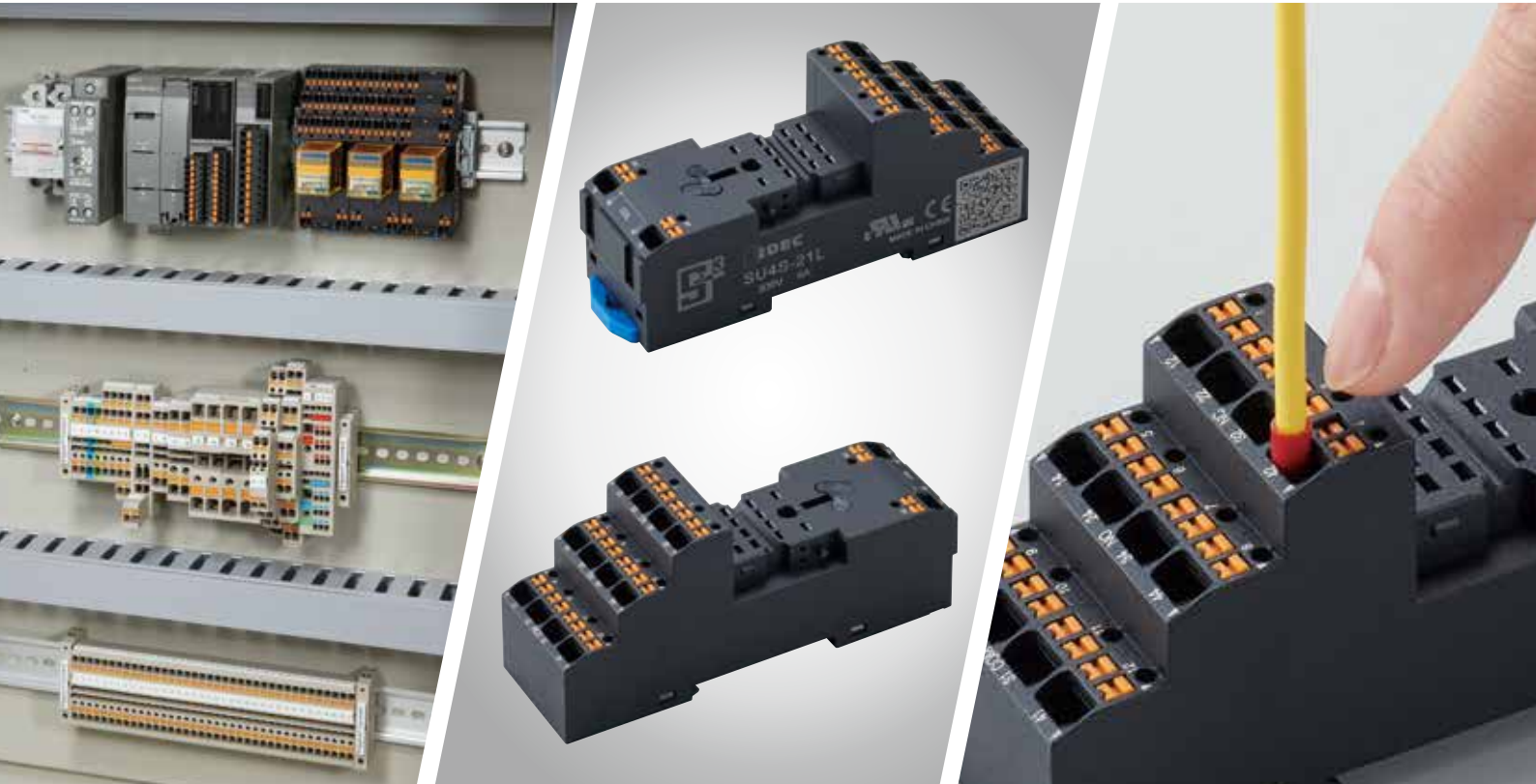




Relay Sockets
SU series



One step wiring, easy & quick connection

Safe and efficient SU series Push-in relay sockets

IDEC CORPORATION



Push-in

Time saving & efficient

Save up to **55%** in wiring time

Wiring time reduced greatly compared with conventional screw terminals.

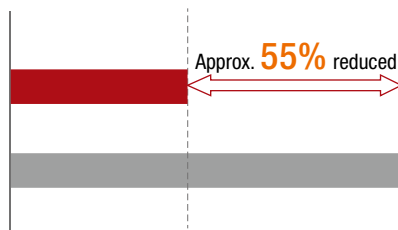
(Compared with IDEC products)

Reduce maintenance work

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

Push-in
SU Series

Conventional
Screw terminal



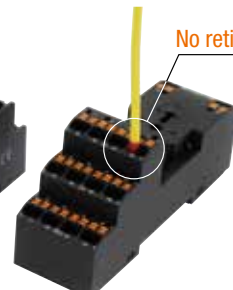
*) Based on IDEC research

Retightening
required



Screw terminal

No retightening



Push-in

Wide range of options

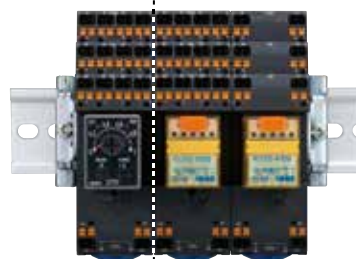
Easy wiring to coil side connection using jumpers

Can be used with polarized relays.



*) The rated current is 2A.

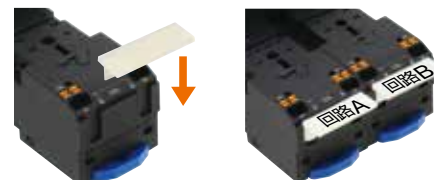
IDEC GT5Y timers can be mounted



GT5Y timer | RU relay

Marking plate allows for easy identification

A marking plate enables easy identification of connections. Maintenance time is reduced.



One step wiring, easy & quick connection

Safe and efficient SU series Push-in relay sockets



Highly reliable

High visibility

The terminal number on the socket can be clearly seen on the socket preventing incorrect wiring. Also, the distinct color pusher prevents a flat blade screw-driver from being inserted into the wire port.

Vibration-resistant

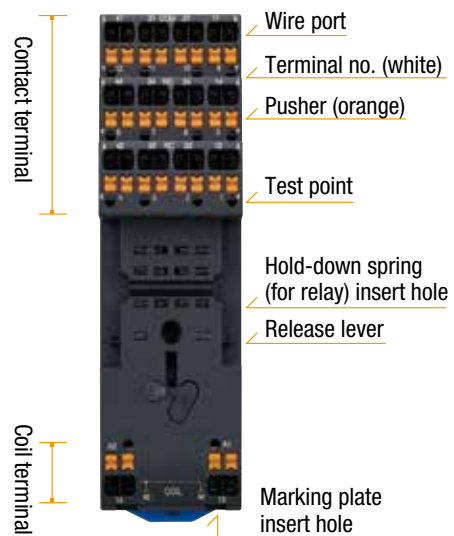
Safe and reliable Push-in connection achieves high contact reliability and vibration resistance regardless of the wire size or shape.



Before inserting wire



Wire inserted



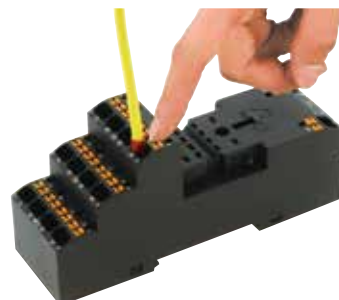
Release lever

The release lever can be mounted to hold and remove the relay easily.



IP20 Finger-safe

IEC60529 finger-safe design. IP20 protection. Safe contact protection structure prevents electric shock.




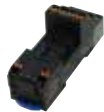
SU Series Relay Sockets

Push-in relay sockets reduce wiring by 55%*

* Compared with conventional screw terminal relay sockets.

Relay Sockets

Package Quantity: 1

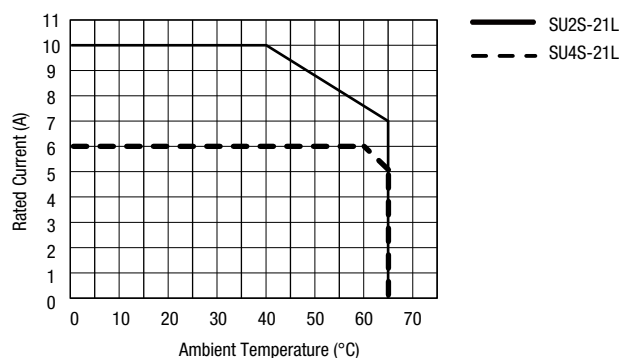
| Shape | No. of Poles | Part No. (Ordering No.) |
|---|--------------|-------------------------|
|  | 2 | SU2S-21L |
|  | 4 | SU4S-21L |

Applicable Relay / Timer

| No. of Poles | Socket | Relay | Timer |
|--------------|----------|-------------------|--------|
| 2 | SU2S-21L | RU2S, RN2S | GT5Y-2 |
| 4 | SU4S-21L | RU4S, RU42S, RN4S | GT5Y-4 |

- For details on RU series relay, RN series relay, and GT5Y timer, see catalog.
- When using the SU socket with RU series relay, be sure to note the derating characteristics.

Derating Curve



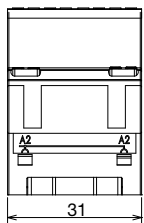
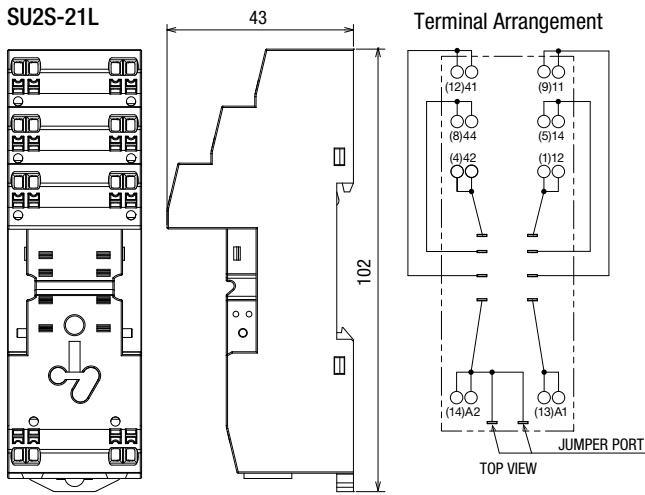
Specifications and Ratings

| Part No. | SU2S-21L | SU4S-21L |
|--------------------------------------|---|----------|
| No. of Poles | 2 | 4 |
| Rated Insulation Voltage | 300V AC/DC | |
| Rated Thermal Current (*1) | 12A | 8A |
| Applicable Wire | Solid wire / stranded wire: 0.14 to 1.5mm ² , AWG26 to 16 Stranded wire with ferrule (without insulated cover): 0.5 to 1.5mm ² , AWG20 to 16 Stranded wire with ferrule (with insulated cover): 0.14 to 1.0mm ² , AWG26 to 18 | |
| Insulation Resistance | 100MΩ min. (500V DC megger) | |
| Dielectric Strength | 2500V AC, 1 min. (between live and dead metal parts, between live metal parts of the different poles) | |
| Vibration Resistance (Damage Limits) | 10 to 55 Hz, amplitude 1.0 mm | |
| Shock Resistance (Damage Limits) | 50G (when using SU9Z-S21R/-S21T hold-down spring or SU9Z-C21R release lever) | |
| Operating Temperature | -40 to +65°C (no freezing) | |
| Operating Humidity | 5 to 85% RH (no condensation) | |
| Storage Temperature | -40 to +65°C (no freezing) | |
| Storage Humidity | 5 to 85% RH (no condensation) | |
| Degree of Protection | IP20 (IEC 60529) | |
| Weight (approx.) | 80g | |
| Applicable Standards | UL508, CSA C22.2 No.14, IEC61984 | |

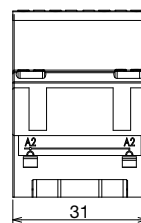
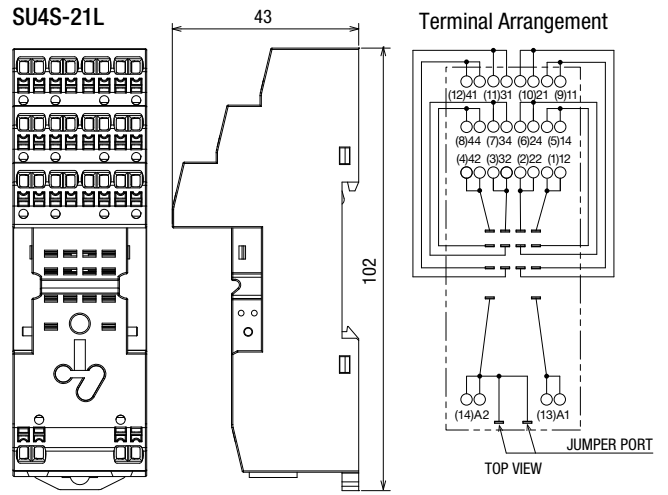
*1) Be sure to note the derating characteristics.

Dimensions

SU2S-21L



SU4S-21L



All dimensions in mm.

Note) The numbers in parentheses () are values according to NEMA standards.

Accessories

When ordering, specify the Ordering No.

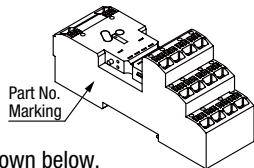
| Function | Shape | Material | Part No. | Ordering No. | Package Quantity | Remarks |
|---------------------------|-----------|--|-------------|--------------|------------------|---|
| Release Lever (For Relay) | | Plastic | SU9Z-C21R | SU9Z-C21R | 5 | <p>Note) Release lever cannot be used on timers.</p> |
| Marking Plate | | Plastic (white) | SU9Z-P2100W | SU9Z-P2100W | 10 | |
| Jumper | | Bronze (tin-plated) Insulation: PBT plastic | SU9Z-J2102A | SU9Z-J2102A | 10 | A2 terminal of the coil is connected. The rated current is 2A. |
| Hold-down Spring | For Relay | Stainless steel | SU9Z-S21R | SU9Z-S21R | 10 | See P.8 for Applicable Relay / Timer. |
| | For Timer | Stainless steel | SU9Z-S21T | SU9Z-S21T | 10 | |
| DIN Rail | | Aluminum | BAA1000 | BAA1000PN10 | 10 | <ul style="list-style-type: none"> Length: 1m Width: 35mm Weight: 200g (approx.) |
| End Clip | | Metal (zinc-plated steel) | BNL6 | BNL6PN10 | 10 | Weight: 15g (approx.) Use end clips when mounting multiple sockets on the DIN rail. |
| DIN Rail Spacer | | Plastic (black) | SA-406B | SA-406B | 1 | Thickness: 5 mm Used for adjusting spacing between sockets mounted on a DIN rail. |

Instructions

Identifying the Socket

SU2S and SU4S can be identified by the part number marked on the side.

| No. of Poles | Part No. |
|--------------|----------|
| 2 | SU2S-21L |
| 4 | SU4S-21L |



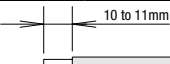
Applicable Wire

When wiring, use the applicable wires shown below.

Applicable Wire and Specifications

| | |
|---|---|
| Applicable Wire (Stranded Wire, Solid Wire) | 0.14 to 1.50mm ² (AWG16 to 26) |
| Wire Strip Length (*1) | 10 to 11mm |

*1) Strip the sheath of the wire 10 to 11 mm from the end.



When using a ferrule, refer to "Wire Size and Recommended Ferrule" below.
 Note: Make sure that the stranded wires do not loosen when using wiring without ferrules.

Wire Size and Recommended Ferrules

Ferrules without Insulated Covers

| Applicable Wire (Stranded Wire) | | Wire Strip Length | Weidmüller Recommended Part No. |
|---------------------------------|-----------------|-------------------|---------------------------------|
| AWG | mm ² | | |
| 20 | 0.50 | 10 to 11 mm | H0.5/10 |
| 18 | 0.75 | 10 to 11 mm | H0.75/10 |
| 18 | 1.00 | 10 to 11 mm | H1.0/10 |
| 16 | 1.50 | 10 to 11 mm | H1.5/10 |

Note) Above ferrules cannot be purchased from IDEC.

Ferrules with Insulated Covers

| Applicable Wire (Stranded Wire) | | Wire Strip Length | IDEC Part No. |
|---------------------------------|-----------------|-------------------|----------------|
| AWG | mm ² | | |
| 26 | 0.14 | 10 to 11 mm | S3TL-F014-12WC |
| 24 | 0.25 | 10 to 11 mm | S3TL-H025-12WJ |
| 22 | 0.34 | 10 to 11 mm | S3TL-H034-12WT |
| 20 | 0.50 | 10 to 11 mm | S3TL-H05-14WA |
| | | 12 to 13 mm | S3TL-H05-16WA |
| 18 | 0.75 | 10 to 11 mm | S3TL-H075-14WW |
| | | 12 to 13 mm | S3TL-H075-16WW |
| 18 | 1.00 | 10 to 11 mm | S3TL-H10-14WY |
| | | 12 to 13 mm | S3TL-H10-16WY |

Recommended Crimping Tool (Optional)

| Item | Crimping Range | IDEC Part No. |
|---------------|---|---------------|
| Crimping tool | 0.5 to 4mm ² / 30AWG to 12AWG | S3TL-CR04T |
| | 0.25 to 6mm ² / 24AWG to 10AWG | S3TL-CR06D |

Note) Note the crimping dimensions when using tools other than the recommended crimping tool. For details, see page 7.

Recommended Screw driver (Optional)

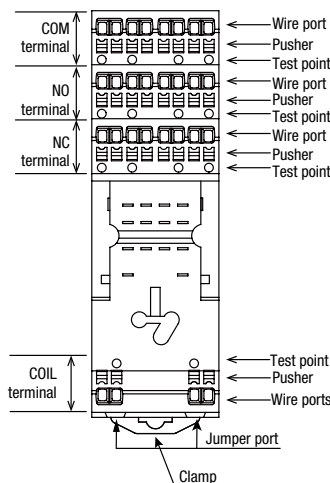
| Name | IDEC Part No. |
|------------------------|----------------|
| Flat blade screwdriver | S3TL-D04-25-75 |

Note) Use a flat blade screwdriver with a blade size of 0.4×2.5mm. Refer to the table below for other companies' ferrules that correspond to "Wire Size and Recommended Ferrules".

| Applicable Wire (Stranded Wire) | PHOENIX CONTACT Part No. | | WAGO Part No. | | |
|---------------------------------|--------------------------|----------------------|-------------------------|----------------------|----------------|
| | Without Insulated Cover | With Insulated Cover | Without Insulated Cover | With Insulated Cover | |
| 26 | 0.14 | — | AI 0.14-8 GY-1000 | — | |
| 24 | 0.25 | — | AI 0.25-8 YE | — | |
| 22 | 0.34 | — | AI 0.34-8 TQ | — | |
| 20 | 0.50 | A 0.5-8 | AI 0.5-8 WH | FE-0.5-8 | FE-0.5-8N-WH |
| | | A 0.5-10 | AI 0.5-10 EH | FE-0.5-10 | FE-0.5-10N-WH |
| 18 | 0.75 | A 0.75-8 | AI 0.75-8 GY | FE-0.75-8 | FE-0.75-8N-GY |
| | | A 0.75-10 | AI 0.75-10 GY | FE-0.75-10 | FE-0.75-10N-GY |
| 18 | 1.00 | A 1.0-8 | — | FE-1.0-8 | — |
| | | A 1.0-10 | — | FE-1.0-10 | — |
| 16 | 1.50 | A 1.5-10 | — | FE-1.5-10 | — |

Note) Check each company's catalog for details.

Parts Description

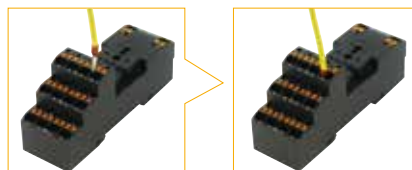


Note: Two wire ports for each terminal

Inserting the Wire

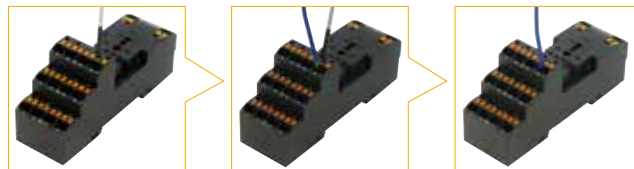
Wire with ferrule or solid wire

- 1) Insert the wire to the back of the wire port.
- 2) Wiring is complete. Pull the wire lightly to make sure that the wire does not pull out from the socket.



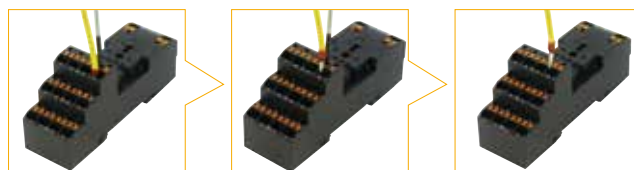
Stranded wire

- 1) Push the pusher (orange button) using a flat blade screwdriver.
- 2) Insert the wire fully in the wiring port while pressing the pusher
- 3) Release the flat blade screwdriver. Wiring is complete. Pull the wire lightly to make sure that the wire does not pull out from the socket.



Removing the Wire

- 1) Push the pusher using a flat blade screwdriver.
- 2) Pull out the wire while pressing the pusher.
- 3) Release the flat blade screwdriver.



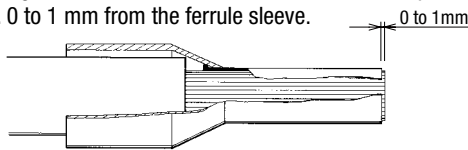
Instructions

Note

- After wiring, tug lightly to make sure that the wire is properly connected.
- Operate the pusher with a force of 40N. Do not press excessively.
- Do not pull the wire out without depressing the pusher. When pulling the wire, be sure to pull in a straight direction. Otherwise, the socket may be damaged.
- Use a recommended flat blade screwdriver with the blade size of 0.4×2.5mm.
- When mounting multiple sockets on a DIN rail, be sure to secure both side with end clips (BNL6).

Crimping of Ferrules and Wiring

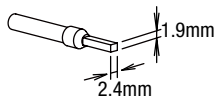
- Choose an appropriate ferrule for the wire.
- Cut the wire carefully to get a flat end.
- Make sure that ferrule sleeve is completely filled by the conductor. Depending on the cross section, the conductor should protrude approx. 0 to 1 mm from the ferrule sleeve.



- When crimping, refer to the instructions of the crimping tool.

Crimping dimensions: W2.4×H1.9 mm

Maximum connectable crimping size is W2.4×H1.9. Make sure that the ferrule size will be smaller than this dimension.

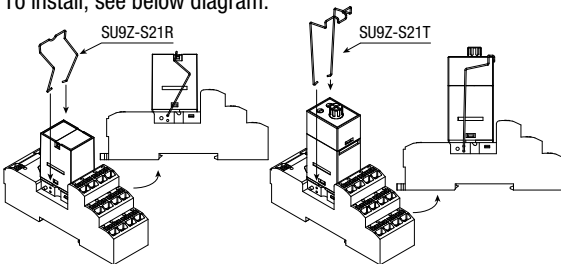


Note 1) If a tool other than the recommended crimping is used, the ferrule may not be crimped to the appropriate size and the clamp or spring inside the socket may be deformed and may not operate normally.

Note 2) Pin crimp terminals cannot be used.

Installing the Hold-down Spring

Use SU9Z-S21R (for relay) or SU9Z-S21T (for timer) hold-down springs. Install the hold-down springs into appropriate spring insert hole. To install, see below diagram.

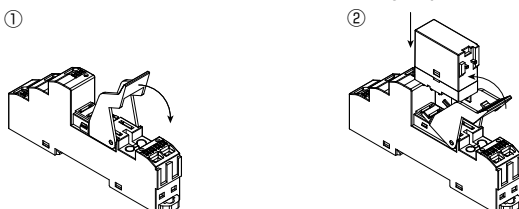


Note) Confirm that the Hold-down Spring is securely installed into the spring insert hole. The relay may fall off if it is not installed properly.

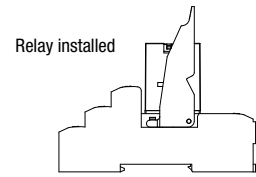
Installing / Removing the Relay

Installing the Relay

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.

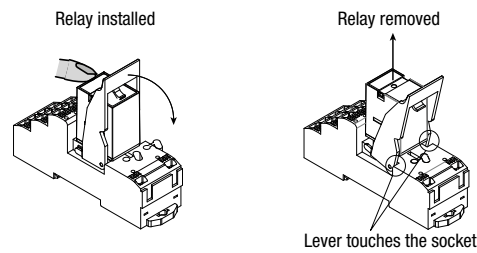


Note: Confirm that the relay is securely installed in the socket. The relay may fall off if it is not installed properly.



Removing the Relay

Lightly press the relay to prevent it from falling off. Then pull down the release lever to the direction shown by the arrow and the remove the socket.



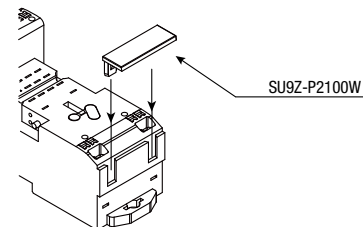
Note)

- 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.

Installing the Marking Plate

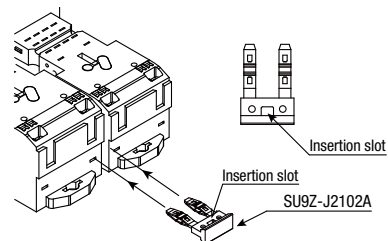
Install the marking plate as shown in the diagram below. Mark on the surface using an oil-based marker, or affix a sticker with markings.

The size of the marking surface is 8.4mm × 25mm.



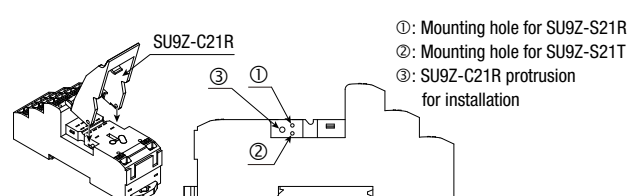
Using the Jumper

Insert the jumper to the back of the jumper slot. To remove, insert the small flat blade driver into the slot below and pull out. Because the rated current is 2A, use at 2A maximum.




Installing the Release Lever

To install the release lever, SU9Z-S21R (for relay), attach to the protrusion on the socket as shown below.



Applicable Relay / Timer


Applicable Relay (RU Series)

| Shape | Model | Single Contact | | Bifurcated Contact | Coil Voltage Code * | |
|---|---|-----------------|-----------------|--------------------|-------------------------------|--|
| | | Part No. (DPDT) | Part No. (4PDT) | Part No. (4PDT) | | |
|  | With Latching Lever | Standard | RU2S- * | RU4S- * | RU42S- * | A24, A100, A110, A200, A220, D6, D12, D24, D48, D100, D110 |
| | With diode (DC coil only) | RU2S-D- * | RU4S-D- * | RU42S-D- * | D6, D12, D24, D48, D100, D110 | |
| | With diode (DC coil only) Reverse polarity coil | RU2S-D1- * | RU4S-D1- * | RU42S-D1- * | D24 | |
| | With RC (AC coil only) | RU2S-R- * | RU4S-R- * | RU42S-R- * | A100, A110, A200, A220 | |
| | Without Latching Lever | Standard | RU2S-C- * | RU4S-C- * | RU42S-C- * | A24, A100, A110, A200, A220, D6, D12, D24, D48, D100, D110 |
| | With diode (DC coil only) | RU2S-CD- * | RU4S-CD- * | RU42S-CD- * | D6, D12, D24, D48, D100, D110 | |
| | With diode (DC coil only) Reverse polarity coil | RU2S-CD1- * | RU4S-CD1- * | RU42S-CD1- * | D24 | |
| | With RC (AC coil only) | RU2S-CR- * | RU4S-CR- * | RU42S-CR- * | A100, A110, A200, A220 | |


Rated Coil Voltage

| Coil Voltage Code | Coil Rating |
|-------------------|-------------|
| A24 | 24V AC |
| A100 | 100-110V AC |
| A110 | 110-120V AC |
| A200 | 200-220V AC |
| A220 | 220-240V AC |
| D6 | 6V DC |
| D12 | 12V DC |
| D24 | 24V DC |
| D48 | 48V DC |
| D100 | 100V DC |
| D110 | 110V DC |

Applicable Relay (RN Series)

| Shape | Part No. | | Coil Rated Voltage |
|---|--------------|--------------|--------------------|
| | DPDT | 4PDT | |
|  | RN2S-NL-A24 | RN4S-NL-A24 | 24V AC |
| | RN2S-NL-A115 | RN4S-NL-A115 | 115V AC |
| | RN2S-NL-A220 | RN4S-NL-A220 | 220V AC |
| | RN2S-NL-A230 | RN4S-NL-A230 | 230V AC |
| | RN2S-NL-A240 | RN4S-NL-A240 | 240V AC |
| | RN2S-NL-D12 | RN4S-NL-D12 | 12V DC |
| | RN2S-NL-D24 | RN4S-NL-D24 | 24V DC |
| | RN2S-NL-D48 | RN4S-NL-D48 | 48V DC |
| | RN2S-NL-D110 | RN4S-NL-D110 | 110V DC |

Applicable Timer (GT5Y)

| Shape | Operation Mode | Contact Configuration | Output | Time Range | Operating Voltage | Part No. |
|---|--|-----------------------|------------------------|--------------|-------------------|---------------|
|  | A: ON Delay B: Interval ON C: Cycle OFF D: Cycle ON | 2PDT | 220V AC/ 30V DC, 5A | 0.1S to 10H | 100 to 120V AC | GT5Y-2SN1A100 |
| | | | | 0.1S to 30H | | GT5Y-2SN3A100 |
| | | | | 0.1S to 60H | | GT5Y-2SN6A100 |
| | | | | 0.1S to 10H | 200 to 240V AC | GT5Y-2SN1A200 |
| | | | | 0.1S to 30H | | GT5Y-2SN3A200 |
| | | | | 0.1S to 10H | 12V DC | GT5Y-2SN1D12 |
| | | | | 0.1S to 30H | | GT5Y-2SN3D12 |
| | | | | 0.1S to 60H | | GT5Y-2SN6D12 |
| | | | | 0.1S to 10H | 24V DC | GT5Y-2SN1D24 |
| | | | | 0.1S to 30H | | GT5Y-2SN3D24 |
| | | 0.1S to 60H | GT5Y-2SN6D24 | | | |
| | | 4PDT | 220V AC/ 30V DC, 3A | 0.1S to 10H | 100 to 120V AC | GT5Y-4SN1A100 |
| | | | | 0.1S to 30H | | GT5Y-4SN3A100 |
| | | | | 0.1S to 60H | | GT5Y-4SN6A100 |
| | | | | 0.1S to 10H | 200 to 240V AC | GT5Y-4SN1A200 |
| | | | | 0.1S to 30H | | GT5Y-4SN3A200 |
| | | | | 0.1S to 60H | GT5Y-4SN6A200 | |
| | | | | 0.1S to 30H | 12V DC | GT5Y-4SN3D12 |
| | | | | 0.1S to 10H | | GT5Y-4SN1D24 |
| | | | | 0.1S to 30H | | GT5Y-4SN3D24 |
| 0.1S to 60H | 24V DC | | | GT5Y-4SN6D24 | | |

IDEC CORPORATION

Head Office 6-64, Nishi-Miyahara-2-Chome, Yodogawa-ku, Osaka 532-0004, Japan

 www.idec.com

USA IDEC Corporation
EMEA APEM SAS

Singapore IDEC Izumi Asia Pte. Ltd.
Thailand IDEC Asia (Thailand) Co., Ltd.
India IDEC Controls India Private Ltd.

China IDEC (Shanghai) Corporation
IDEC Izumi (H.K.) Co., Ltd.
Taiwan IDEC Taiwan Corporation

Japan IDEC Corporation

Specifications and other descriptions in this brochure are subject to change without notice.
Information in this brochure is current as of July, 2023.
2023 IDEC Corporation, All Rights Reserved.

EP1720-4

