

New Value For Control Panels

OMRON

# Sockets, Slim I/O Relays, I/O Relay Terminals

Push-In Plus Terminal Block Series

PYF-PU (Sockets for MY Relays)

P2RF-PU (Sockets for G2R-S Relays)

G2RV-SR/G3RV-SR (Slim I/O Relays)

G70V (I/O Relay Terminals)

P7SA-PU (Sockets for G7SA Relays with Forcibly Guided Contacts)

A New Standard for Reducing Work in  
Control Panels



Sockets for G7SA Relays  
Series added Oct. 2016

- Push-In Plus terminal blocks 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.

Evolution in control panels results in large evolution in production facilities.

And if control panel design, control panel manufacturing processes, and human interaction with them are innovated, control panel manufacturing becomes simpler and takes a leap forward.

OMRON will continue to achieve a control panel evolution and process innovation through many undertakings starting with the shared Value Design for Panel \*1 concept for the specifications of products used in control panels.

\*1 Value Design for Panel



Our shared Value Design for Panel (herein after referred to as "Value Design") concept for the specifications of products used in control panels will create new value to our customer's control panels.

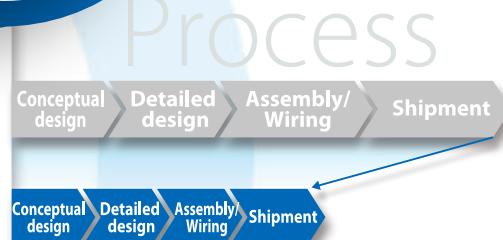
Combining multiple products that share the Value Design concept will further increase the value provided to control panels.



Further Evolution  
for  
**Panels**

**New Value  
For  
Control Panels**

Innovation for  
panel building  
**Process**



Simple & Easy  
for panel business  
**People**

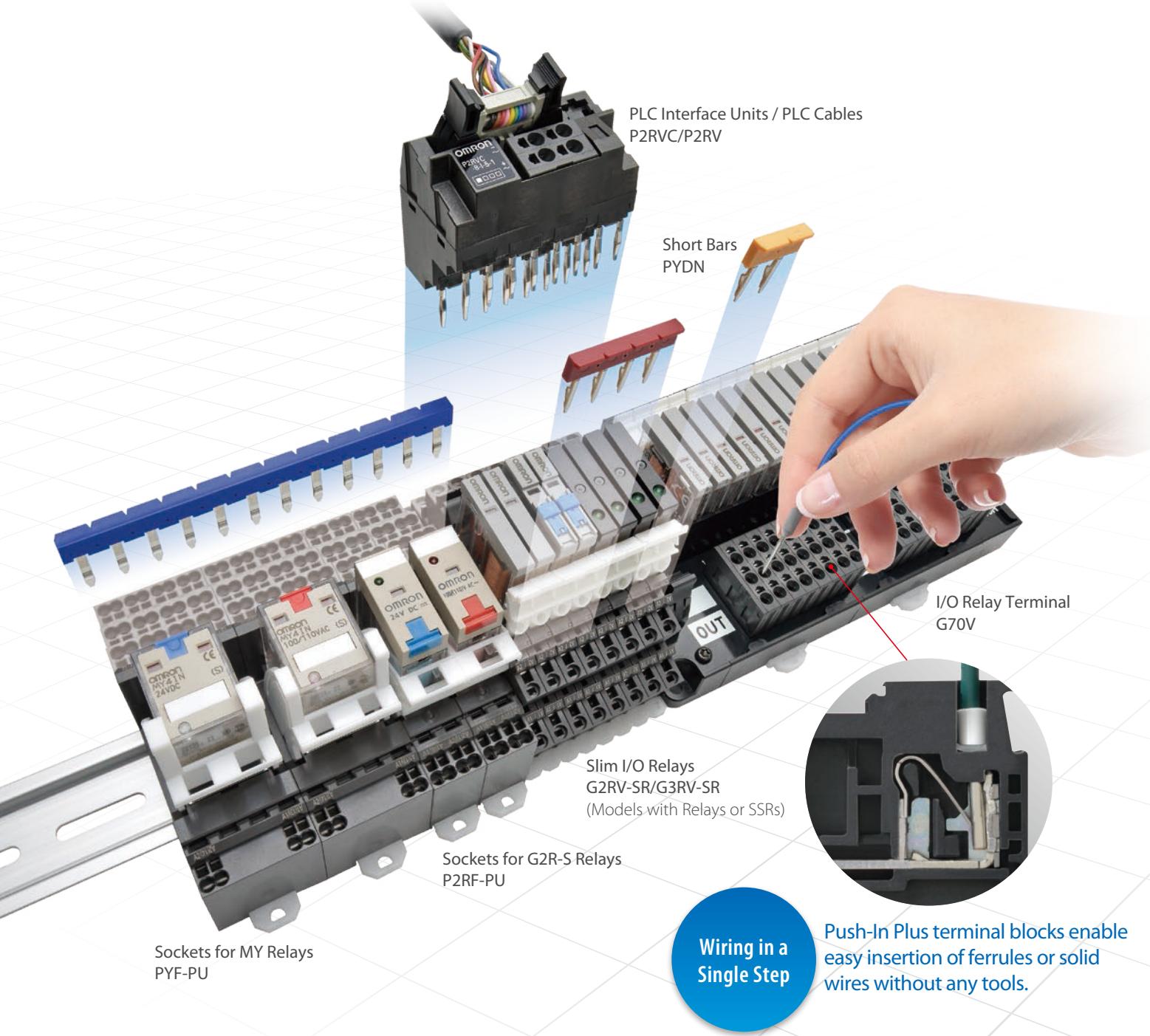
**Panels**

**People**



# A New Standard for Reducing Work in Control Panels

Combining a Wide Selection of Relays with the Easy-to-use Push-In Plus Terminal Block Series Reduces Wiring and Workload



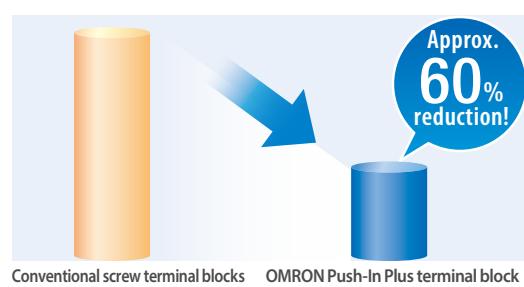
OMRON provides many accessories that make I/O products more convenient.

# Push-In Plus Terminal Blocks for Easy Wiring

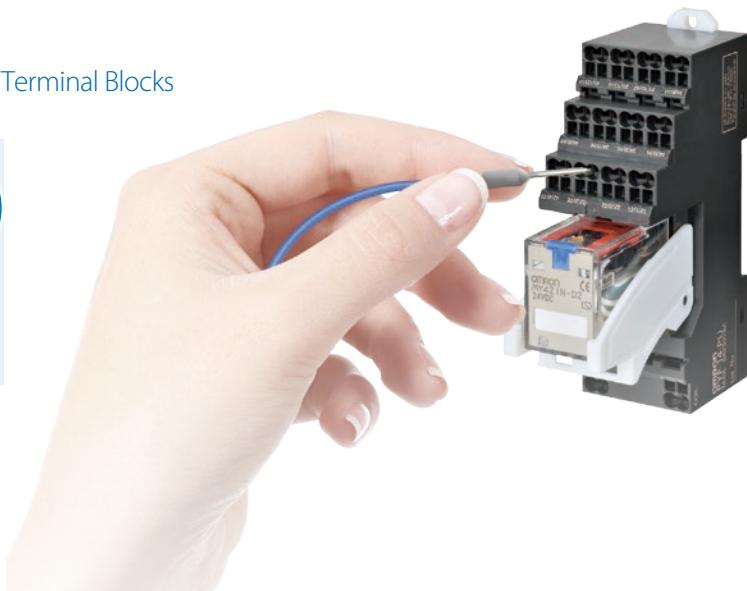
## Just Insert Wires: No Tools Required

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

Greatly Reduce Wiring Work with Push-In Plus Terminal Blocks



\*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 shape to hold the screwdriver was created by the resin parts and the spring. Work goes smoothly when connecting stranded wires directly to the terminal because it's easier to aim at the desired terminal.



## Easy to Insert

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

## 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.

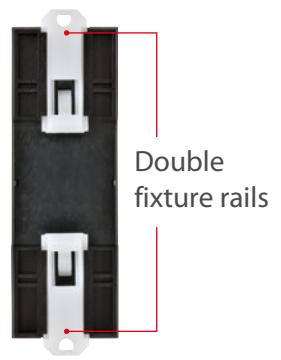
## No Retightening Required

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



PYF-PU, P2RF-PU, G2RV-SR/G3RV-SR

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



Back of Push-In Plus Terminal Block Socket

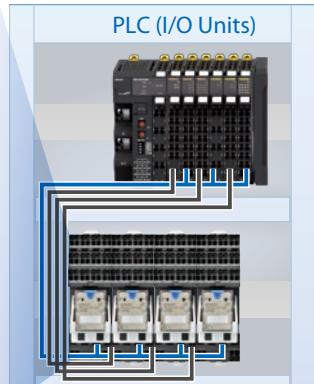
There are no installation direction restrictions, which enables flexible, efficient wiring inside panels.

Specified Installation Direction (Previous Industry Standard)

Output (contacts)



Input (coils)



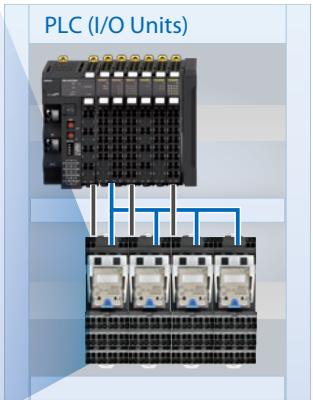
Installation is possible with either top or bottom facing up.

No Installation Direction Restrictions

Input (coils)



Output (contacts)



\*You can wire by the shortest path.

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.

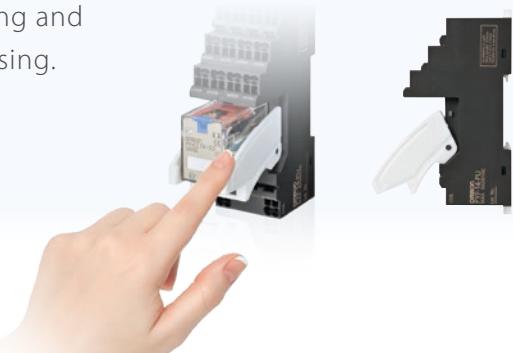
And the fixture rails can be pulled out to mount the Relays with screws.  
(Applicable models: PYF-PU and P2RF-PU)



## Push-In Plus Terminal Block Features

### Standard-feature Release Levers

All Push-In Plus Terminal Block Sockets 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.



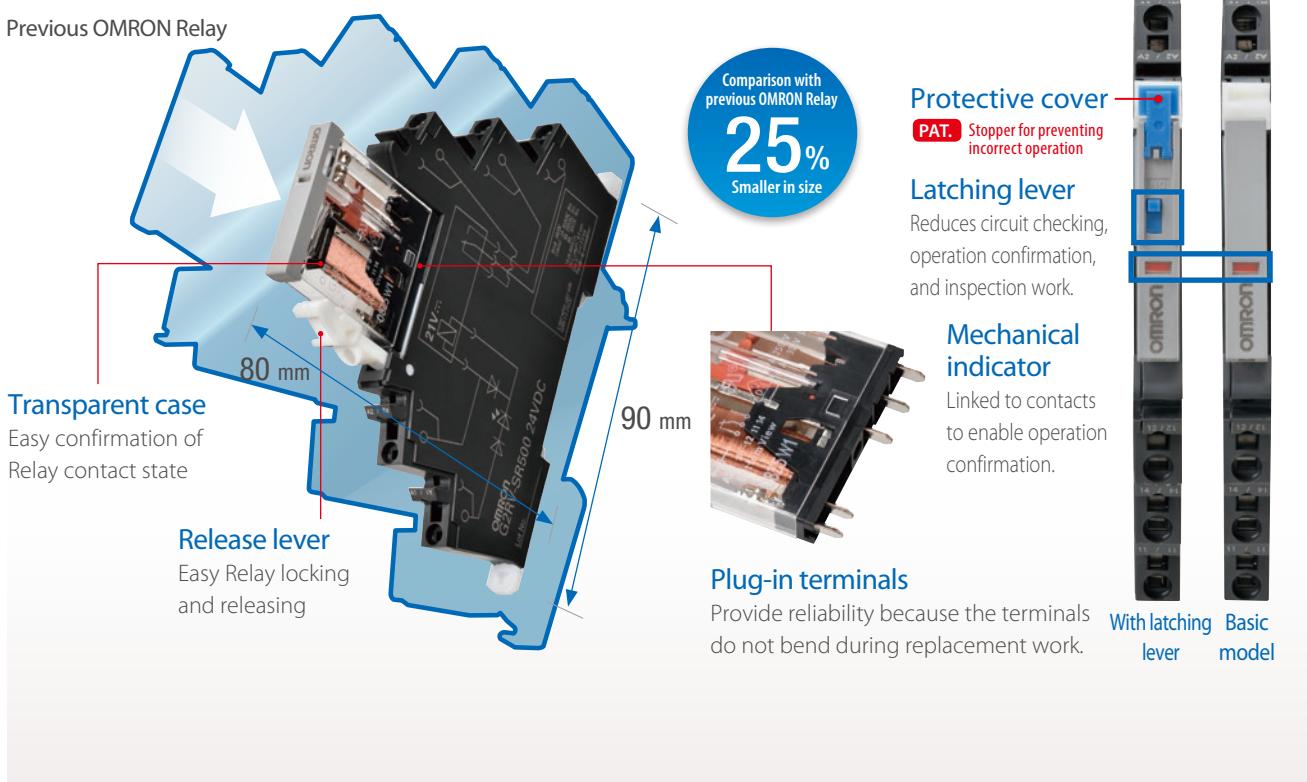
Note: Refer to individual datasheets for details.

## Slim I/O Relays G2RV-SR/G3RV-SR

# Compact Design and Unique Structure Help Reduce Work from Designing to Maintenance

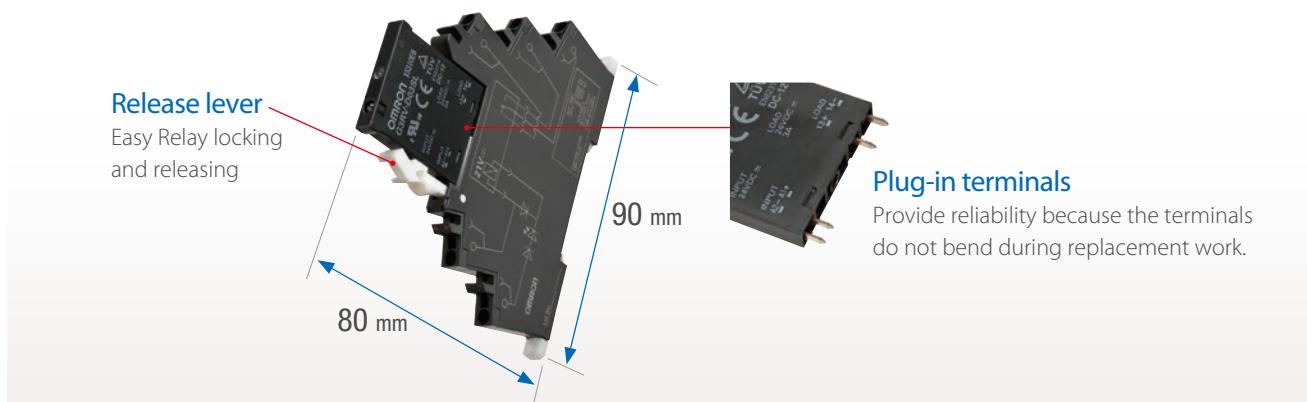
## G2RV-SR

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



## G3RV-SR

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

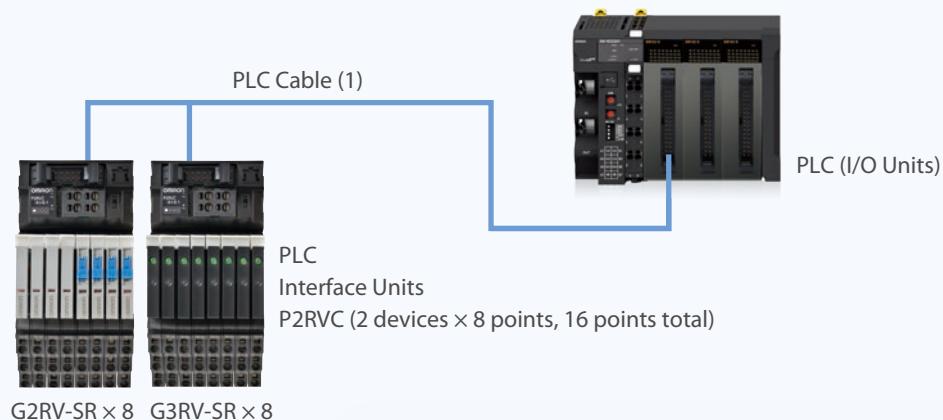


## Slim I/O Relays, I/O Relay Terminals G2RV-SR/G3RV-SR, G70V

# PLC Cables Reduce Wiring Even Further

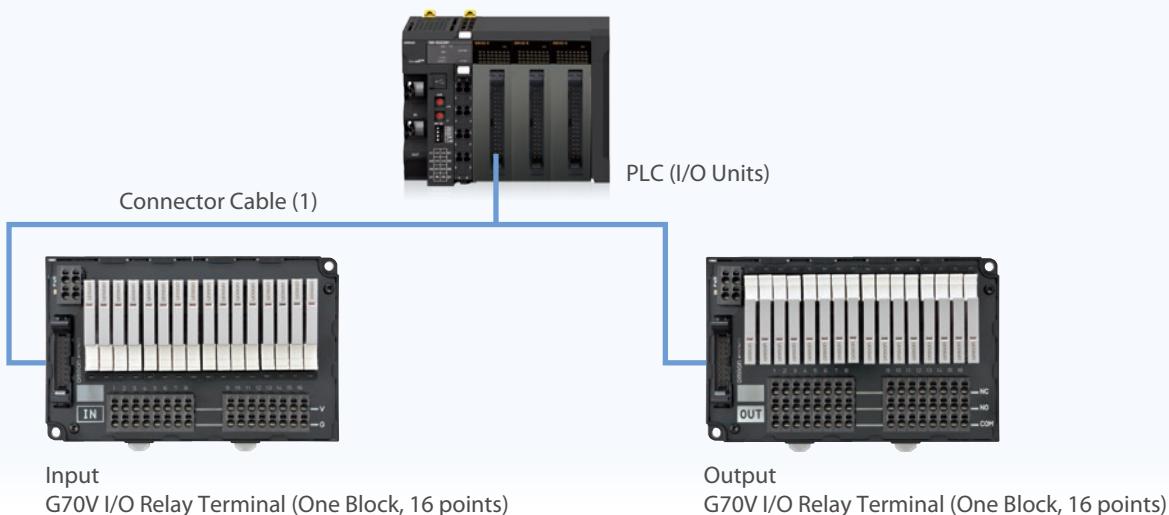
### Using a PLC Interface Unit with G2RV-SR/G3RV-SR Slim I/O Relays

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

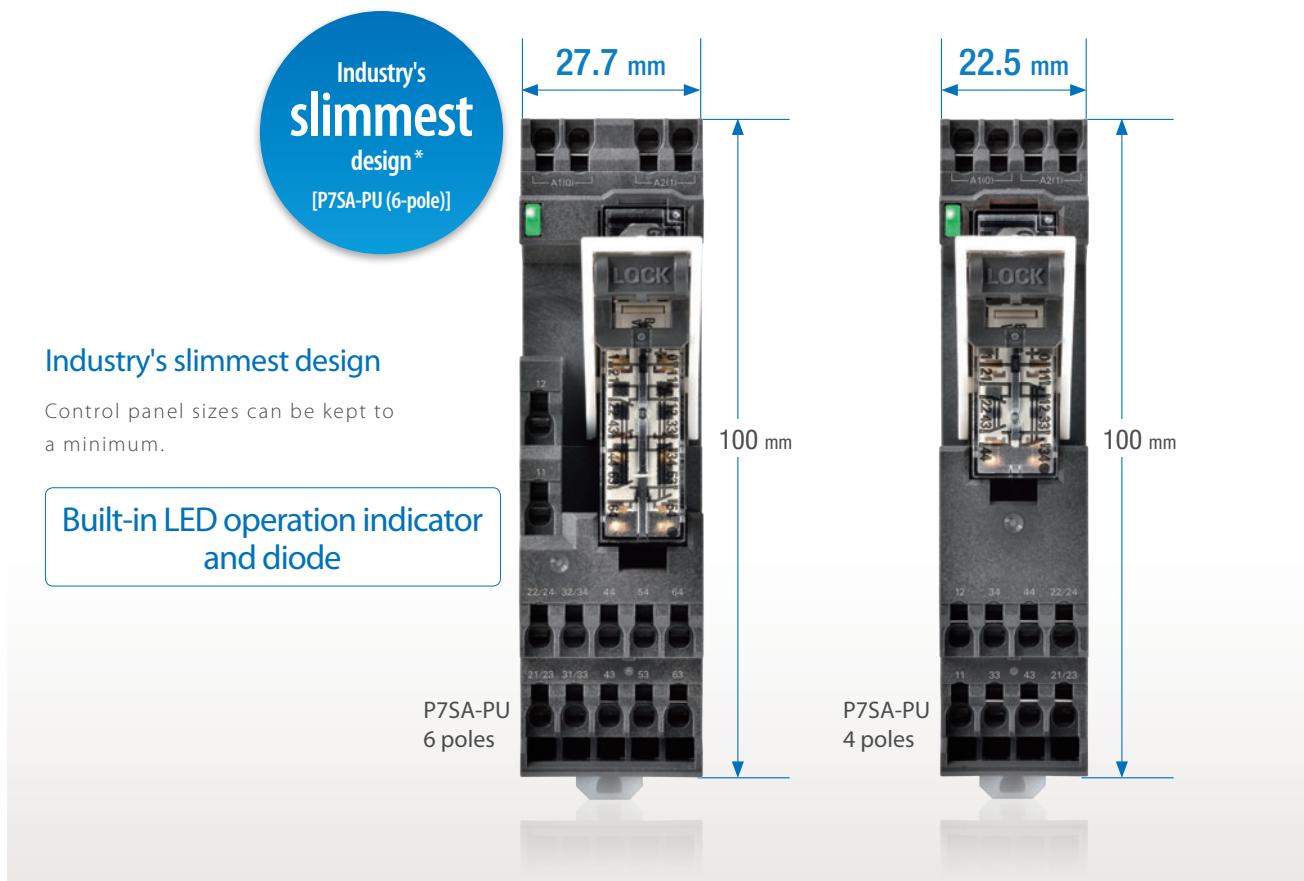
You can connect 16 I/O points with just one cable with connectors to reduce wiring work.



## Sockets for Relays with Forcibly Guided Contacts P7SA-PU

# Reduced Control Panel Size and Less Wiring Work

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



\*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

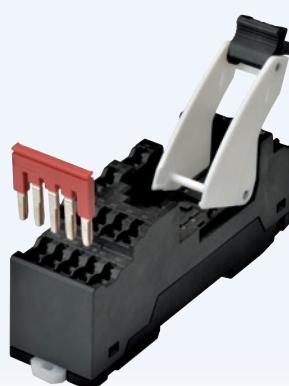
**Coil side**

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



**Contact side**

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





The G7SA is a compact, slim Relay with Forcibly Guided Contacts that meets EN standard requirements (EN 50250 / Class A VDE certification).

By using a forcibly guided contact mechanism, this Relay can detect the occurrence of contact welding via the control circuit.

With a lineup that includes slim Sockets with Push-In Plus terminal blocks, control panel sizes can be kept to a minimum, and wiring time can be reduced.

### Relays with Forcibly Guided Contacts G7SA

#### Application Examples



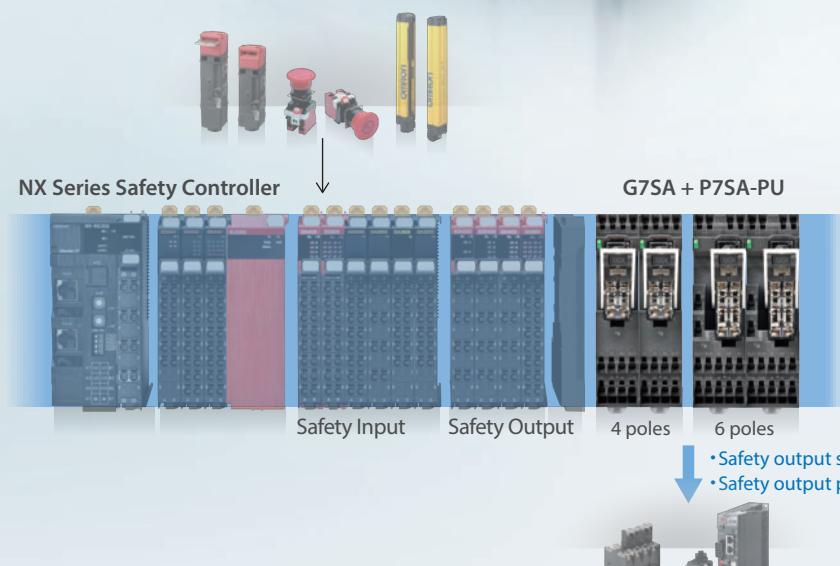
Machining center



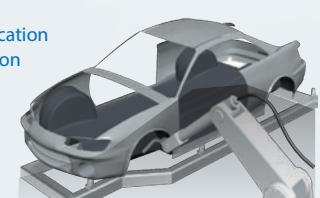
Pressing machine



FPD manufacturing equipment



Semiconductor manufacturing equipment



Automobile production line

## Product Lineup

### Push-In Plus Terminal Block Sockets

#### 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 (Released in October 2016)

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

### Relay Products with Push-In Plus Terminal Blocks

#### 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

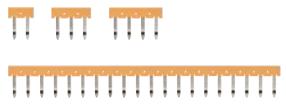
	For inputs		For outputs	
Model	G70V-SID16P-1*	G70V-SID16P*	G70V-SOC16P-1*	G70V-SOC16P*
Transistor output	PNP	NPN	PNP	NPN
Appearance	 	 	 	 

\*Relay Terminal Sockets 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		G2RV-SR G3RV-SR	G2RV-SR G3RV-SR	G70V
Appearance	Product color     The photo shows the PYDN-7.75 model.				

# Products That Create New Value in Control Panels



Panel Assist Web

[www.ia.omron.com/solution/panel/](http://www.ia.omron.com/solution/panel/)



Innovation in Control Panel Building  
Cat. No. Y218

Refer to the PYF-□□-PU/P2RF-□□-PU Push-In Plus Terminal Block Sockets Datasheet (Cat. No. J212), the G2RV-SR/G3RV-SR Slim I/O Relays Datasheet (Cat. No. J214), the G70V I/O Relay Terminal Datasheet (Cat. No. J215), and the G7SA Relays with Forcibly Guided Contacts Datasheet (Cat. No. J120) for details.

Before you place an order, please read and understand "Agreement for Using the Product" available on Omron's latest "Best control devices Omron", "General Brochure" or Omron's website.

**OMRON Corporation**      **Industrial Automation Company**  
Kyoto, JAPAN

Contact: [www.ia.omron.com](http://www.ia.omron.com)

**Regional Headquarters**

**OMRON EUROPE B.V.**  
Wegalaan 67-69, 2132 JD Hoofddorp  
The Netherlands  
Tel: (31)2356-81-300/Fax: (31)2356-81-388

**OMRON ASIA PACIFIC PTE. LTD.**  
No. 438A Alexandra Road # 05-05/08 (Lobby 2),  
Alexandra Technopark,  
Singapore 119967  
Tel: (65) 6835-3011/Fax: (65) 6835-2711

**OMRON ELECTRONICS LLC**  
2895 Greenspoint Parkway, Suite 200  
Hoffman Estates, IL 60169 U.S.A.  
Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

**OMRON (CHINA) CO., LTD.**  
Room 2211, Bank of China Tower,  
200 Yin Cheng Zhong Road,  
PuDong New Area, Shanghai, 200120, China  
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

**Authorized Distributor:**

© OMRON Corporation 2016 All Rights Reserved.  
In the interest of product improvement,  
specifications are subject to change without notice.

CSM\_1\_3\_0916  
Cat. No. J213-E1-02

0916 (0316)