

OMRON

Screwless Clamp Terminal Socket for G2RS Relay

P2RF-05-S

P2RF-08-S

Troublesome, time-consuming relay wiring jobs are a thing of the past.

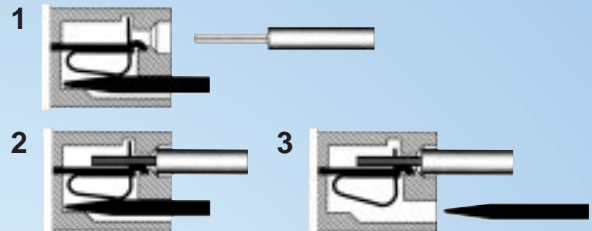
No More Screwing Up with
OMRON's New Socket



“Screwless” means “Troublefree.” The Result is More Time for Creative Jobs, Quality Assurance, Safety and Reliability.



- **Unique 1-2-3-Step Wiring Procedure**
without the need for tightening screws



- **Very Reliable Cable Connection**
without the need for additional tightening

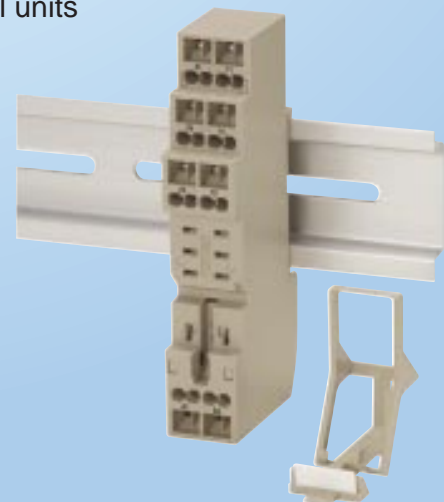


- **Environment-Friendliness**
using no Pb, Cd or Be

- **Instant Relay Release Lever**
for one-touch dismounting



- **Double Wiring**
with two independent terminal units



- **Separate Terminal Design for Safety**
- **Two Types of Nameplate Available**
- **Convenient Socket Bridge for Group Mounting**
- **Production Facilities that meet ISO-9001 and ISO-14001 Standards**

Screwless Clamp Terminal Socket

P2RF□□S

- Screwless clamping greatly contributes to reducing wiring time.
- No over or under tightening of cable connection so better contact reliability is achieved.
- Double wiring possible on all the terminals, and easy bridge and branch connections.
- Use either solid or standard wires from 0.2 to 1.5 mm² (AWG24 to AWG16).
- Safe terminal arrangement: Coil terminals separated from contact terminals.
- Unique ejector enables easy relay replacement.
- Two types of nameplate are available: New MY and Legrand.
- Finger-protection construction.
- VDE, UL, CSA approval pending.



Ordering Information

	1-pole	2-pole
Socket	P2RF-05-S	P2RF-08-S
Clip & Release Lever	P2CM-S	
Nameplate	R99-11 nameplate for MY	
Socket Bridge	P2RM-SR, P2RM-SB	

Specifications

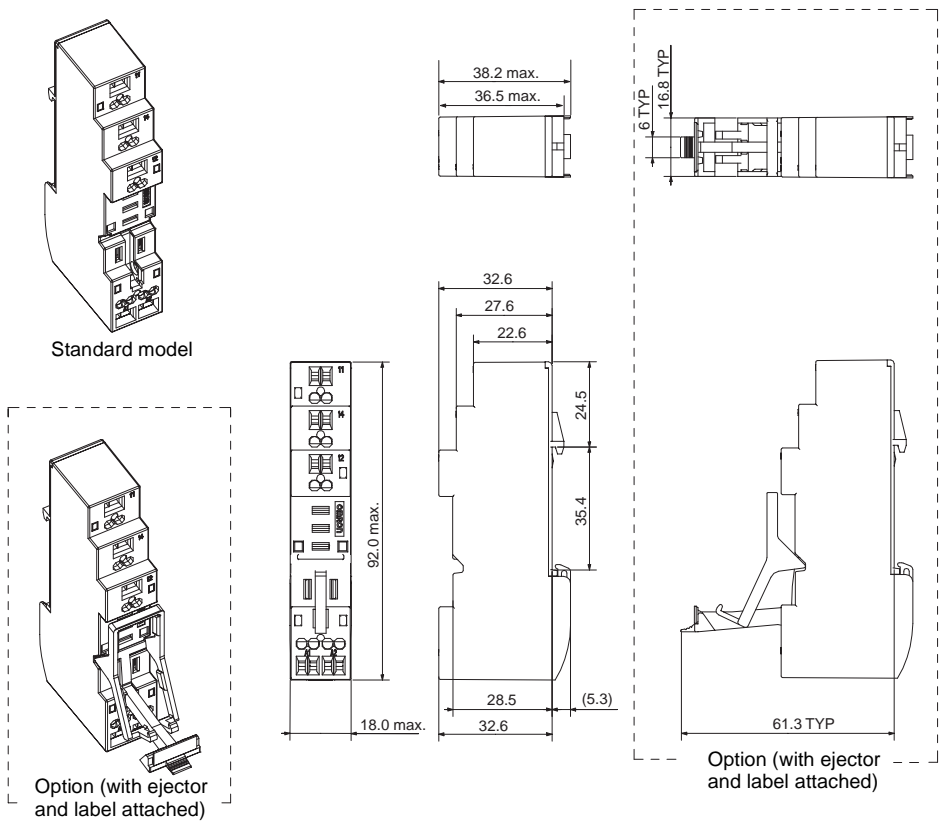
Item	P2RF05S	P2RF08S	Remarks
Relay	G2R-1-S Series	G2R-2-S Series	---
Dimensions (W×H×D)	18×92×38.2 max.		---
Rated voltage	250 VAC		---
Rated carry current	10 A at 70°C	5 A at 70°C	VDE0627
Applicable wires	0.2 to 1.5 mm ² (AWG24 to AWG16) Solid wire, Standard wire		---
Number of wire connections	2 wires per terminal (1 wire per hole)		---
Clamping force	10 N min. (0.2 mm ²), 40 N min. (1.5 mm ²)		EN60999

■ Safety Standards

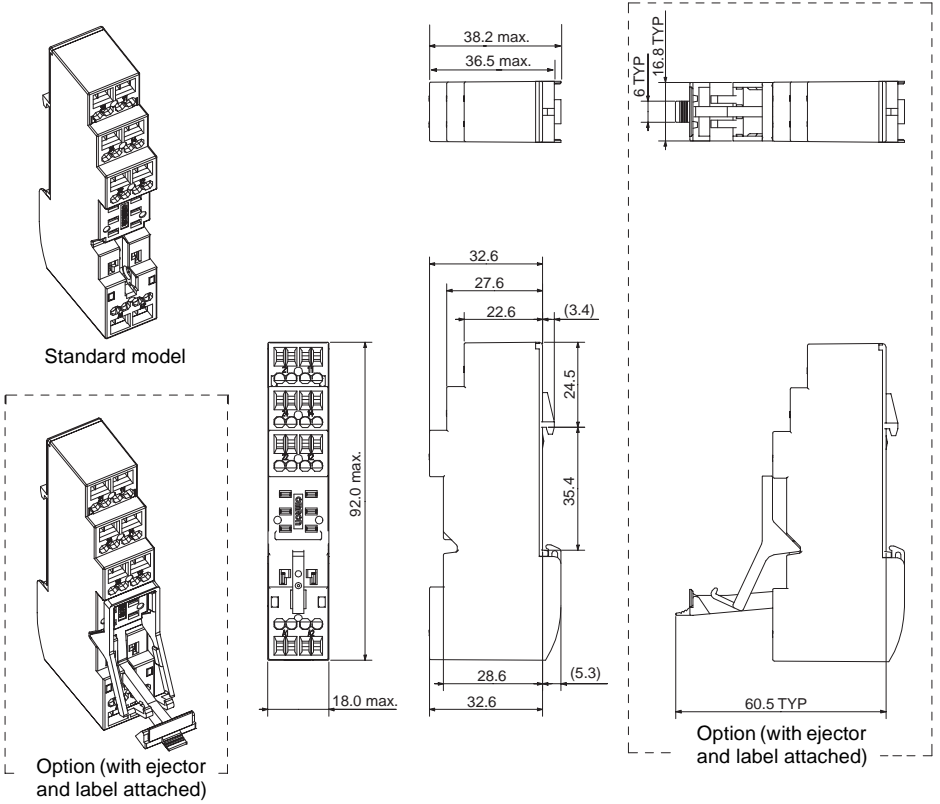
Standard	File No. (status)
VDE0627 (IEC664, EN60999)	Approval pending
UL508 (UL1059)	Approval pending
CSA C22.2 No. 14 (CSA C22.2 No. 158)	Approval pending

Dimensions

P2RF-05-S



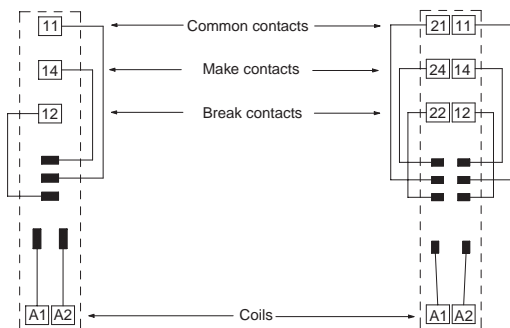
P2RF-08-S



Terminal Arrangement

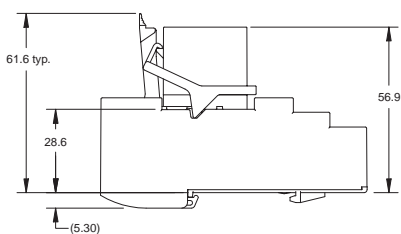
P2RF-05-S

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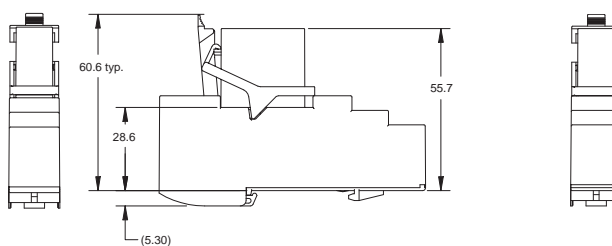


Mounting Height (With Lever)

P2RF-05-S

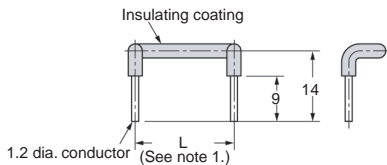


P2RF-08-S



Accessories (Option)

Socket Bridge



Note: 1. The relationship between the model number, the length L, and the color of the insulating coating is shown in the following table.

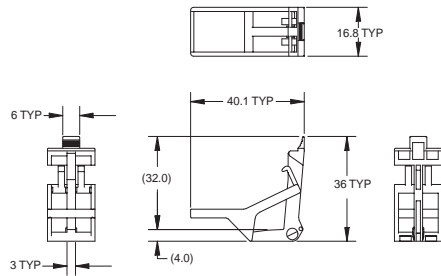
Model number	Length L (mm)	Color of insulating coating
P2RM-SR	14.3	Red
P2RM-SB		Blue

- The insulating coating must be able to withstand a voltage of 3,000 V for 1 minute. Use either PE or PA as the material of the insulating coating.
- The positions of the ends of the insulating coating must not vary more than 0.5 mm.

4. The characteristics of the socket bridge are shown in the following table.

Item	Characteristic
Rated ON current	10 A
Rated insulation voltage	250 VAC
Temperature rise	35°C max.
Dielectric strength	3,000 VAC for 1 minute
Ambient operating temperature	-55 to 70°C

Clip and Release Lever



Installation

■ Tools

A flat-blade screwdriver should be used to mount the cables.

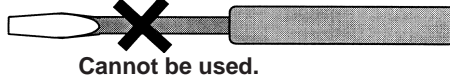
Applicable Screwdriver

- Flat-blade, Parallel-tip, 2.5 mm diameter (3.0 mm max.)

- Flat-blade, Parallel-tip



- Flat-blade, Flared-tip



Cannot be used.

Examples: FACOM AEF.2.5×75E (AEF. 3×75E)
 VESSEL No. 9900-(-)2.5×75 (No. 9900-(-)3×100)
 WAGO 210-119
 WIHA 260/2.5×40 (260/3×50)

*Chamfering the tip of the driver improves insertion when used as an exclusive tool.

■ Applicable Wires

Applicable Wire Sizes

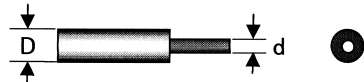
0.2 to 1.5 mm², AWG24 to AWG16

Applicable Wire Type

Solid wires, standard wires, flexible wires, or wires with ferules can be used.

(See note 1.) $< 2.2 \leq \text{Diameter } D \text{ (mm)} \leq 3.2$ (3.5: see note 2.)

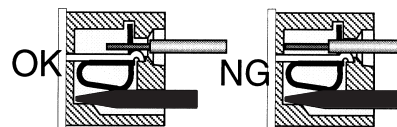
Conductor diameter d (mm) or length of sides a and b (mm) ≤ 1.9



Wires with Ferules



- Note:** 1. If the overall diameter of the wire is less than 2.2 mm, do not insert the wire past the conductor. Refer to the following diagrams.



2. If the overall diameter of the wire is over 3.2 mm, it will be difficult to use double wiring.

Examples of Applicable Wires (Confirmed Using Catalog Information)

Type of wire	Conductor type	See note 1, above.	Recommended wire sizes	See note 2, above.
Equipment wire 2491X	Flexible		0.5, 0.75, 1.0 mm ²	1.5 mm ²
BS6004	Solid	0.5 mm ²		
Switchgear BS6231	Solid		1.0 mm ²	1.5 mm ²
Switchgear BS6231	Flexible		0.5, 0.75 mm ²	1.0 mm ²
Tri-rated control and switchgear	Flexible		0.5, 0.75, 1.0, 1.5 mm ²	
Conduit	Standard		1.5 mm ²	
UL1007	Flexible	18AWG	16AWG	
UL1015	Flexible		18AWG, 16AWG	
UL1061	Flexible	18AWG		
UL1430	Flexible	18AWG	16AWG	

■ Wiring

Use wires of the applicable sizes specified above. The length of the exposed conductor should be 8 to 9 mm.

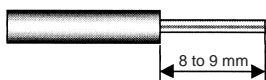


Fig. 1 Exposed Conductor Length

Use the following wiring procedure.

1. Insert the specified screwdriver into the release hole located beside the wire connection hole where the wire is to be inserted.

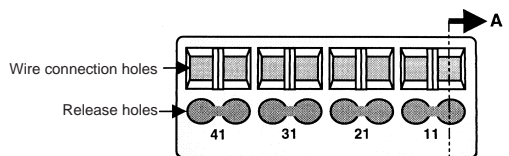


Fig. 2 Wire Connection Holes and Release Holes

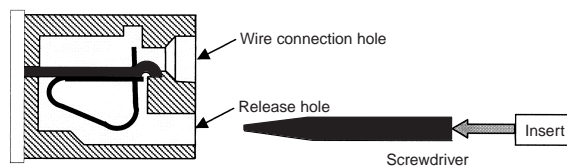
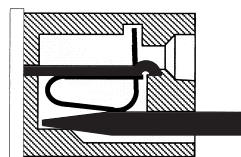
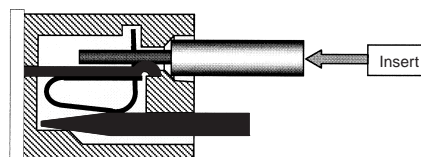


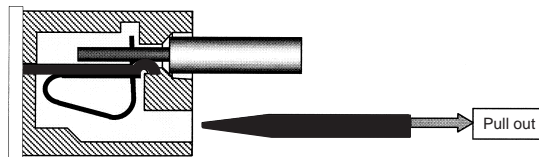
Fig. 3 Section A-A of Fig. 2



2. Insert the exposed conductor into the wire connection hole.



3. Pull out the screwdriver.



Precautions

Precautions for Connection

- Do not move the screwdriver up, down, or from side to side while it is inserted in the hole. Doing so may cause damage to internal components (e.g., deformation of the clamp spring or cracks in the housing) or cause deterioration of insulation.
- Do not insert the screwdriver at an angle. Doing so may break the side of socket and result in a short-circuit.



- Do not insert two or more wires in the hole. Wires may come in contact with the spring causing a temperature rise or be subject to sparks. (There are two wiring holes for each terminal.)



- Insert the screwdriver along the hole wall as shown below.



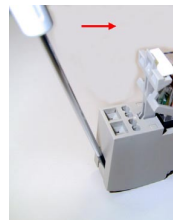
- If lubricating liquid, such as oil, is present on the tip of screwdriver, the screwdriver may fall out resulting in injury to the operator.
- Insert the screwdriver into the bottom of the hole. It may not be possible to connect cables properly if the screwdriver is inserted incorrectly.

General Precautions

- Use the clip to prevent relays floating or falling out of the socket.
- Do not use the product if it has been dropped on the ground. Dropping the product may adversely affect performance.
- Confirm that the socket is securely attached to the mounting track before wiring. If the socket is mounted insecurely it may fall and injure the operator.
- Ensure that the socket is not charged during wiring and maintenance. Not doing so may result in electric shock.
- Do not pour water or cleansing agents on the product. Doing so may result in electric shock.
- Do not use the socket in locations subject to solvents or alkaline chemicals.
- Do not use the socket in locations subject to ultraviolet light (e.g., direct sunlight). Doing so may result in markings fading, rust, corrosion, or resin deterioration.
- Do not dispose of the product in fire.

Removing from Mounting Rail

To remove the socket from the mounting rail, insert the tip of screwdriver in the fixture rail, and move it in the direction shown below.



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