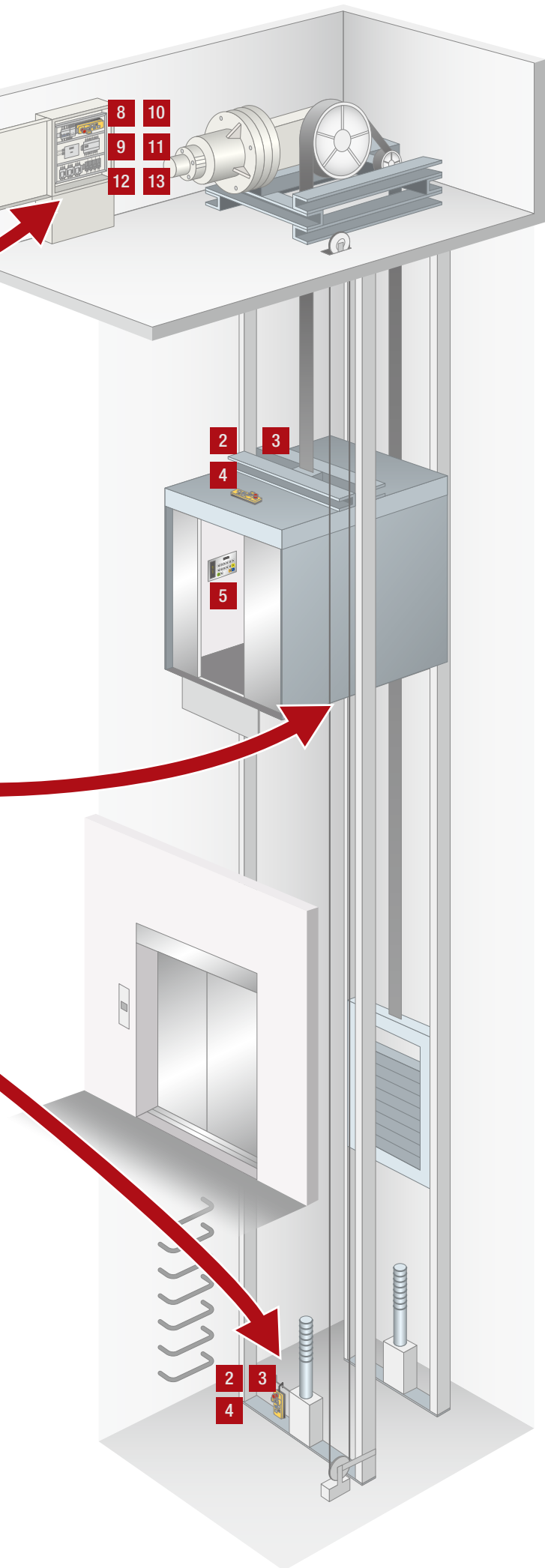XW Series

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FC6A

New

HR6S

S³ CONNECT

Safety Relay Modules

Full range of diagnostic functions contribute to elevator safety

▌**Diagnostic results** are **coded** and output as a pulse signal for easy and detailed monitoring of the safety system.

▌Dial switching allows configuration of **various input devices** and **selection of numerous start modes**, eliminating the need to use a different module with a different function.

New

SX5E (8-port type)

Ethernet Switches

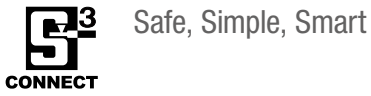## Unmanaged switch available with 5-port or 8-port

▌High **impact resistance** enables high reliability and stable operation.

▌**Robust metal housing** for superior environmental resistance.

▌Compliant with Fast Ethernet standards for **high-speed communication**.

▌Equipped with industrial features such as **QoS** (8-port model only) and redundant power input.
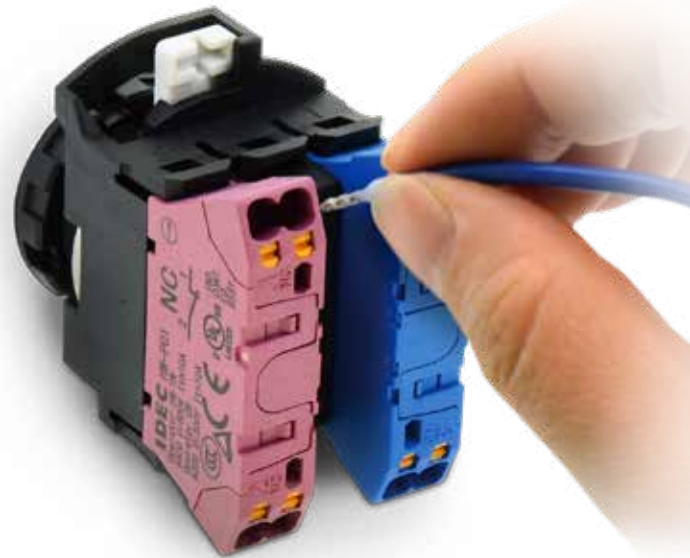
8-port　　　5-port

Push-in Terminal Products

Safe, Simple, Smart

Push-in connections improve work efficiency

▌Simple wiring. **No screwdriver required** when inserting wires, improving work efficiency.

▌**Time saving** & **efficient**
Wiring time reduced by 55% compared to conventional screw teminals. (*1)

▌Safe construction and vibration resistant.
Saves **installation space** and achieves efficiency.

▌No need for **re-tightening**, reducing maintenance work.

*1 Based on IDEC research

Switches & Pilot Lights
HW / CW Series

Relays & Sockets
RU (SU) / RJ (SJ) Series

Controllers
FC6A

Application: Elevator control panels

Improve wiring efficiency with push-in technology
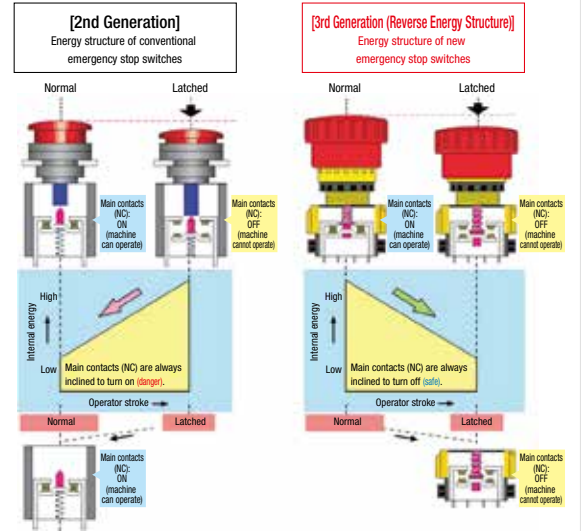
XW Series

Emergency Stop Switches

Next-generation ergronomic emergency stop switches Compliant to IP65 and IP67

▌ **IP65** and **IP67** rated. Allows flexible installation in underground pits.

▌ IDEC's unique highly reliable safety technology ideal for the elevator industry.
1. **Reverse Energy Structure**
2. **Safe Break Action**

▌ 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)
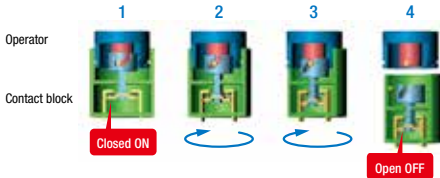

[2nd Generation]
Energy structure of conventional emergency stop switches

[3rd Generation (Reverse Energy Structure)]
Energy structure of new emergency stop switches

▌ Innovative design of the emergency stop switch

Enables flexible installation and ensures access to safety for maintenance technicians.

▌ Safe Break Action

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

When the contact block is detached from the operator, the cam directly opens the NC main contacts (contacts are off). (Patented)

Type	Mounting Hole Size (mm)	Head Size (mm)	Terminal Style				IP Rating	International Standards				
			Solder	PC Board	M3 Screw	Connector Type		UL	CSA	TÜV	CCC	CE
Resin bezel type	ø22.3	ø40, ø60	●	●	●	●	IP65, IP67	●	●	●	●	●
Color indicator type	ø22.3	ø38			●		IP65	●	●	●	●	●

Application: Maintenance boxes, emergency stop boxes

Superior safety

HW/CW Series

Push-in Switches & Pilot Lights

S³ CONNECT

Simple wiring with Push-in technology

▌ Wiring is accomplished by **simply inserting** a solid wire or ferrule into the Push-in terminal. **No need for retightening**, achieving easy wiring for elevators.

▌ **Self-cleaning action contacts** minimize the risk of connection failure due to dust.

High visibility with new LED

▌ISO3864-4 Compliant safety colors

Include: R (Red), Y (Yellow), G (Green), PW (Pure white)
Safety colors are defined in the ISO standards.
The bright and clears colors are suited for emergency situations.

HW series
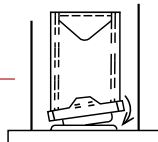
Conventional LEDs

NEW LEDs

CW series

Conventional LEDs

NEW LEDs

▌ Self-cleaning action contacts

Wiping action

Time saving and efficient

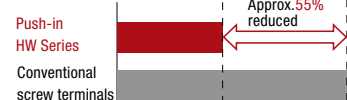▌ Reduce wiring time

Connecting

Push the wire straight in as far as it will go.

Connection is completed. Pull lightly to make sure it is firmly in place.

Wiring process

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

Push-in HW Series

Conventional screw terminals

Approx.55% reduced

* Based on IDEC research

Product Name	Mounting Hole Size (mm)	Bezel Size (mm)	Terminal Style		IP Rating	International Standards				
			Screw	Push-in		UL	CSA	TÜV	CCC	CE
HW	ø22	ø30	●	●	IP65	●	●	●	●	●
CW	ø22	ø30	●	●	IP65	●	●	●	●	●

Application: Elevator control panels, maintenance boxes

Improving wiring efficiency with push-in technology

FB Series
Control Boxes

Control boxes with flexibilities

▊ **IP67**(*1) **/ IP65** rated maintenance boxes. Can be customized to comply with elevator safety standards.

▊ Four mounting styles for flexible installation: direct mounting, rear mounting, hook mounting, and aluminum frame mounting.

*1) IP67 for single hole boxes only

▊ Efficient and safe elevator maintenance

Product Name	Material	Box Type, Size	IP Rating	International Standards		
				UL	CSA	CE
FB	Box cover/base: Polycarbonate Box cover mounting screws: Stainless steel	76 mm 140 mm 200 mm	IP67(*1) / IP65	●	●	●

*1) IP67 for single hole only

Application: Maintenance boxes

Wide range of applications. Single to five hole boxes available

Multimec™ Series APEM
Tactile Switches

Durable, easy-to-operate tactile switches

▌ Endures operation of **10 million** cycles. Improves **durability** of operation panels for elevators.

▌ Multimec™ switches are **IP67** rated, ideal for use in dusty environments and areas subject to rain.

▌ Unfaltering tactile feedback.

Product Name	Terminal Style	Durability	IP Rating	Contact Rating
Multimec™	Solder Through hole	10 million times	IP67	0.5 to 50mA (24V DC)

Application: Elevator Buttons

Easy, reliable operation

HW1Z

Illuminated / Non-illuminated Buzzers

Buzzer and lamp functions integrated into one. Compliant to ISO 8100 safety standards.

▌ **Push-in** terminal reduces wiring work for elevator systems.

▌ Reduced installation space is achieved by **integrating the functions** of a buzzer and lamp into one (illuminated buzzer only).

▌ **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.

▌ **IP65 rated from front of panel**
Resistance to dust and water.

▌ **Waterproof construction**
Installing an optional terminal rubber boot upgrades the terminal's waterproof characteristics to IP54 without the need to use a rear enclosure.

▌ **A simple and secure solution to prevent car collision accidents**
This is a handy solution for ensuring safety, by notifying workers of the movement of an elevator during maintenance work.

Product Name	Rated Voltage Current	Buzzer Specifications	IP Specifications	Cover Specifications
HW1Z	12 to 24V DC	Illuminated model: Intermittent sound Non-illuminated model: Continuous sound / intermittent sound	Panel front: IP65 Panel rear: IP40, IP54 (when using waterproof terminal cover)	Waterproof terminal cover: Nitrile rubber

Application: Workers notified by sound and light when the elevator operates, ensuring safety during inspection

Enhanced safety for maintenance work

HS5D

Interlock Switches

Compact and highly reliable

❚ Safety devices that meet **New ISO8100** requirements. Can be used in a variety of situations.

❚ **Compact size** for installation in narrow spaces such as pits and machine rooms.

❚ **Head removal detection** function detects removal of the head and signals to ensure safety.

❚ Eliminate accidents caused by hoisting machine errors

❚ Ensuring safety in the pit with both refuge device and safety switches

❚ Simple method ensuring safety while working in a pit

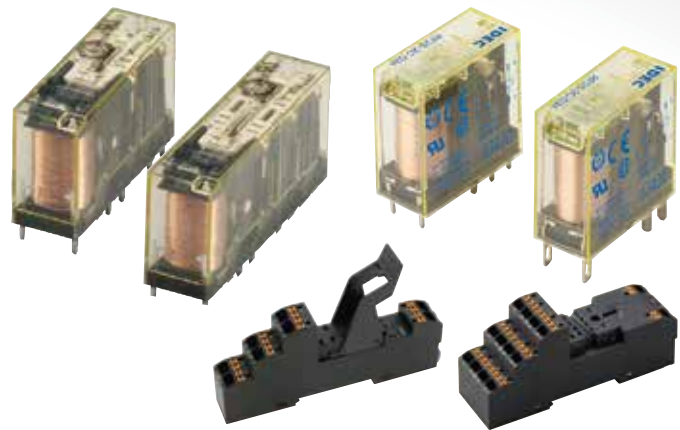| Product Name	Electrical Durability	Contact Configuration	Head Material	IP Rating	International Standards				
					UL	CSA	TÜV	CCC	CE
HS5D	100,000 operations minimum (AC-12 250V, 6A), 1 million operations minimum (24V AC/DC, 100mA) (Operation frequency: 900 times/hour)	1NC-1NO, 2NC	Metal / plastic	IP67	●	●	●	●	●

Application: Ladder detection

Superior safety

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RF1/RF2

Force Guided Relays

Compact force guided relays reduce installation space

▌ 2- to 6-pole models enable flexible construction of safety circuits. **Save cost** and **installation space** by selecting the ideal contact configuration for elevator safety circuits.

▌ IDEC safety components help build a control system that complies with new elevator safety standards

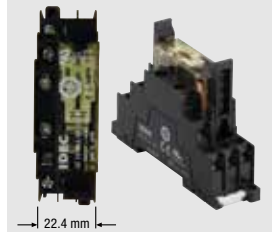▌ When Using RF2S-1A1BLD1-D24 & DIN Rail Socket

Total cost reduced by approx. **40**%

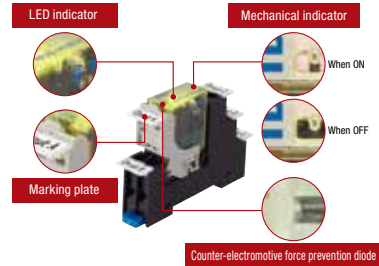Installation space reduced by **30**%

15.5 mm

When using a 4-pole forced guide relay with LED indicator & DIN rail socket

22.4 mm

▌ Features

LED indicator

Mechanical indicator

When ON

When OFF

Marking plate

Counter-electromotive force prevention diode

* Compared to IDEC products. Total cost refers to the cost for relays and sockets.

Product Name	Contact Configuration	Electrical Durability	Mechanical Durability	International Standards			
				UL	CSA	TÜV	CE
RF1	2NO-2NC, 3NO-1NC, 4NO-2NC, 5NO-1NC, 3NO-3NC	100,000 operations minimum with a resistance load of 250V AC, 6A (On/Off frequency: 1200 times/hour) 100,000 operations minimum with a resistance load of 30V DC, 6A	10 million operations minimum (On/Off frequency: 10,800 times/hour)	●	●	●	
RF2	SPST-NO +SPST-NC, DPDT	100,000 operations minimum (On/Off frequency: 1800 times/hour)	10 million operations minimum (On/Off frequency: 18,000 times/hour)	●	●	●	●

Application: **Safety circuits**

Building optimal safety circuits

HG Series
Operator Interfaces

Touch panels with enhanced remote monitoring functions

▌ With the web server function, locations of AGVs and the status of automated warehouses can be remotely monitored using a PC, tablet, or smartphone.

▌ Remote maintenance is possible by using the FTP server and client function to transmit data.

▌ Hard coating for excellent durability and preventing scratches.

Product Name	Screen 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-inch / 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: Touch screens for vertical automatic carriers

Operation panels for vertical automatic carriers

RU/RJ/SU/SJ Series

S³ CONNECT

Relays / Push-in Relay Sockets

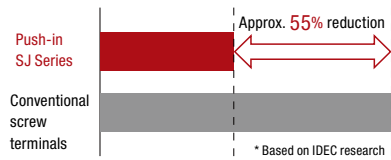## High-performance easy-to-use relays and relay sockets

▌ Push-in terminals save up to **55%** in wiring time (*1)

▌ RJ relays with large switching capacity. **Slim** and **compact** design (12.7 mm) achieves downsizing of control boards.

▌ Push-in terminals reduce **maintenance** work such as tightening of screws.

*1 Compared with conventional screw terminal (Based on IDEC research)
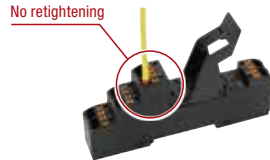

Time saving and efficient

▌ **Saves up to 55% in wiring time**

Wiring time reduced greatly compared with conventional screw terminals. (Comparison at IDEC)

Push-in SJ Series

Approx. **55%** reduction

Conventional screw terminals

* Based on IDEC research

▌ **Reduce maintenance work**

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

No retightening
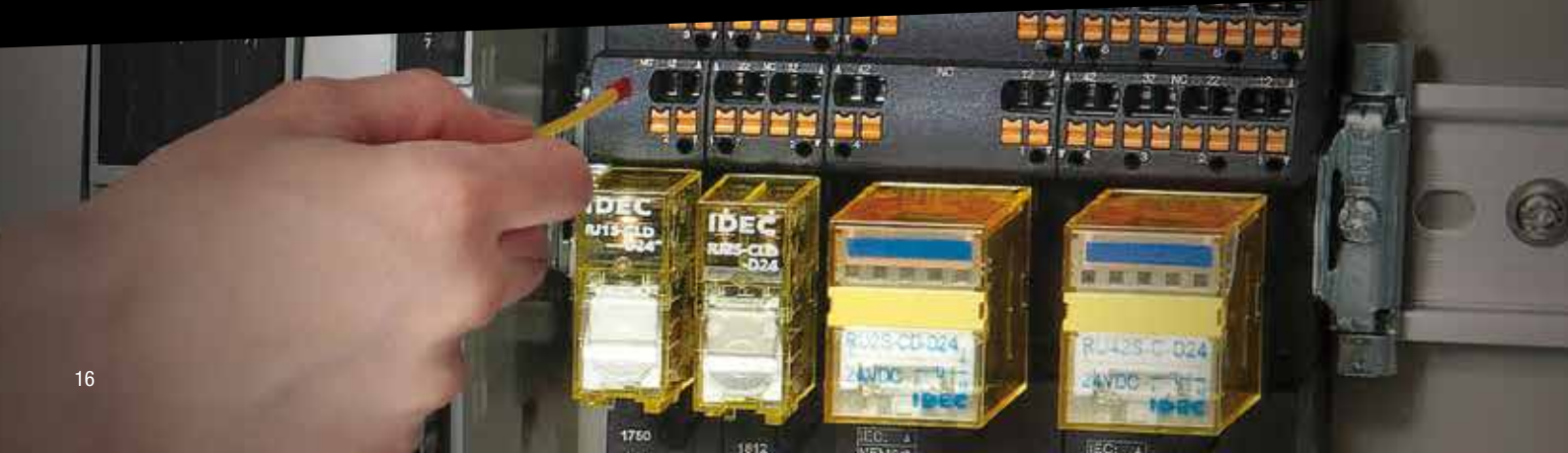
Safe & easy

▌ **Equipped with a release lever**

The release lever easily holds and ejects the relay.

	Product Name	Allowable Switching Current	Contact Material	Compatible Socket			International Standards			
				Push-in Terminal	Screw Terminal (Standard)	Screw Terminal (Finger Protection)	UL	CSA	TÜV (VDE)	CE
RJ	RJ1S (1 pole)	12A	AgNi	SJ1S-21L	SJ1S-05B	SJ1S-07L	●	●	●	●
	RJ2S (2 poles)	8A	AgNi	SJ2S-21L	SJ2S-05B	SJ2S-07L	●	●	●	●
RU	RU2 (2 poles)	10A	Ag alloy	SU2S-21L	SN2S-05D	SM2S-05DF	●	●	●	●
	RU4 (4 poles)	6A	Ag (Au clad)	SU4S-21L	SN4S-05D	SY4S-05DF	●	●	●	●
	RU42 (4 poles) (bifurcated)	3A	AgNi (Au clad)	SU4S-21L	SN4S-05D	SY4S-05DF	●	●	●	●

Application: Elevator control panel

Improve workability and efficiency with Push-in technology

LF1B-N / LF2B

LED Lighting

Compact LEDs for a wide variety of applications

▌ Various lengths available to meet space requirements and illumination needs.

▌ Long lifespan (40,000 hours) and 54% less power consumption compared to fluorescent lights reducing maintenance work.

▌ IP65 protection (waterproof/dustproof), suitable for use in wet areas.

LF2B

LF1B-N

▌ Efficient operation of control panels in elevator shafts

Product Name	Cover	IP Rating	Rated Voltage	International Standards		
				UL	CSA	CE
LF1B-N	Clear / White	IP65	24V DC	●	●	●
LF2B	Clear / White	IP65	12/24V DC 100 to 240V AC	● (*1)	● (*1)	●

*1) 12/24V DC only

Application: **Elevator control panels, elevator car lighting**

Slim body for installation in narrow spaces

FC6A

S³ CONNECT   Controllers

PLC with control and monitoring functions for elevator applications

▌ WEB server function allows easy construction of a **remote monitoring** system.

▌ Email function automatically transmits **early alerts** regarding abnormal status of elevators and escalators.

▌ **Remote maintenance** can be performed by using the FTP server and client function to transmit data.

▌ Push-in terminals save up to **55**% in wiring time (*1)

*1 Compared with conventional screw terminal (Based on IDEC research)

▌ Remote monitoring of elevator cars to provide diagnostic data for maintenance work

Product Name	No. of I/O	Rated Operating Voltage	Maximum No. of Digital I/O	Maximum No. of Analog I/O
FC6A Plus CPU module	16 I/O	24V DC	2044	511
	32 I/O	24V DC	2060	511
FC6A All-in-One CPU module	16 I/O	24V DC 100 to 240V AC	404	101
	24 I/O	24V DC 100 to 240V AC	508	125
	40 I/O	12V DC, 24V DC 100 to 240V AC	528 (48 for 12V DC power supply)	127 (7 for 12V DC power supply)
	CAN J1939: 40 I/O	12V DC, 24V DC 100 to 240V AC	528 (48 for 12V DC power supply)	126 (7 for 12V DC power supply)

Application: **Elevator control panels, remote monitoring systems**

IoT and equipment control

PS5R-V/PS6R

Switching Power Supply

Compact power supply easily mounts on a DIN rail

▌ Efficient conversion of **93%.** (PS6R, 230V AC input)

▌ IDEC's **SS terminal**(*1) for safety and ease of use

▌ **EN61204-3** (DC power supply EMC standard, Class B) compliant

▌ 5-year **long term warranty** (3 years for PS6R)

*1) SS terminal (save & safety terminal): The screw is sprung up and captive, so there is no need to loosen or remove the screw. This also prevents the screw from falling off, improving work efficiency.

Product Name	Rated Input Voltage	Output Capacity	Dimensions (Width)	Efficiency (TYP.) (For rated output) (*1)	International Standards			
					UL	CSA	TÜV	CE
PS5R-V	100 to 240V AC	10 to 240W	22.5 to 60 mm	77 to 89% (for 100V AC) 73 to 90% (for 230V AC)	●	●	●	●
PS6R	100 to 240V AC	120 to 480W	37 to 85mm	90 to 91% (for 100V AC) 90 to 93% (for 230V AC)	●	●	●	●

*1) When in a stable state at the rated value.

Application: Elevator control panels

Slim and compact DIN rail mount power supply

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 to the world 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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