

## Spring Clamp Relay Sockets

# SU Series



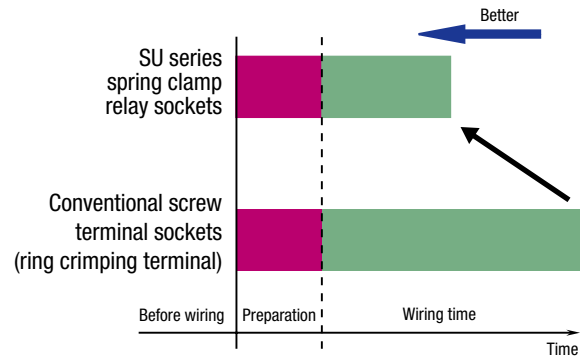
Can be installed easily on 35-mm-wide DIN rail in snap-on action.



• See website for details on approvals and standards.

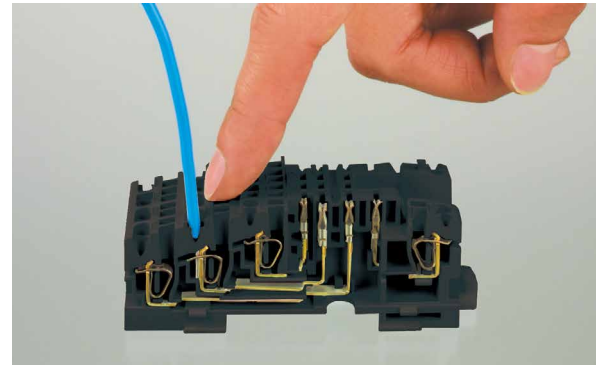
### Wiring time reduced by 50%

Wiring reduced by 50% compared with standard screw terminals. (compared with IDEC products)

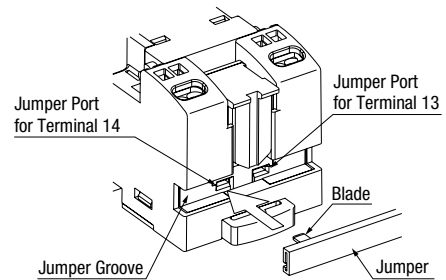


### Finger-safe IP20 degree of protection

Finger-safe IP20 degree of protection (IEC 60529)  
Prevents electric shock by protection from live parts.



### Easy connection using jumper wiring



### Safe and reliable

Relay contact terminals on upper side and coil terminal on the lower provide higher safety and allows easy wiring. Spring clamp style connection achieves high contact reliability and vibration resistance regardless of wire size and shape.



### Reduced maintenance

Spring clamp eliminates loosening, reducing maintenance and labor.

# SU Series Spring Clamp Relay Sockets

New spring-clamp relay socket providing higher level of safety.

## Relay Sockets

Shape	No. of Poles	Part No.	Applicable Relay
	2	SU2S-11L	RU2S RM2S GT5Y-2
	4	SU4S-11L	RU4S, RY4S, RY42S, GT5Y-4

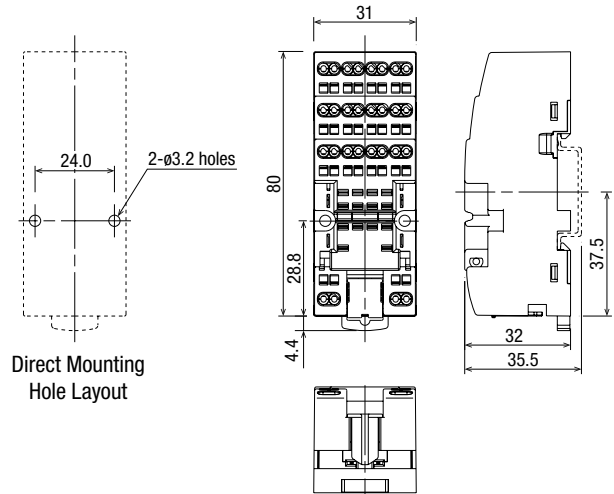
## Specifications

Part No.		SU2S-11L	SU4S-11L
Operating Temperature		-55 to +70°C (no freezing)	
Operating Humidity		45 to 85% RH (no condensation)	
Storage Temperature		-55 to +70°C (no freezing)	
Storage Humidity		45 to 85% RH (no condensation)	
Applicable Wire	EN/IEC	Solid Wire	0.2 to 1.5mm <sup>2</sup>
		Stranded Wire	0.2 to 1.25mm <sup>2</sup>
	UL	AWG24-16	
Rated Insulation Voltage		250V	
Rated Current (Note)		10A 8A (collective mounting)	6A (4-pole) 10A (2-pole) 8A (2-pole, collective mounting)
Dielectric Strength		Between contacts of the different poles: 2500V AC, 1 min. (between live and dead metal parts, between live metal parts of the different poles)	
Insulation Resistance		100MΩ minimum	
Degree of Protection		IP20 (IEC 60529)	
Weight (approx.)		53g	63g

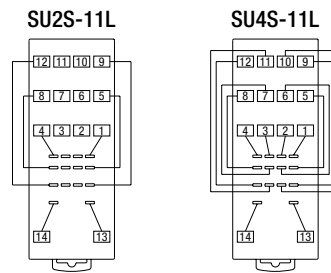
Note: When operating over the rated current in collective mounting, keep 10mm between the SU sockets.

## Dimensions

SU2S-L/SU4S-11L



## Terminal Arrangement (top view)



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

Relays

Sockets

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Sockets

DIN Rail Products

# SU Series Spring Clamp Relay Sockets

## Accessories

All dimensions in mm  
When ordering, specify the Ordering No.

Name	Shape	Specifications	Part No.	Ordering No.	Package Quantity	Remarks
Jumper		Brass (ABS cover) Weight: 3g (approx.)	SU9Z-J5	SU9Z-J5PN10	10	Used for interconnecting relay coil terminals. Can be cut to required length.
Hold-down Spring (leaf spring)		Stainless steel Weight (a pair): 1g (approx.)	SFA-101	SFA-101PN20	10 pairs	A pair of springs are used for a relay.
		Stainless steel Weight (a pair): 2g (approx.)	SFA-202	SFA-202PN20	10 pairs	
DIN Rail (*1)		Aluminum Weight: 200g (approx.)	BAA1000	BAA1000PN10	10	Length: 1m Width: 35mm
End Clip (*1)		Metal (zinc plated steel) Weight: 15g (approx.)	BNL6	BNL6PN10	10	

Note: Make sure that the total current to the jumper does not exceed the rated current.

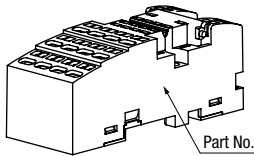
\*1) See H-071 for details on DIN rail products

## Instructions

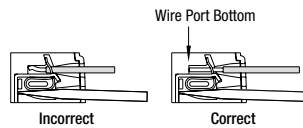
### Identifying Socket

SU2S-11L and SU4S-11L can be identified by the part number marked on the side. Note that 4-pole relay cannot be mounted on SU2S.

No. of Poles	Part No.
2	SU2S-11L
4	SU4S-11L



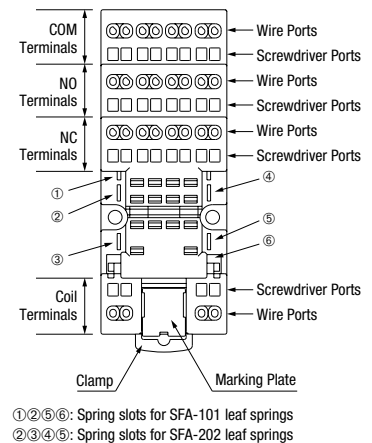
spring clamp opening. Make sure that the wire insulation is stripped 9 to 10 mm and the wire is inserted to the bottom.



### Applicable Ferrules

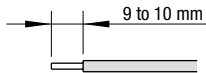
Applicable Wire (stranded)	Part No.		Manufacturer
	mm <sup>2</sup>	AWG	
0.25	24	AI 0.25-12BU	Phoenix Contact
—	22	AI 0.34-8TQ	
0.5	20	AI 0.5-8WH AI 0.5-10WH	

### Parts Description



### Applicable Wires

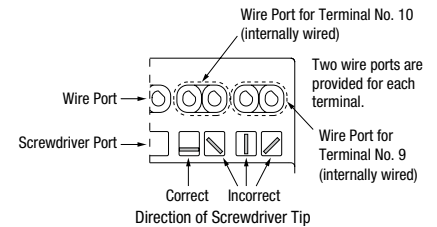
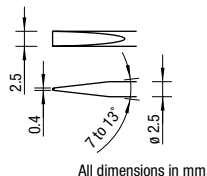
- Strip the wire insulation 9 to 10 mm from the end.
- When using stranded wires without ferrules, make sure that the core wires have not been loosened.



- In applications using ferrules for stranded wires, choose the ferrule listed in the table below. Make sure that an insulation sheath is applied when using the ferrules. When using thin wires with insulation diameter of  $\phi 1.6$  mm or less, do not insert the wire too deeply where the insulation inserts into the

### Applicable Screwdriver

For wiring, use the following applicable screwdriver.



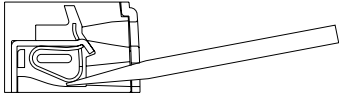
- APEM
- Switches & Pilot Lights
- Control Boxes
- Emergency Stop Switches
- Enabling Switches
- Safety Products
- Explosion Proof
- Terminal Blocks
- Relays & Sockets
- Circuit Protectors
- Power Supplies
- LED Illumination
- Controllers
- Operator Interfaces
- Sensors
- AUTO-ID

- Relays
- Sockets
- DIN Rail Products
- SJ
- DF
- SU
- S

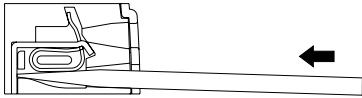
Instructions

Wiring Instructions

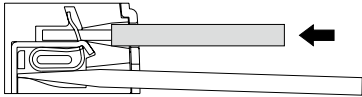
1. Insert an applicable screwdriver into the square-shaped port as shown, until the screwdriver tip touches the bottom of the spring.



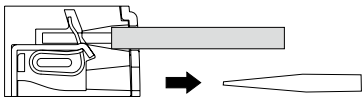
2. Push in the screwdriver until it touches the bottom of the port. The wire port is now open, and the screwdriver is held in place. The screwdriver will not come off even if you release your hand.



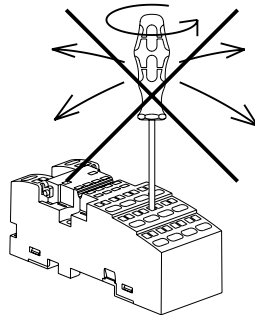
3. While the screwdriver is retained in the port, insert the wire or ferrule into the round-shaped wire port. Each wire port can accommodate one wire or ferrule. When connecting two wires to one terminal, use the adjoining port of the same terminal.



4. Pull out the screwdriver. The connection is now complete.

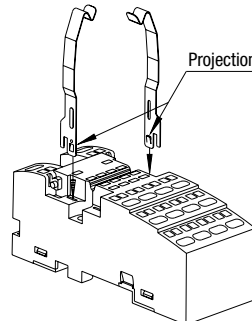


Do not tilt or turn the screwdriver while it is inserted into the screwdriver port in the socket, otherwise the socket may break.

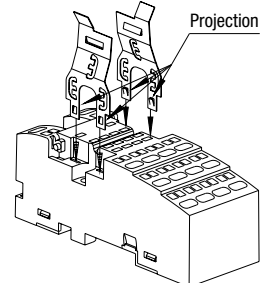


Installing the Hold-down Spring

Use SFA-101 or SFA-202 hold-down spring (ordered separately). To install, insert the springs into the spring slots with the projection on the springs facing each other. Once installed, the springs cannot be removed.



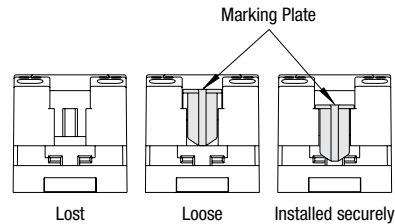
SFA-101 Leaf Spring



SFA-202 Leaf Spring

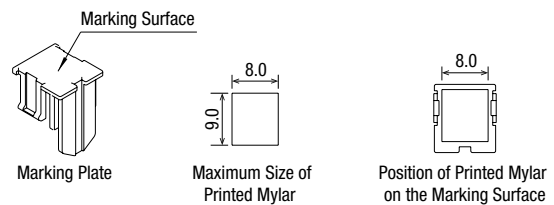
Installing the Marking Plate

Because of its removable structure, the marking plate may have fallen from the socket or become loose in delivery. Make sure that the marking plate is securely installed before starting operation. The marking plate protects the conductive portion of the socket, located under the marking plate, by preventing metal fragments or pieces of wire from dropping inside. Should any such fragments enter the socket, they may cause fire hazard, damage, or malfunction.



Marking Plate

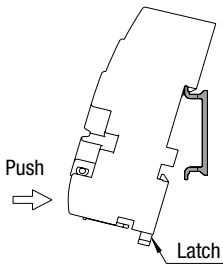
Write markings on the SU sockets using an oil-based marker, or glue printed mylar on the marking surface. The size of the printed mylar can be 8 × 9 mm maximum.



DIN Rail Mounting and Removing

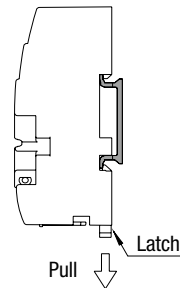
Mounting

With the latch facing downward, install the socket on the DIN rail as shown below.



Removing

Pull the latch with a hand or using a screwdriver, and remove the socket from the DIN rail.

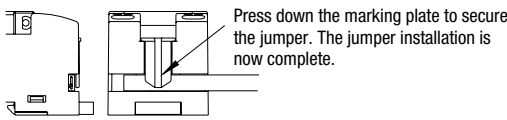
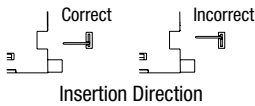
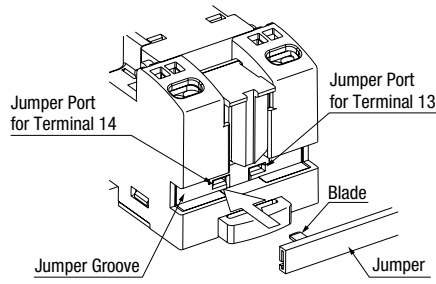


Do not mount or remove the socket at -20°C or below.

## SU Series Spring Clamp Relay Sockets

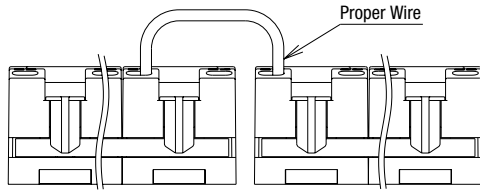
### Installing the SU9Z-J5 Jumper

Loosen the marking plate on the socket. Making sure that the SU9Z-J5 jumper is correctly aligned, insert the blades into the ports in the groove of the SU socket.



### Jumper Wiring to Six or More SU Sockets

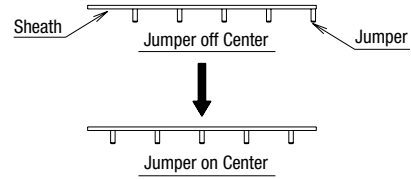
To jumper wire six or more SU sockets, connect five sockets using whole jumpers and the remaining sockets using a cut jumper. Then connect the two terminals on adjoining sockets using an applicable wire (see table below).



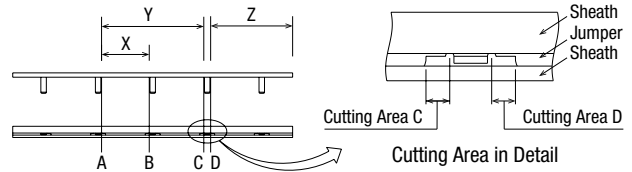
Jumper Wiring of Terminal 14 between Adjoining Sockets

### Installing the SU9Z-J5 Jumper on Two, Three, or Four SU Sockets

As shown below, slide the jumper in the sheath so that the jumper aligns with the center of the sheath.

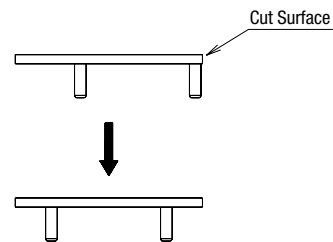


With the sheath properly installed on the jumper, cut the sheath and jumper at the points shown below, using cutting pliers. Referring to the drawing on the below right, make sure that the sheath and jumper are cut within the cutting area. Dispose of unused portions according to local waste disposal requirements.



For Connecting	Jumper Quantity	Cutting Area	Discard
2 sockets	2	A, C	Y
2 sockets	1	A, B	X
3 sockets	1	D	Z
4 sockets	1	D	Z

After cutting the jumper and sheath, slide the jumper as shown below, so that the ends of the jumper are not exposed.



# 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.
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- (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.
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  - 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

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