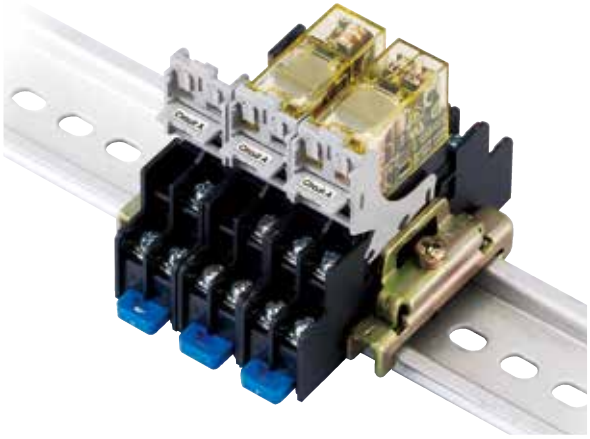
Relay Sockets

SJ Series

Slim, space-saving relay sockets.
Release lever with an integrated marking plate is provided.

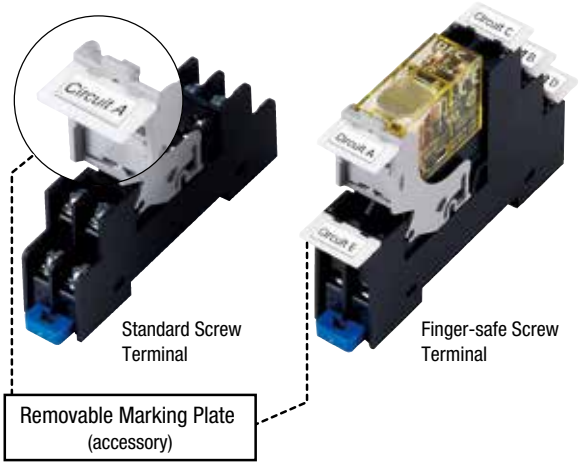
• See website for details on approvals and standards.

Marking Plate integrated with Release Lever

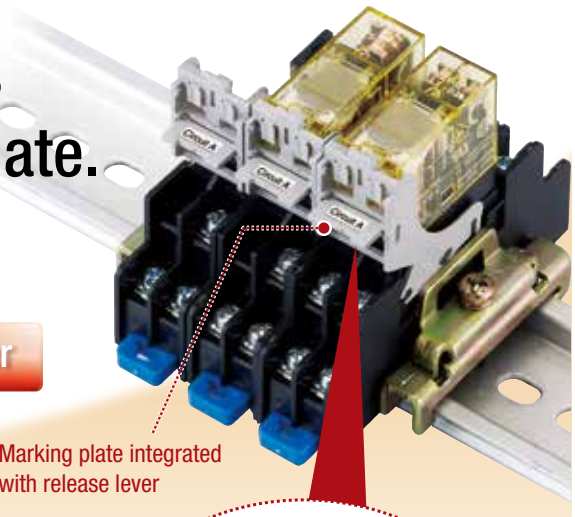


Removable Marking Plate Available

∗ Can be attached to the release lever and socket

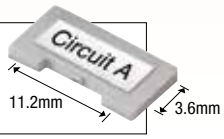


Identify relays/connections easily using the marking plate.

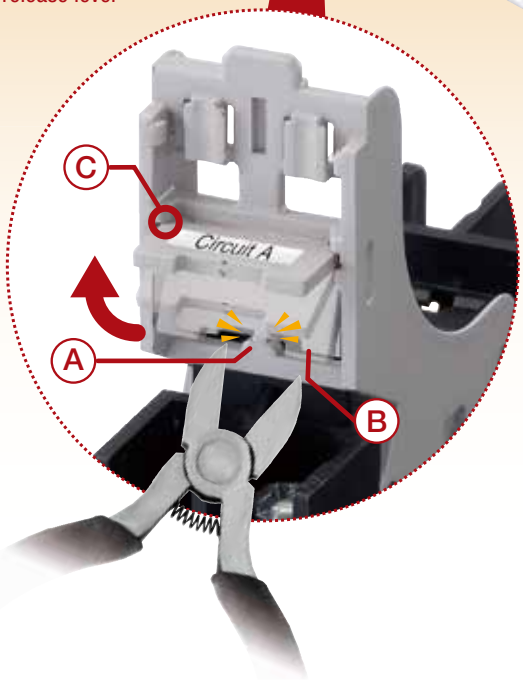


Marking Plate integrated with Release Lever

1. Cut the tab using nippers. (A)
2. Lift the marking plate. (B)
3. Lock the marking plate into grooves. (C)
4. Marking area
   * The specified dimension is the allowable marking area.



* See H-044 for dimensions.



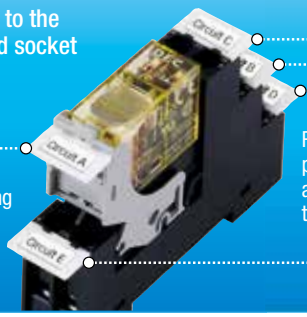
Removable Marking Plate

Standard Screw Terminal

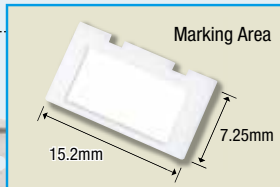
Can be attached to the release lever

Finger-safe Screw Terminal

Can be attached to the release lever and socket



Coil voltage, signal name, circuit, etc. can be marked on the removable marking plate for easy identification of connections.



SJ9Z-PW
Removable Marking Plate
(accessory)

SJ Series Relay Sockets

Slim, space-saving relay sockets.
Release lever with integrated marking plate allows for easy maintenance in narrow spaces.

Shape	Standard Screw Terminal (1 pole)		Finger-safe Screw Terminal (2 pole)	
Terminal Style	1-pole		2-pole	
Terminal No. Color	Black	White	Black	White
Standard Screw Terminal	SJ1S-05B	SJ1S-05BW	SJ2S-05B	SJ2S-05BW
Finger-safe Screw Terminal	SJ1S-07L	SJ1S-07LW	SJ2S-07L	SJ2S-07LW

Note: Release lever is supplied with each socket.

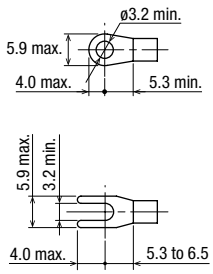
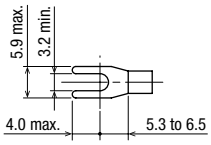
Specifications

Model	SJ1S	SJ2S
Rated Current	12A	8A
Rated Insulation Voltage	250V AC/DC	
Applicable Wire	2 mm² maximum (14 AWG)	
Applicable Crimping Terminal	2 mm² × 2	
Recommended Tightening Torque	1.0 N·m	
Screw Terminal Style	M3 slotted Phillips screw	
Terminal Strength	Wire tensile strength: 50N minimum	
Insulation Resistance	100MΩ minimum (500V DC megger)	
Dielectric Strength	Between live and dead metal parts: 2000V AC, 1 minute Between contact and coil: 4000V AC, 1 minute Between contacts of the same pole: 1000V AC, 1 minute Between contacts of the different poles: 3000V AC, 1 minute	
Vibration Resistance	Damage limits: 90 m/s² Resonance: 10 to 55 Hz, amplitude 0.75 mm	
Shock Resistance	Damage limits: 1000 m/s²	
Operating Temperature	–40 to +70°C (no freezing)	
Storage Temperature	–55 to +85°C (no freezing)	
Operating Humidity	5 to 85% RH (no condensation)	
Storage Humidity	5 to 85% RH (no condensation)	
Degree of Protection	IP20 (finger-safe screw terminal)	
Weight (approx.)	30g	34g

Applicable Relay

Terminal Style	1-pole		2-pole	
	Socket	Relay	Socket	Relay
Standard Screw Terminal	SJ1S-05B SJ1S-05BW	RJ1S	SJ2S-05B SJ2S-05BW	RJ2S RJ22S
Finger-safe Screw Terminal	SJ1S-07L SJ1S-07LW		SJ2S-07L SJ2S-07LW	

Applicable Crimping Terminals

Standard Screw Terminal	Finger-safe Screw Terminal
	

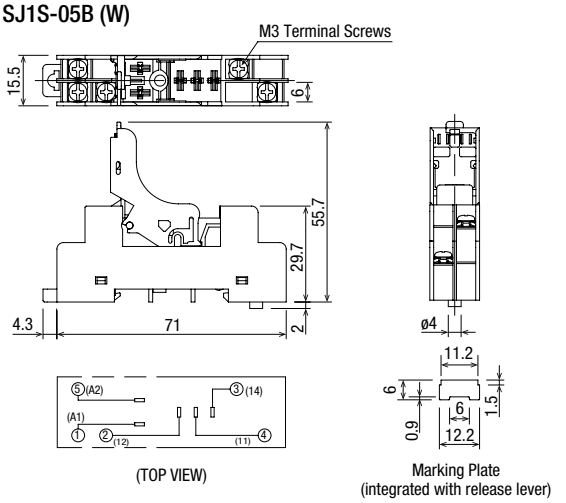
Note: Ring tongue terminals cannot be used on finger-safe sockets.

APEM
Switches & Pilot Lights
Control Boxes
Emergency Stop Switches
Enabling Switches
Safety Products
Explosion Proof
Terminal Blocks
Relays & Sockets
Circuit Protectors
Power Supplies
LED Illumination
Controllers
Operator Interfaces
Sensors
AUTO-ID
Relays
Sockets
DIN Rail Products
SJ
DF
SU
S

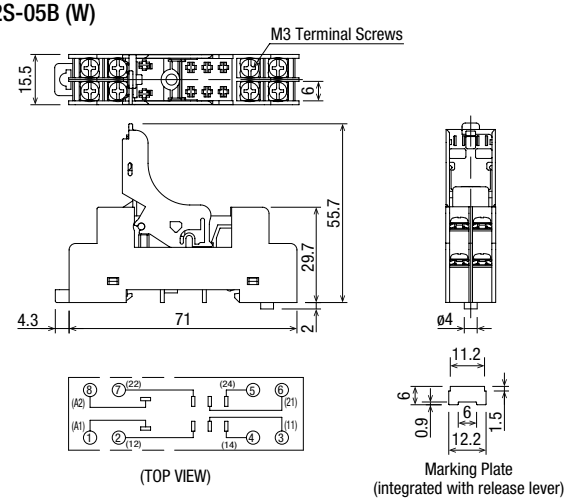
Dimensions

All dimensions in mm

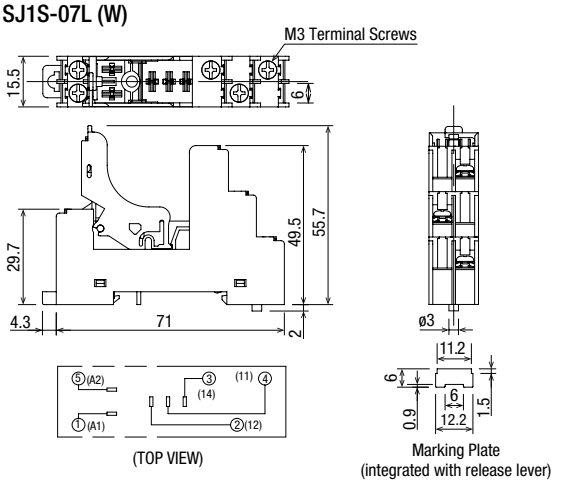
SJ1S-05B (W)



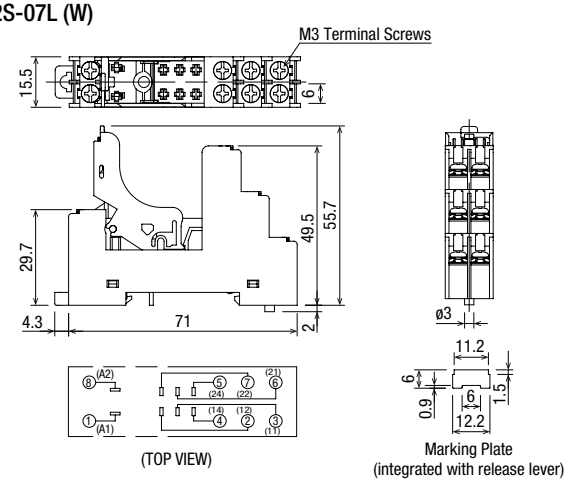
SJ2S-05B (W)



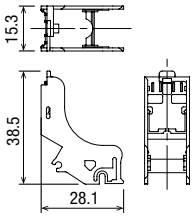
SJ1S-07L (W)



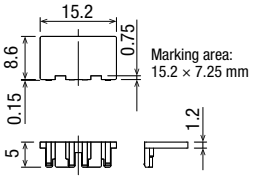
SJ2S-07L (W)



Replacement Parts

Description	Material	Part No.	Quantity	Dimensions
Release Lever (with integrated marking plate) 	Plastic (gray)	SJ9Z-CM	5	 When not using marking plate

Accessories

Description		Material	Part No.	Quantity	Dimensions
Removable Marking Plate 		Plastic (white)	SJ9Z-PW	10	
Jumper	For 2 sockets	Nickel-coated brass with polypropylene coating	SJ9Z-JF2	5	Terminal centers: 15.5mm Rated current: 12A Ensure that the total current to the jumper does not exceed the maximum current.
	For 5 sockets		SJ9Z-JF5		
	For 8 sockets		SJ9Z-JF8		
	For 10 sockets		SJ9Z-JF10		

⚠ Safety Precautions

- Turn off power to the relay and the socket before starting installation, removal, wiring, maintenance, and inspection of the relays. Failure to turn power off may cause electrical shock or fire hazard.
- Use wires of the proper size to meet the voltage and current requirements.
- Make sure that relay and output equipment are wired correctly. Incorrect wiring causes overheat resulting in possible fire hazard.
- Prevent metal fragments and pieces of wire from dropping inside the socket. Ingress of such fragments and chips may cause fire hazard, damage, or malfunction.

Instructions

Installing relays

The relay is installed on the socket using the release lever. Leaf spring is not necessary.

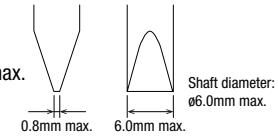
Rail Mounting and Removing

Do not mount or remove the socket in cold temperature (below –20°C), otherwise the socket may be damaged.

Applicable Screwdriver

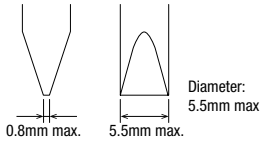
Standard Screw Terminal

- Phillips screwdriver: PH2, shaft diameter ø6.0 mm max.
- Flat blade screwdriver



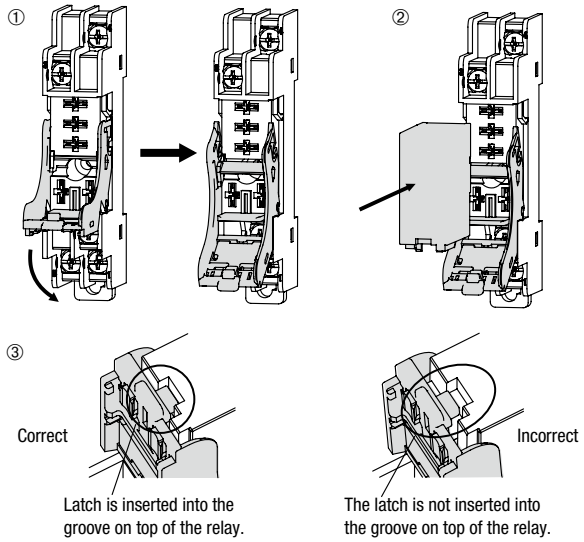
Finger-safe Screw Terminal

Phillips: ø5.5 mm maximum
Slotted: Shown at right



Installing relays

1. Unlock the release lever by pulling down as shown with arrow ①.
2. Press the relay against the socket as shown with arrow ②. Make sure that the relay is firmly in place.
3. Confirm that the relay is securely installed in the socket. When installed properly, the relay and the socket look as shown in ③

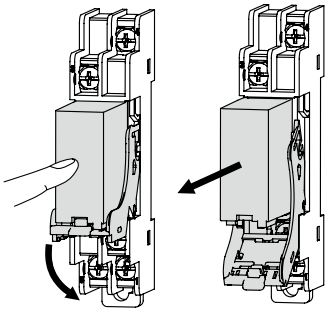


Caution

Ensure that the relay is installed in the socket completely.

Removing the relay

① Lightly press the relay to prevent it from falling off.
② Pull down the release lever to the direction shown by the arrow until it touches the socket. Pull down further, and the lever will be detached from the socket.



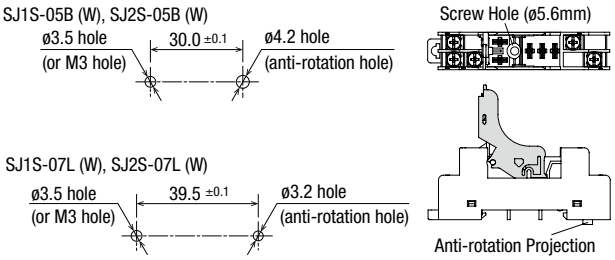
Caution

Make sure that wire or finger is not caught between the release lever and socket.
Because release lever is removable, make sure not to apply excessive force. Otherwise the relay may fall and result in damage.

Panel Mounting

Insert the anti-rotation projection into the anti-rotation hole. Mount the socket onto the panel using M3 screws (not provided). Use a screwdriver with diameter of ø5.5mm maximum.

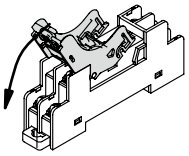
Mounting Hole Layout



Tighten the mounting screws to a torque of 1.0 N·m maximum. Tightening with higher torque will damage the socket.
The round rib projecting from the socket bottom prevents rotation when the socket is mounted on the panel directly. Ensure to insert the rib into the anti-rotation hole, otherwise the socket may be damaged.

Removing the Release Lever

Pull down the release lever to the direction shown by the arrow until it touches the socket. Pull down further, and the release lever will be detached from the socket.



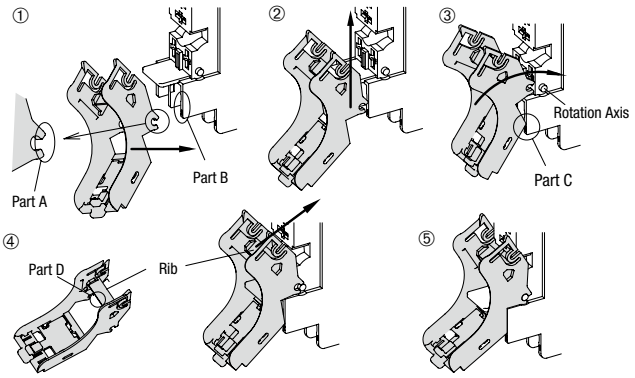
Caution

Make sure that the relay has been removed from the socket before removing the release lever. If the release lever is removed when the relay is installed on the socket, the relay may fall out.

Instructions

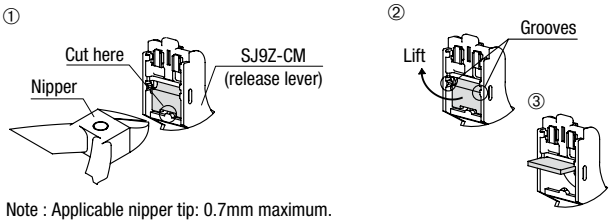
Installing the Release Lever

① Attach part A to part B.
② Slide the release lever in the direction of the arrow until part A runs out of part B.
③ Rotate the release lever, with the center of rotation at part C until part A touches the rotation axis.
④ Push the rib of the release lever against the socket.
⑤ Release lever is installed.

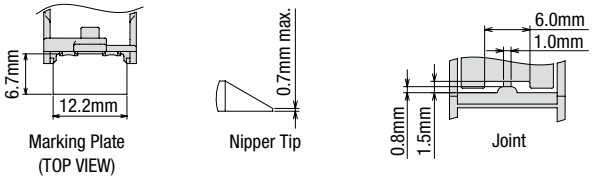


Using Marking Plate integrated with SJ9M-CM Release Lever

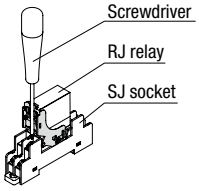
① Using the nippers, cut the joint (Note).
② Lift the marking plate as shown with the arrow.
③ Latch the marking plate into the grooves.



Note : Applicable nipper tip: 0.7mm maximum.
Make sure to cut the joint before installing the relay.



The integrated marking plate must be retracted to the original position when wiring. The SJ9Z-CM integrated marking plate can be lifted and retracted for 50 times maximum.

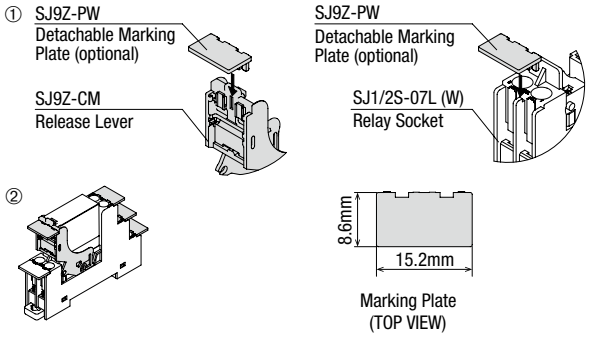


Using SJ9Z-PW Removable Marking Plate (optional)

① Insert the marking plate into the slot on the release lever or socket.

Note: SJ9Z-PW removable marking plate cannot be installed on the SJ1S-05B (W)/SJ2B-05B (W) socket.

② The marking plate is installed.



Current

Check the current of relay and ensure that the current is maintained below the values shown in the following table.

Model		SJ1S-05B			SJ1S-07L			SJ2S-05B			SJ2S-07L		
Operating temperature highest limit		70ºC	55ºC	40ºC	70ºC	55ºC	40ºC	70ºC	55ºC	40ºC	70ºC	55ºC	40ºC
Single mount		12A			12A			8A			8A		
Collective mount	When DC relay is mounted	11A (*1)	12A		10A (*2)	12A		7A (*4)	8A		6A (*5)	7A (*3)	8A
	When AC relay is mounted	— (*1)	12A		— (*2)	11A (*1)	12A	— (*4)	8A		— (*5)	7A (*3)	

*1) 12A when there is 5mm or more space between adjecent socket.
*2) 12A when there is 10mm or more space between adjecent socket.
*3) 8A when there is 5mm or more space between adjecent socket.
*4) 8A when there is 10mm or more space between adjecent socket.
*5) 8A when there is 15mm or more space between adjecent socket.

Ordering Terms and Conditions

Thank you for using IDEC Products.

By purchasing products listed in our catalogs, datasheets, and the like (hereinafter referred to as "Catalogs") you agree to be bound by these terms and conditions. Please read and agree to the terms and conditions before placing your order.

1. Notes on contents of Catalogs

(1) Rated values, performance values, and specification values of IDEC products listed in this Catalog are values acquired under respective conditions in independent testing, and do not guarantee values gained in combined conditions.
Also, durability varies depending on the usage environment and usage conditions.

(2) Reference data and reference values listed in Catalogs are for reference purposes only, and do not guarantee that the product will always operate appropriately in that range.

(3) The specifications / appearance and accessories of IDEC products listed in Catalogs are subject to change or termination of sales without notice, for improvement or other reasons.

(4) The content of Catalogs is subject to change without notice.

2. Note on applications

(1) If using IDEC products in combination with other products, confirm the applicable laws / regulations and standards.
Also, confirm that IDEC products are compatible with your systems, machines, devices, and the like by using under the actual conditions. IDEC shall bear no liability whatsoever regarding the compatibility with IDEC products.

(2) The usage examples and application examples listed in Catalogs are for reference purposes only. Therefore, when introducing a product, confirm the performance and safety of the instruments, devices, and the like before use. Furthermore, regarding these examples, IDEC does not grant license to use IDEC products to you, and IDEC offers no warranties regarding the ownership of intellectual property rights or non-infringement upon the intellectual property rights of third parties.

(3) When using IDEC products, be cautious when implementing the following.

i. Use of IDEC products with sufficient allowance for rating and performance

ii. Safety design, including redundant design and malfunction prevention design that prevents other danger and damage even in the event that an IDEC product fails

iii. Wiring and installation that ensures the IDEC product used in your system, machine, device, or the like can perform and function according to its specifications

(4) Continuing to use an IDEC product even after the performance has deteriorated can result in abnormal heat, smoke, fires, and the like due to insulation deterioration or the like. Perform periodic maintenance for IDEC products and the systems, machines, devices, and the like in which they are used.

(5) IDEC products are developed and manufactured as general-purpose products for general industrial products. They are not intended for use in the following applications, and in the event that you use an IDEC product for these applications, unless otherwise agreed upon between you and IDEC, IDEC shall provide no guarantees whatsoever regarding IDEC products.

i. Use in applications that require a high degree of safety, including nuclear power control equipment, transportation equipment (railroads / airplanes / ships / vehicles / vehicle instruments, etc.), equipment for use in outer space, elevating equipment, medical instruments, safety devices, or any other equipment, instruments, or the like that could endanger life or human health

ii. Use in applications that require a high degree of reliability, such as provision systems for gas / waterworks / electricity, etc., systems that operate continuously for 24 hours, and settlement systems

iii. Use in applications where the product may be handled or used deviating from the specifications or conditions / environment listed in the Catalogs, such as equipment used outdoors or applications in environments subject to chemical pollution or electromagnetic interference
If you would like to use IDEC products in the above applications, be sure to consult with an IDEC sales representative.

3. Inspections

We ask that you implement inspections for IDEC products you purchase without delay, as well as thoroughly keep in mind management/maintenance regarding handling of the product before and during the inspection.

4. Warranty

(1) Warranty period

The warranty period for IDEC products shall be one (1) year after purchase or delivery to the specified location. However, this shall not apply in cases where there is a different specification in the Catalogs or there is another agreement in place between you and IDEC.

(2) Warranty scope

Should a failure occur in an IDEC product during the above warranty period for reasons attributable to IDEC, then IDEC shall replace or repair that product, free of charge, at the purchase location / delivery location of the product, or an IDEC service base. However, failures caused by the following reasons shall be deemed outside the scope of this warranty.

i. The product was handled or used deviating from the conditions / environment listed in the Catalogs

ii. The failure was caused by reasons other than an IDEC product

iii. Modification or repair was performed by a party other than IDEC

iv. The failure was caused by a software program of a party other than IDEC

v. The product was used outside of its original purpose

vi. Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and Catalogs

vii. The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from IDEC

viii. The failure was due to other causes not attributable to IDEC (including cases of force majeure such as natural disasters and other disasters)

Furthermore, the warranty described here refers to a warranty on the IDEC product as a unit, and damages induced by the failure of an IDEC product are excluded from this warranty.

5. Limitation of liability

The warranty listed in this Agreement is the full and complete warranty for IDEC products, and IDEC shall bear no liability whatsoever regarding special damages, indirect damages, incidental damages, or passive damages that occurred due to an IDEC product.

6. Service scope

The prices of IDEC products do not include the cost of services, such as dispatching technicians. Therefore, separate fees are required in the following cases.

(1) Instructions for installation / adjustment and accompaniment at test operation (including creating application software and testing operation, etc.)

(2) Maintenance inspections, adjustments, and repairs

(3) Technical instructions and technical training

(4) Product tests or inspections specified by you

The above content assumes transactions and usage within your region. Please consult with an IDEC sales representative regarding transactions and usage outside of your region. Also, IDEC provides no guarantees whatsoever regarding IDEC products sold outside your region.

IDEC CORPORATION

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EMEA	APEM SAS	**Thailand**	IDEC Asia (Thailand) Co., Ltd.		IDEC Hong Kong Co. Ltd.		
		India	IDEC Controls India Private Ltd.	**Taiwan**	IDEC Taiwan Corporation		

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