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

- 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.
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

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.

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.

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.
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.

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.

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 Omron Relays.

Previous Omron Relay

- **Transparent case**: Easy confirmation of Relay contact state
- **Release lever**: Easy Relay locking and releasing
- **Latching lever**: Reduces circuit checking, operation confirmation, and inspection work.
- **Mechanical indicator**: Linked to contacts to enable operation confirmation.
- **Plug-in terminals**: Provide reliability because the terminals do not bend during replacement work.
- **Protection cover**: Stopper for preventing incorrect operation

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

High-capacity Load and Slim Body

Rated load: 3 A
Load current Approx. 67% Higher
Width: 31 mm
G6D-F4B
(Screw terminal model)

Rated load: 5 A
Load current Approx. 30% Higher
Width: 31 mm
G6D-F4PU
(Push-In Plus terminal model)

Rated load: 5 A
Width: 43 mm
G6B-4BND
(Screw terminal model)

A Wide Range of Applications
Save Space with a Low-profile Body

Small control panels for various equipment
Junction Box etc.
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
Control panel sizes can be kept to a minimum.

Built-in LED operation indicator and diode

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

<table>
<thead>
<tr>
<th>Applicable models</th>
<th>General-purpose Relays</th>
<th>SSRs</th>
<th>Timers</th>
<th>Liquid Leakage Sensor Amplifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MY2</td>
<td>G3F / G3FD</td>
<td>H3Y(N)-2-B</td>
<td>K7L-C3-B</td>
</tr>
<tr>
<td>No. of poles</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Socket model</td>
<td>PYF-08-PU</td>
<td>PYF-08-PU*</td>
<td>PYF-08-PU-L*</td>
<td>PYF-14-PU-L*</td>
</tr>
</tbody>
</table>

*Appearance*

*A release lever is not included.*

### P2RF-PU-Applicable Models

<table>
<thead>
<tr>
<th>Applicable models</th>
<th>General-purpose Relays</th>
<th>SSRs</th>
<th>Timers</th>
<th>Liquid Leakage Sensor Amplifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G2R-1-S</td>
<td>G3R-I/O / G3RZ</td>
<td>H3RNB-1-B</td>
<td>K7F-C3-B</td>
</tr>
<tr>
<td>No. of poles</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Socket model</td>
<td>P2RF-05-PU</td>
<td>P2RF-08-PU*</td>
<td>P2RF-08-PU-L*</td>
<td>P2RF-08-PU</td>
</tr>
</tbody>
</table>

*Appearance*

### P7SA-PU-Applicable Models

<table>
<thead>
<tr>
<th>Applicable models</th>
<th>Relays with Forcibly Guided Contacts G7SA</th>
<th>No. of poles</th>
<th>Socket model</th>
<th>Appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>P7SA-10F-ND-PU</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td>P7SA-14F-ND-PU</td>
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</tr>
</tbody>
</table>

### Temporal Relays

<table>
<thead>
<tr>
<th>Relay output</th>
<th>Power MOS FET Relay output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>G6D-F4PU*</td>
</tr>
<tr>
<td>AC load</td>
<td>5 A at 250 VAC</td>
</tr>
<tr>
<td>DC load</td>
<td>5 A at 30 VDC</td>
</tr>
</tbody>
</table>

*Relays are also available with screw terminals.*
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.

**Further Evolution**

**for Panels**

**Innovation for panel building**

**Process**

**Simple & Easy**

**for panel business**

**People**

New Value For 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.

### Slim I/O Relays

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

*Relays are also available with screw terminals.

### I/O Relay Terminals

<table>
<thead>
<tr>
<th>Model</th>
<th>For inputs</th>
<th>For outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>No internal connections</td>
<td>G70V-SID16P-1*</td>
<td>G70V-SOC16P-1*</td>
</tr>
<tr>
<td>Internal connections</td>
<td>G70V-SID16P-1-C16*</td>
<td>G70V-SOC16P-1-C4*</td>
</tr>
<tr>
<td>Transistor output</td>
<td>PNP</td>
<td>PNP</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Model</th>
<th>Short Bars</th>
<th>Separator Plate</th>
<th>PLC Interface Units / PLC Cables</th>
<th>Connector Cables for I/O Relay Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>PYDN</td>
<td>XWSS-P2.5</td>
<td>XWS2-EP12</td>
<td>P2RVC / P2RV</td>
<td>XW2Z-R</td>
</tr>
<tr>
<td>Application</td>
<td>Reducing wiring and device connections</td>
<td>Insulation</td>
<td>Reducing wiring</td>
<td>Reducing wiring</td>
</tr>
<tr>
<td>Applicable models</td>
<td>PYF-PU</td>
<td>G2RV-SR</td>
<td>G3RV-SR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P2RF-PU</td>
<td>G3RV-SR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>G2RV-SR</td>
<td>G3RV-SR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>G6D-F4PU</td>
<td>G3DZ-F4PU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P7SA-PU</td>
<td>G2RV-SR</td>
<td>G3RV-SR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>G2RV-SR</td>
<td>G3RV-SR</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>G70V</td>
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<td></td>
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</tr>
</tbody>
</table>

**Appearance**

The photo shows the PYDN-7.75 model.