

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)

A New Standard for Reducing Work in Control Panel



NEW

Terminal Relays
Series added Apr. 2019

- 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.

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.

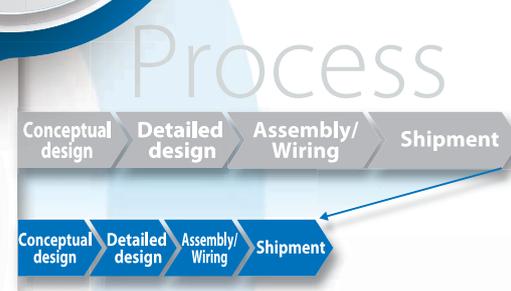
Combining multiple products that share the Value Design concept will further increase the value provided to control panels.

Further Evolution
for
Panels

**New Value
For
Control Panels**

Innovation for
panel building
Process

Simple & Easy
for panel business
People



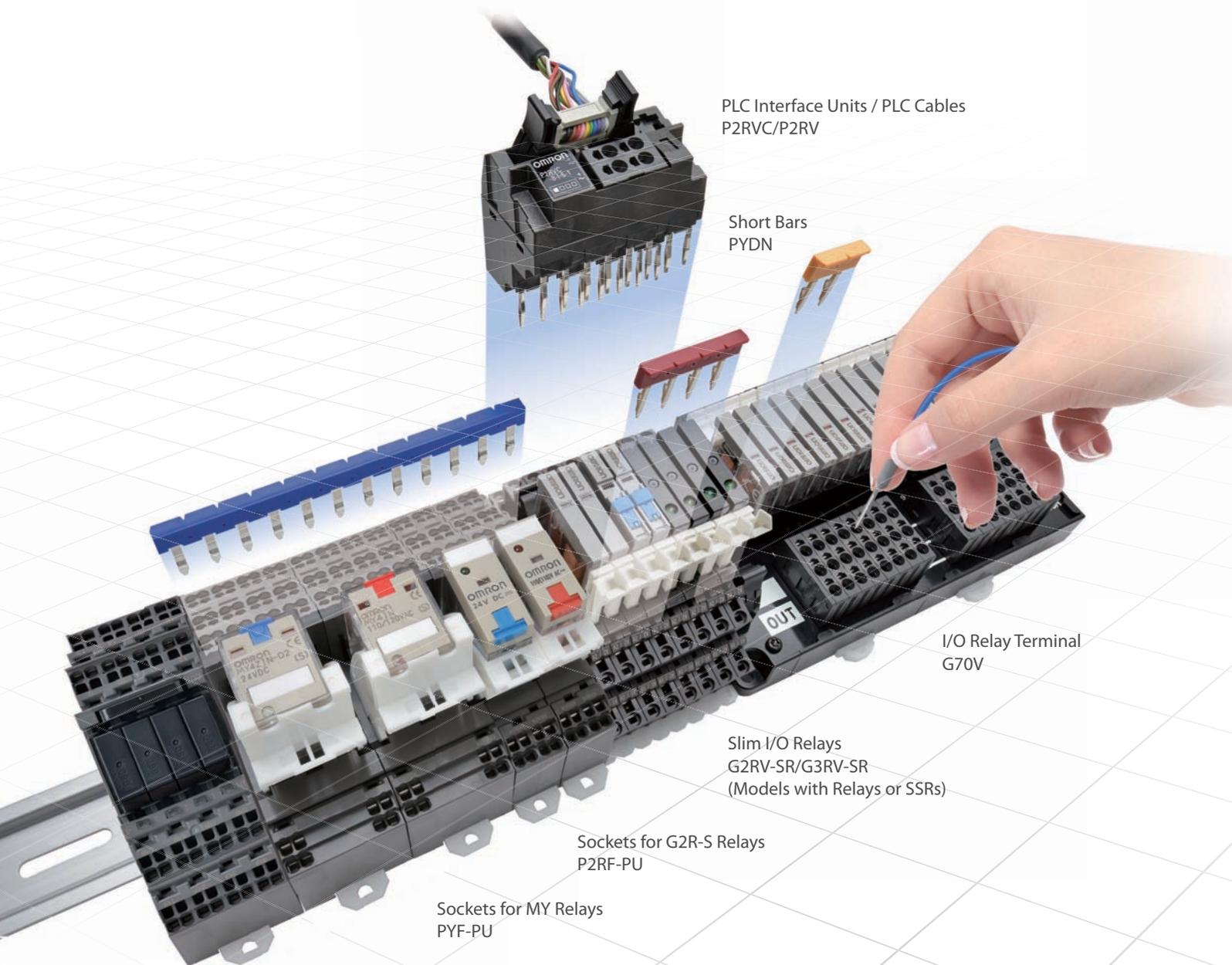
Panels

People



A New Standard for Reducing Work in Control Panel

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



PLC Interface Units / PLC Cables
P2RVC/P2RV

Short Bars
PYDN

I/O Relay Terminal
G70V

Slim I/O Relays
G2RV-SR/G3RV-SR
(Models with Relays or SSRs)

Sockets for G2R-S Relays
P2RF-PU

Sockets for MY Relays
PYF-PU

Terminal Relays
G6D-F4PU/G3DZ-F4PU

NEW

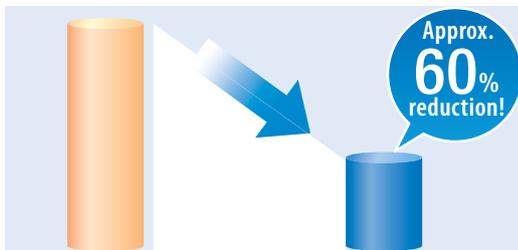
OMRON provides many accessories that make I/O products more convenient.

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.



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.

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.



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.

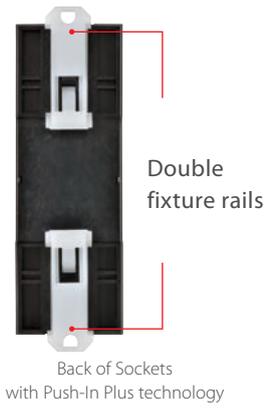
No Retightening Required

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.



Needless

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.

Specified Installation Direction (Previous Industry Standard)

No Installation Direction Restrictions

Output (contacts)

Input (coils)

Installation is possible with either top or bottom facing up.

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)

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.



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

Compact Design and Unique Structure Help Save Space

G2RV-SR

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

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

80 mm

90 mm

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

80 mm

90 mm

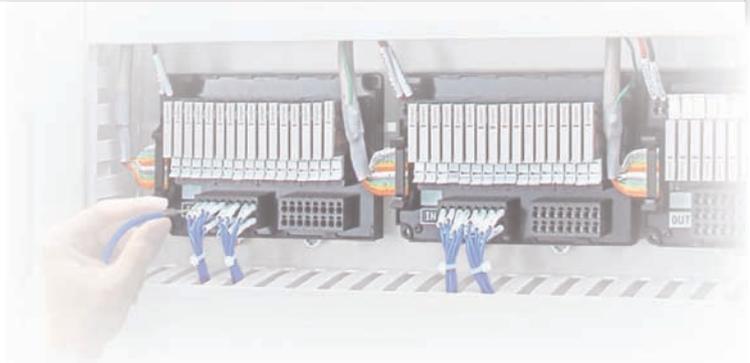
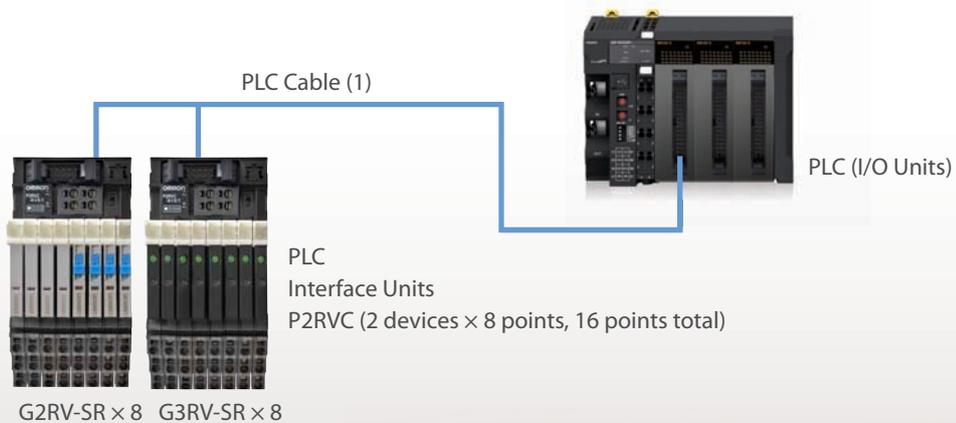
Plug-in terminals
Provide reliability because the terminals do not bend during replacement work.

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

PLC Cables Reduce Wiring Even Further

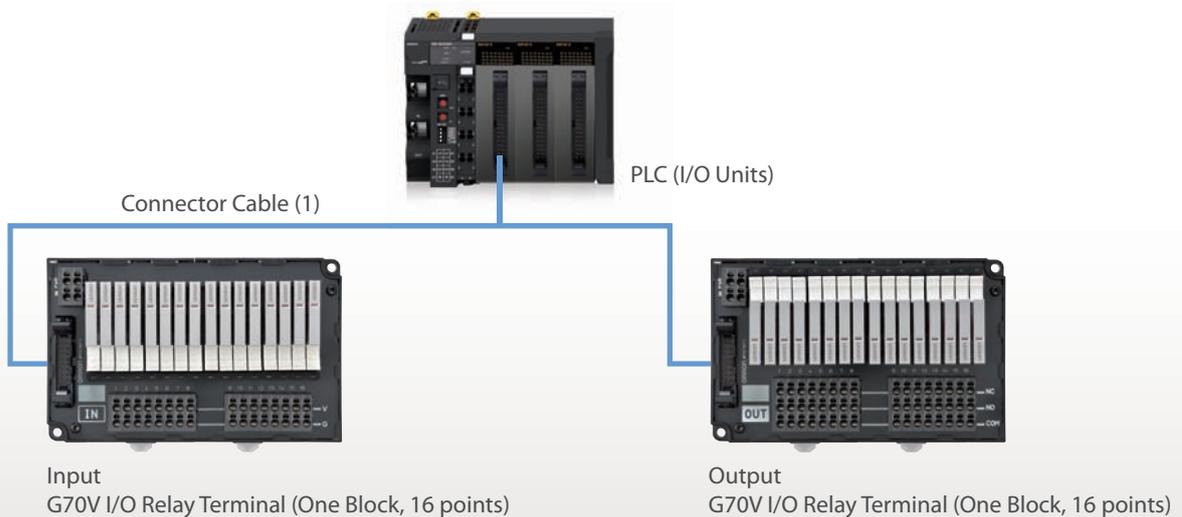
Using a PLC Interface Unit with G2RV-SR/G3RV-SR Slim I/O Relays

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.



Terminal Relays

G6D-F4PU/G3DZ-F4PU **NEW**

Save Space with a Compact Body

High-capacity Load and Slim Body

Rated load: 3 A

Load current
Approx. **67% Higher**

Rated load: **5 A**

Width
Approx. **30% Reduced**

Rated load: 5 A

Width: 31 mm
G6D-F4B
(Screw terminal model)

Width: 31 mm
G6D-F4PU
(Push-In Plus terminal model)
NEW

Width: 43 mm
G6B-4BND
(Screw terminal model)

Detailed description: This diagram compares three terminal relay models. On the left is the G6D-F4B (Screw terminal model) with a 31 mm width and a 3 A rated load. In the center is the new G6D-F4PU (Push-In Plus terminal model) with a 31 mm width and a 5 A rated load. On the right is the G6B-4BND (Screw terminal model) with a 43 mm width and a 5 A rated load. Blue circles and arrows indicate that the G6D-F4PU offers approximately 67% higher load current and approximately 30% reduced width compared to the G6B-4BND.

A Wide Range of Applications

Save Space with a Low-profile Body

Junction Box etc.

Small control panels for various equipment

Control box etc.

90 mm

31 mm

35 mm

Detailed description: This section shows various industrial applications for the terminal relays. A large junction box is shown with a relay unit installed. A control panel for a machine is shown with a relay unit. A control box for a machine is shown with a relay unit. A circular inset shows a close-up of the relay unit with dimensions: 90 mm height, 31 mm width, and 35 mm depth.

Sockets for Relays with Forcibly Guided Contacts P7SA-PU

Reduced Control Panel Size and Less Wiring Work

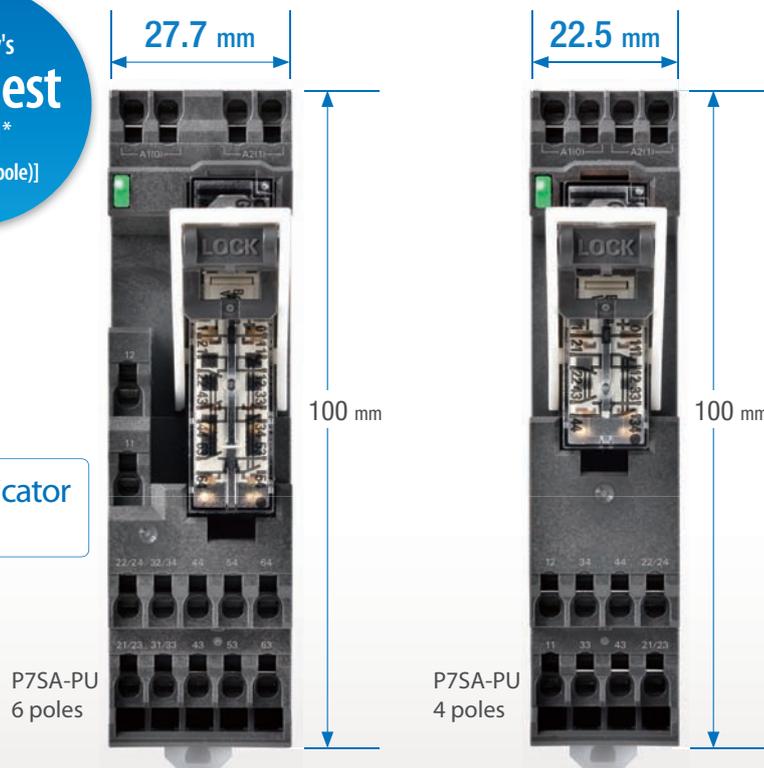
Featuring Sockets with Push-In Plus technology on Sockets for G7SA Relays with Forcibly Guided Contacts

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

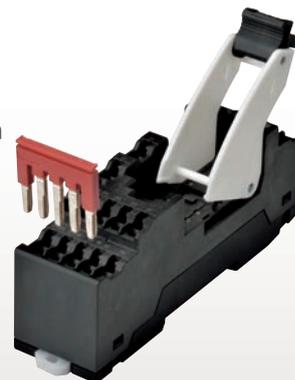
Coil side

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



Contact 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		

Terminal 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.

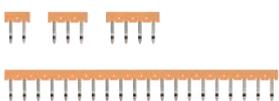
I/O Relay Terminals

		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	P75A-PU	G2RV-SR G3RV-SR	G2RV-SR G3RV-SR	G70V
Appearance	<p>Product color ● ● ● ●</p>  <p>The photo shows the PYDN-7.75 model.</p>				

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.

Refer to the PYF-□□-PU/P2RF-□□-PU Sockets with Push-In Plus technology 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), the G6D-F4PU/G3DZ4-F4PU, G6D-F4B/G3DZ-F4B Terminal Relays Datasheet (Cat. No. J228), and the G7SA Relays with Forcibly Guided Contacts Datasheet (Cat. No. J120) for details.

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