Relay, Sockets with Push-In Plus technology

PYF-PU (Sockets for MY Relays)
P2RF-PU (Sockets for G2R-S Relays)
G2RV-SR/G3RV-SR (Slim I/O Relays)
G6D-F4PU/G3DZ-F4PU (Terminal Relays)
G70V (I/O Relay Terminals)
P7SA-PU (Sockets for G7SA Relays with Forcibly Guided Contacts)

- Sockets with Push-In Plus technology for easy wiring
- Installation with either top or bottom facing up for more flexible in-panel wiring*
- A compact design and unique structure help reduce work from designing to maintenance

*Excluding G70V and P7SA-PU

New Value for Control Panels

Control Panels: The Heart of Manufacturing Sites

Recent evolution in control panel design and manufacturing are benefiting panel builders as well as end users and machine builders, resulting in an evolution within production facilities that reduces total cost of ownership. With the goal of making panel manufacturing simpler and more efficient, we have developed new techniques and technologies for panel design, panel manufacturing and wiring. Our Value Design for Panel concept guides the development of control panel products that reduce time and labor costs, power consumption, and control cabinet size.

Value Design for Panel Concept Advantages

Specifications for Value Design products focus on uniform mounting height and depth, reduced overall volume and side-by- side mounting to make room for more components. Wiring capabilities without tools using front access Push-In Plus wiring terminals decreases installation time.
A panel built around Value Design Concept products provides competitive advantages for panel builders, machine builders and end users. Combining multiple products that share the Value Design Concept increases the value to all stakeholders involved with control panel design and use.

Value Design for Panel

Innovation for panel building **Process**

Further Evolution for **Panels**

New Value For Control Panels

Simple & Easy for panel business **People**

Process

Conceptual design → Detailed design → Assembly/ Wiring → Shipment

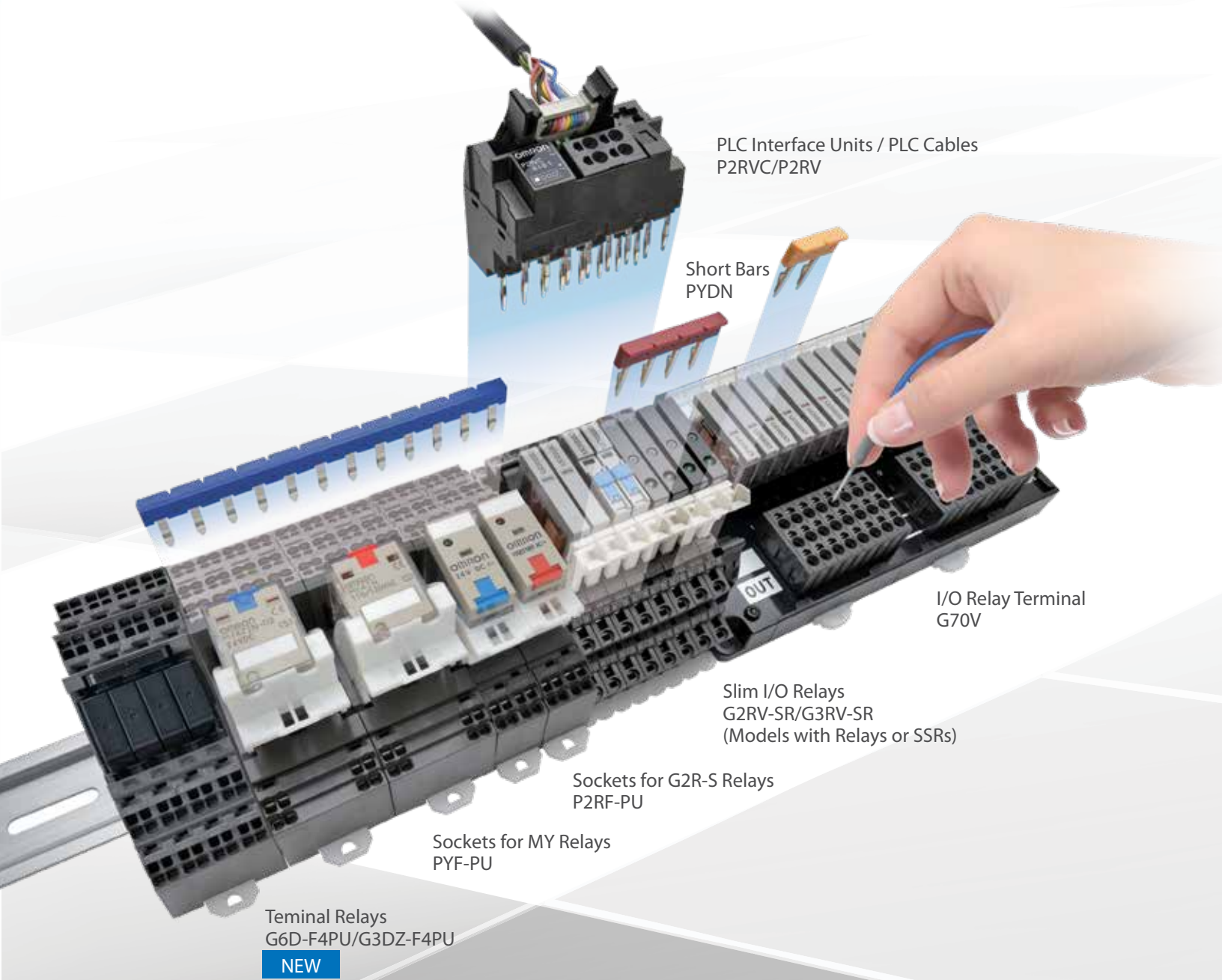
Conceptual design → Detailed design → Assembly/ Wiring → Shipment

Panels

People

A New Standard for Reducing Work in Control Panel

Less wiring and less work by combining a wide range of relay models with the new easy-to-use Push-In Plus terminal block relay series.



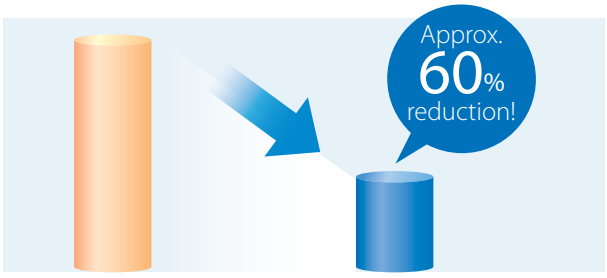
Omron provides many accessories that make I/O products more convenient.

Push-In Plus technology for Easy Wiring

Just Insert Wires: No Tools Required

Now you can use Push-In Plus technology to reduce the time and work involved in wiring.

Greatly Reduce Wiring Work with Push-In Plus technology



Conventional screw terminal blocks Omron Push-In Plus terminal block

*Information for Push-In Plus and screw terminal blocks is based on Omron's actual measurement value data.

Screwdriver Held in Place to Free Both Your Hands

Optimized to hold a screwdriver while connecting stranded wires directly to the terminal.

No Retightening Required

Tightening screws is necessary for screw terminal blocks, but with Push-In Plus technology, there is no need for retightening. This reduces works for wirings, inspections, delivery (shipping), or maintenance.

UNNECESSARY

Easy to Insert

Omron's Push-In Plus technology are as easy as inserting to an earphone jack. They help reduce the work load and improve wiring quality.

Wiring

Just Insert Wires: No Tools Required.

Now you can use Push-In Plus terminal blocks.

(solid wires, or ferrules)

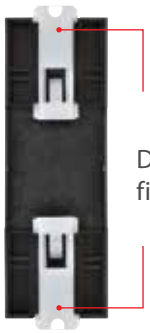
Held Firmly in Place

Even though less insertion force is required, the wires are held firmly in place.

The advanced mechanism design technology and manufacturing technology produced a spring that ensures better workability and reliability. The same strength as screw terminal blocks is provided.

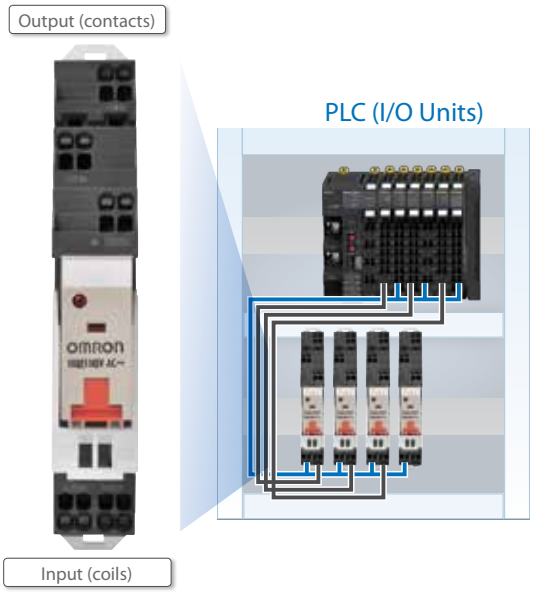
Installation with Either Top or Bottom Facing Up for More Flexible In-panel Designing

There are no installation direction restrictions, which enables flexible, efficient wiring inside panels.



Back of Sockets
with Push-In Plus technology

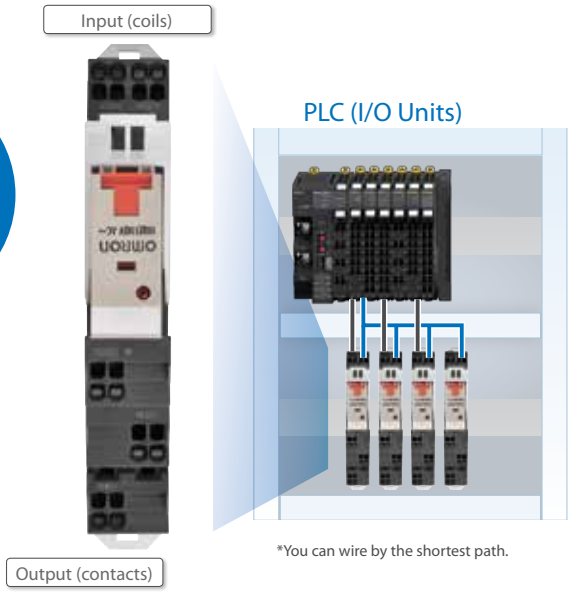
Specified Installation Direction (Previous Industry Standard)



The ability to be installed with either top or bottom facing up simplifies designing and reduces wiring. A unified height of 90 mm enables sharing short bars, reduces work in managing stocks, and reduces design work.

Installation is possible with either top or bottom facing up.

No Installation Direction Restrictions

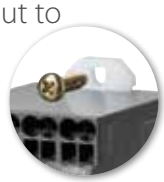


*You can wire by the shortest path.

And the fixture rails can be pulled out to mount the Relays with screws.

(Applicable models:

PYF-PU and P2RF-PU)



Sockets with Push-In Plus technology Features

Standard-feature Release Levers

All Sockets with Push-In Plus technology come with release levers as standard for easy Relay locking and releasing.

Certified for Main Safety Standards

Globally applicable design for reliable use in most countries around the world.

Note: Refer to individual datasheets for details.

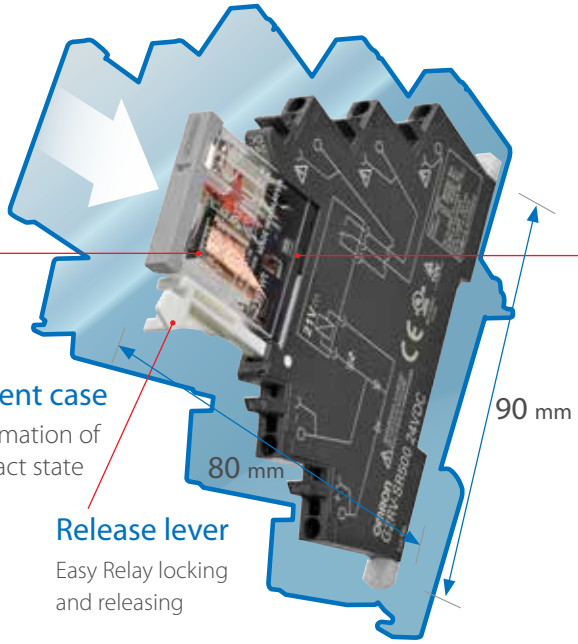
Compact Design and Unique Structure Help Save Space

Slim I/O relays G2RV-SR/G3RV-SR

G2RV-SR

G2RV Relays, which were optimally designed for in-panel applications, can be mounted to downsize panels by 25% over previous OmronRelays.

Previous Omron Relay



Comparison with previous Omron Relay
25%
Smaller in size

Transparent case
Easy confirmation of Relay contact state

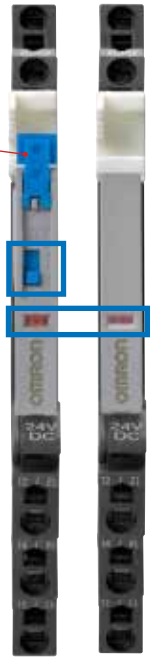
Release lever
Easy Relay locking and releasing

Plug-in terminals
Provide reliability because the terminals do not bend during replacement work.

Protective cover
PAT. Stopper for preventing incorrect operation

Latching lever
Reduces circuit checking, operation confirmation, and inspection work.

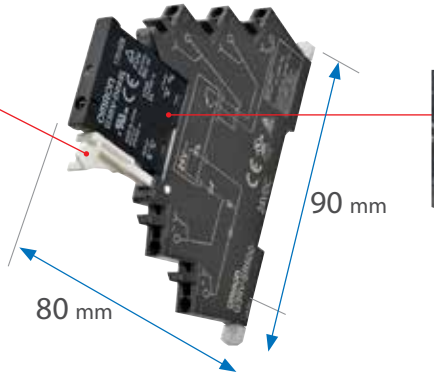
Mechanical indicator
Linked to contacts to enable operation confirmation.



With latching lever | Basic model

G3RV-SR

Optimal SSR (Solid State Relay) with high-frequency, high-speed switching in the same slim shape and size as the G2RV-SR



Release lever
Easy Relay locking and releasing

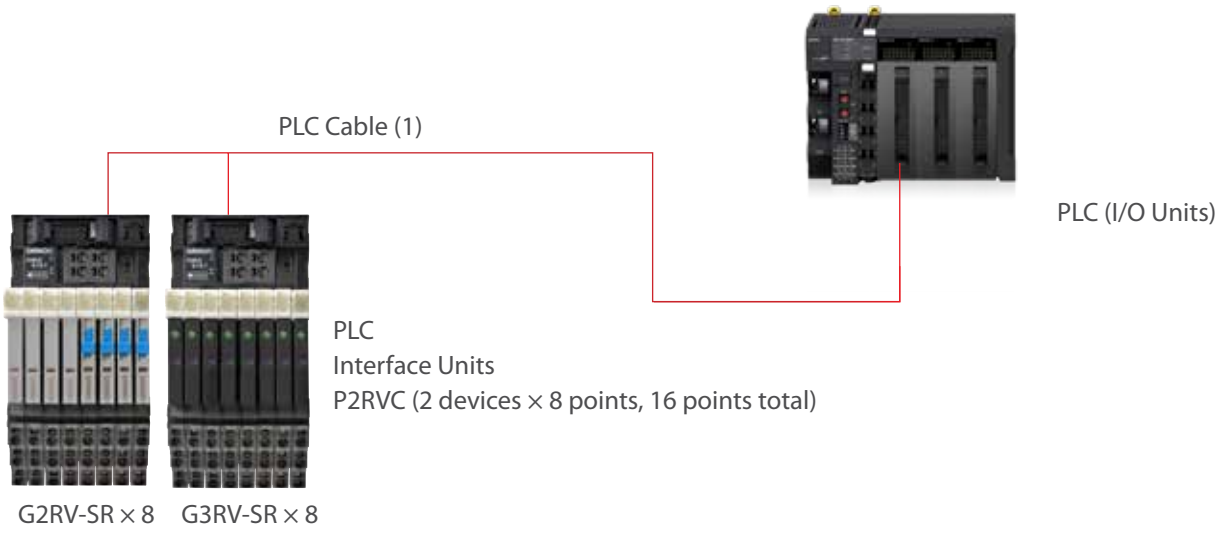
Plug-in terminals
Provide reliability because the terminals do not bend during replacement work.

PLC Cables Reduce Wiring Even Further

Slim I/O Relays, I/O Relay Terminals G2RV-SR/G3RV-SR, G70V

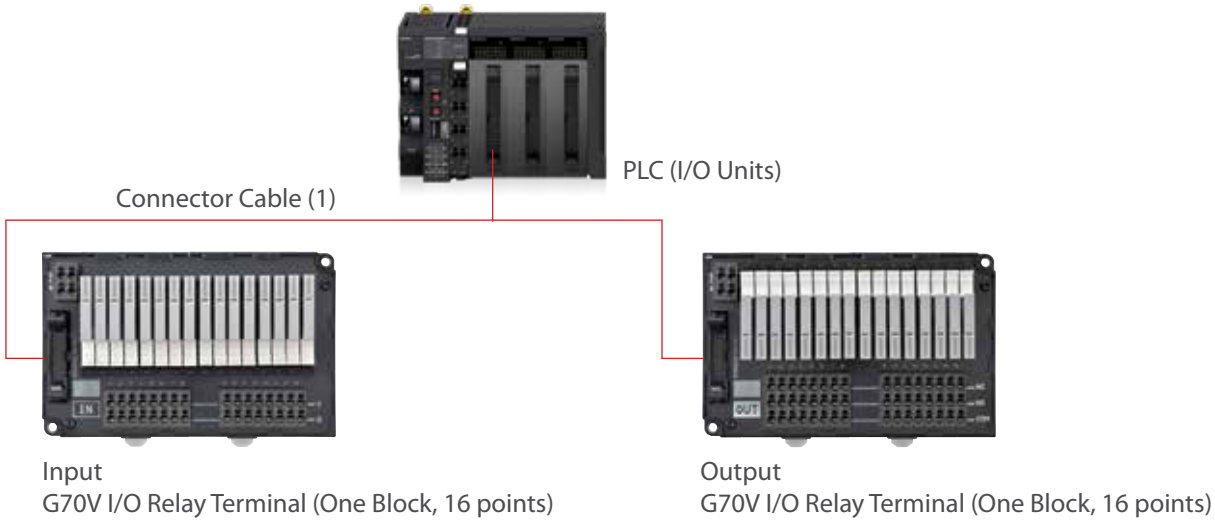
Using a PLC Interface Unit with G2RV-SR/G3RV-SR Slim I/O Relays

You can connect 8 I/O points directly with just one PLC cable to effectively reduce wiring work.



Using a G70V I/O Relay Terminal

You can connect 16 I/O points with just one cable with connectors to reduce wiring work.



Save Space with a Compact Body

Terminal Relays G6D-F4PU/G3DZ-F4PU NEW

High-capacity Load and Slim Body

Rated load: 3 A

Width: 31 mm

G6D-F4B

(Screw terminal model)

Load current Approx. 67% Higher

Rated load: 5 A

Width: 31 mm

G6D-F4PU

(Push-In Plus terminal model)

NEW

Width Approx. 30% Higher

Rated load: 5 A

Width: 43 mm

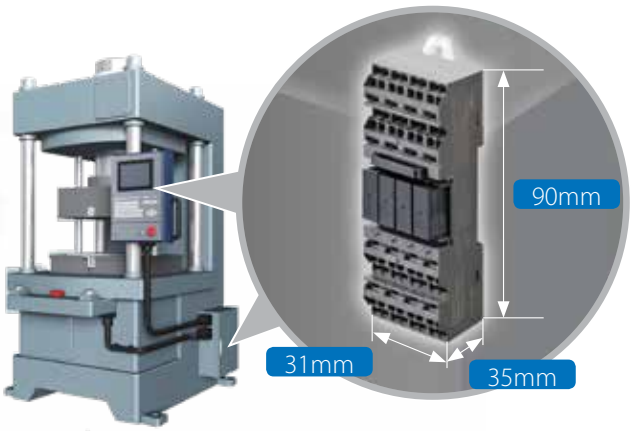
G6B-4BND

(Screw terminal model)

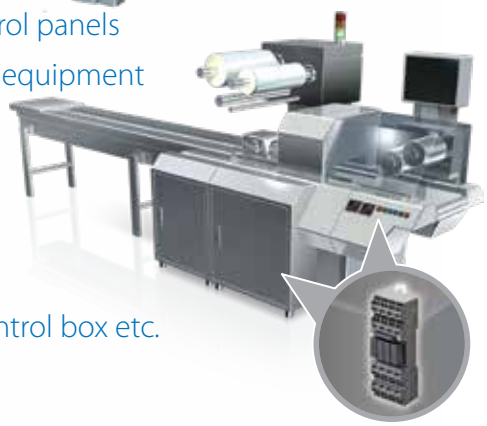
A Wide Range of Applications

Save Space with a Low-profile Body

Junction Box etc.



Small control panels for various equipment



Control box etc.

Reduced Control Panel Size and Less Wiring Work

Sockets for Relays with Forcibly Guided Contacts P7SA-PU

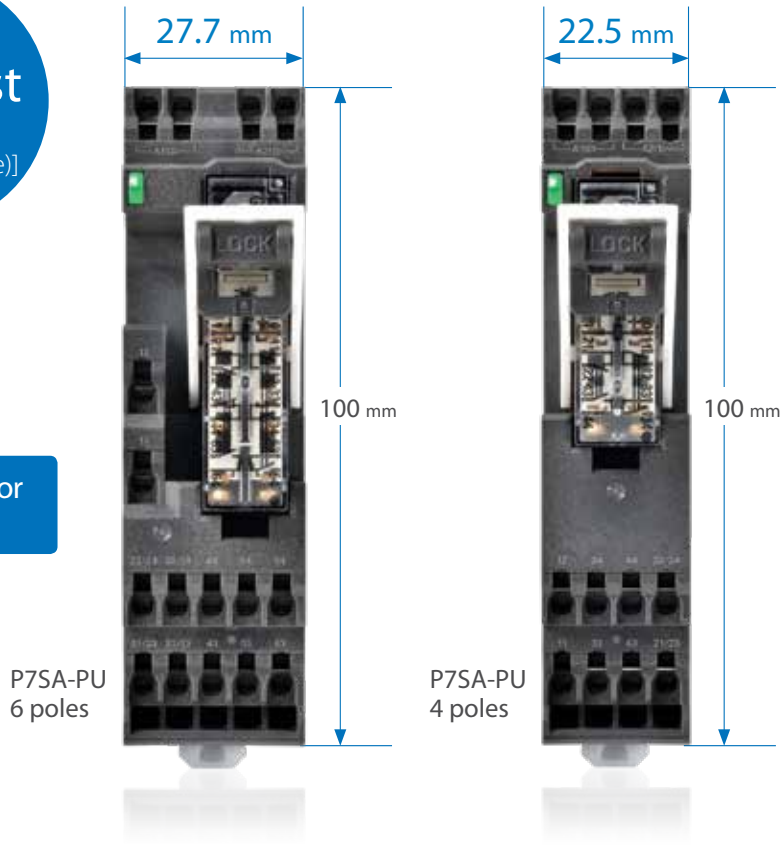
Featuring Sockets with Push-In Plus technology on Sockets for G7SA Relays with Forcibly Guided Contacts

Industry's **slimmest** design*
[P7SA-PU (6-pole)]

Industry's slimmest design

Control panel sizes can be kept to a minimum.

Built-in LED operation indicator and diode



*Six-pole Sockets for Relays with Forcibly Guided Contacts. According to Omron investigation in July 2016.

Double-wire Terminals on the Coil Side and Short Bars on the Contact Side Reduce Crossover Wiring Time

Coil side

The wiring can be crossed-over if crossover wiring of the coil terminals is necessary.

Coil side

The short bars can be crossed-over on the contact side if necessary.

Product Lineup

PYF-PU-Applicable Models

Applicable models	General-purpose Relays		SSRs	Timers	
	MY2	MY4	G3F / G3FD	H3Y(N)-2-B	H3Y(N)-4-B
No. of poles	2	4	1	2	4
Socket model	PYF-08-PU	PYF-14-PU	PYF-08-PU	PYF-08-PU-L*	PYF-14-PU-L*
Appearance					

*A release lever is not included.

P2RF-PU-Applicable Models

Applicable models	General-purpose Relays		SSRs	Timers		Liquid Leakage Sensor Amplifiers
	G2R-1-S	G2R-2-S	G3R-I/O / G3RZ	H3RN-1-B	H3RN-2-B	K7L-□-B
No. of poles	1	2	1	1	2	-
Socket model	P2RF-05-PU	P2RF-08-PU	P2RF-05-PU	P2RF-05-PU	P2RF-08-PU	P2RF-08-PU
Appearance						

P7SA-PU-Applicable Models

Applicable models	Relays with Forcibly Guided Contacts G7SA	
No. of poles	4	6
Socket model	P7SA-10F-ND-PU	P7SA-14F-ND-PU
Appearance		

Teminal Relays

	Relay output	Power MOS FET Relay output
Model	G6D-F4PU*	G3DZ-F4PU*
AC load	5 A at 250 VAC	0.3 A at 3 to 264 VAC
DC load	5 A at 30 VDC	0.3 A at 3 to 125 VDC
Appearance		

*Relays are also available with screw terminals.

Slim I/O Relays

	Basic model	With latching lever	For microloads (gold-plated contacts)	Solid State Relays (SSRs)
Model	G2RV-SR500*	G2RV-SR501*	G2RV-SR500-AP*	G3RV-SR500*
AC load	6 A at 250 VAC	6 A at 250 VAC	50 mA at 30 VAC	2 A at 100 to 250 VAC
DC load	6 A at 30 VDC	6 A at 30 VDC	50 mA at 36 VDC	3 A at 5 to 24 VDC
Appearance				

*Relays are also available with screw terminals.

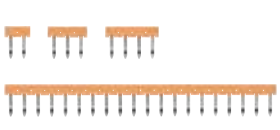
I/O Relay Terminals

		For inputs		For outputs	
Model	No internal connections	G70V-SID16P-1*	G70V-SID16P*	G70V-SOC16P-1*	G70V-SOC16P*
	Internal connections	G70V-SID16P-1-C16*	G70V-SID16P-C16*	G70V-SOC16P-1-C4*	G70V-SOC16P-C4*
Transistor output		PNP	NPN	PNP	NPN
Appearance					

*Models with Sockets (nine models total) are also available.

Replacement Parts and Accessories Available for Different Applications

Accessories Accessories that make I/O products more convenient

	Short Bars		Separator Plate	PLC Interface Units / PLC Cables	Connector Cables for I/O Relay Terminal
Model	PYDN	XW5S-P2.5	XW5Z-EP12	P2RVC / P2RV	XW2Z-R
Application	Reducing wiring and device connections		Insulation	Reducing wiring	Reducing wiring
Applicable models	PYF-PU P2RF-PU G2RV-SR G3RV-SR G6D-F4PU G3DZ-F4PU	P7SA-PU	G2RV-SR G3RV-SR	G2RV-SR G3RV-SR	G70V
Appearance	Product color  The photo shows the PYDN-7.75 model.				

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