

SSR with Plug-in Terminals



The Same Shape as the G2R-1-S Power Relays

- Reduces wiring work by 60% when combined with the P2RF-05-PU Push-In Plus Socket (according to actual OMRON measurements).
- These I/O solid state relays can be mounted in OMRON G70A I/O Terminals.
- Lineup includes Input Modules for microloads and Output Modules for standard loads.
- Lineup also includes UL, CSA, and TÜV-certified models (-UTU models).



Note: The socket is optional.

Refer to the standards certifications and compliance section of your OMRON website for the latest information on certified models.

RoHS Compliant

Refer to *Safety Precautions for All Solid State Relays*.

Ordering Information

List of Models

Input Modules for Microloads

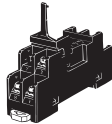
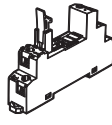
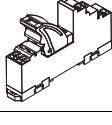

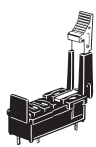

| Insulation method | Operation indicator | Response speed | Applicable load | Input rated voltage | Model |
|-------------------|---------------------|----------------|------------------------------|-----------------------|-----------------------|
| Photocoupler | Yes | --- | 4 to 32 VDC 0.1 to 100 mA | 100 to 240 VAC | G3R-IAZR1SN AC100-240 |
| | | High-speed | | 5 VDC | G3R-IDZR1SN DC5 |
| | | Low-speed | | 12 to 24 VDC | G3R-IDZR1SN DC12-24 |
| | | | | 5 VDC | G3R-IDZR1SN-1 DC5 |
| | | | 12 to 24 VDC | G3R-IDZR1SN-1 DC12-24 | |

Output Modules for Standard Loads

| Insulation method | Operation indicator | Zero cross function | Applicable load | Input rated voltage | Model |
|-------------------|---------------------|---------------------|------------------------|---------------------|---------------------|
| Phototriac | Yes | Yes | 2 A at 100 to 240 VAC | 5 to 24 VDC | G3R-OA202SZN DC5-24 |
| | | No | | | G3R-OA202SLN DC5-24 |
| Photocoupler | | --- | 2 A at 5 to 48 VDC | | G3R-ODX02SN DC5-24 |
| | | | 1.5 A at 48 to 200 VDC | | G3R-OD201SN DC5-24 |

Accessories (Order Separately)



Connection Sockets

| Classification | Terminal type | Appearance | Model |
|----------------|--|---|------------|
| Front-mounting | Screw terminals |  | P2RF-05 |
| | Screw terminals (finger protection structure) |  | P2RF-05-E |
| | Push-In Plus terminal blocks |  | P2RF-05-PU |
| Back-mounting | Relays with PCB Terminals |  | P2R-05P |
| | |  | P2R-057P |
| | Solder terminals |  | P2R-05A |

Refer to *Common Socket and DIN Track Products* for details on *Connection Sockets and DIN Track products (sold separately)* of your OMRON website.

Refer to *PYF-□□-PU/P2RF-□□-PU* for details on *A Push-In Plus Terminal Block Socket* of your OMRON website.

DIN Track Mounting Parts

| Classification | Type | Appearance | Model |
|--------------------|--|---|-----------|
| For front-mounting | DIN Tracks | Shallow type, total length: 1 m | PFP-100N |
| | | Shallow type, total length: 0.5 m | PFP-50N |
| | | Deep type, total length: 1 m | PFP-100N2 |
| | End Plate |  | PFP-M |
| | Spacer |  | PFP-S |
| For back-mounting | Mounting Plates for Sockets * (For 5 Sockets) | --- | P2R-P |

* Used to mount several P2R-05A Connecting Sockets side by side.

Ratings and Specifications

Ratings

Input Modules for Microloads

Input Side

| Model | Item | Rated voltage | Operating voltage | Input current | Must-operate voltage | Must-release voltage |
|---------------|------|----------------|-------------------|---------------|----------------------|----------------------|
| G3R-IAZR1SN | | 100 to 240 VAC | 60 to 264 VAC | 15 mA max. | 60 VAC max. | 20 VAC min. |
| G3R-IDZR1SN | | 5 VDC | 4 to 6 VDC | 8 mA max. | 4 VDC max. | 1 VDC min. |
| G3R-IDZR1SN | | 12 to 24 VDC | 6.6 to 32 VDC | | 6.6 VDC max. | 3.6 VDC min. |
| G3R-IDZR1SN-1 | | 5 VDC | 4 to 6 VDC | | 4 VDC max. | 1 VDC min. |
| G3R-IDZR1SN-1 | | 12 to 24 VDC | 6.6 to 32 VDC | | 6.6 VDC max. | 3.6 VDC min. |

Output Side

| Model | Item | Load voltage | Load current |
|---------------|------|--------------|---------------|
| G3R-IAZR1SN | | 4 to 32 VDC | 0.1 to 100 mA |
| G3R-IDZR1SN | | | |
| G3R-IDZR1SN | | | |
| G3R-IDZR1SN-1 | | | |
| G3R-IDZR1SN-1 | | | |

Output Modules for Standard Loads

Input Side

| Model | Item | Rated voltage | Operating voltage | Input current | Must-operate voltage | Must-release voltage |
|--------------|------|---------------|-------------------|--------------------------|----------------------|----------------------|
| G3R-OA202SZN | | 5 to 24 VDC | 4 to 32 VDC | 15 mA max. (at 25° C) | 4 VDC max. | 1 VDC min. |
| G3R-OA202SLN | | | | | | |
| G3R-ODX02SN | | | | 8mA max. | | |
| G3R-OD201SN | | | | | | |

Output Side

| Model | Item | Load voltage | Load current ^{*1} | Surge withstand current |
|--------------|------|---------------|-----------------------------|-------------------------|
| G3R-OA202SZN | | 75 to 264 VAC | 0.05 to 2 A ^{*2} | 30 A (60 Hz, 1 cycle) |
| G3R-OA202SLN | | | | |
| G3R-ODX02SN | | 4 to 60 VDC | 0.01 to 2 A ^{*2} | 8 A (10 ms) |
| G3R-OD201SN | | 40 to 200 VDC | 0.01 to 1.5 A ^{*2} | 8 A (10 ms) |

*1. Depends on the ambient temperature. Refer to the reference data *Load Current vs. Ambient Temperature Rating* on page 4 for details.

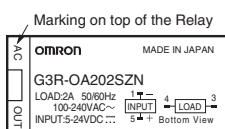
*2. The minimum current value is for a temperature of 10°C or higher.

I/O External Display

Lineup includes Input Modules and Output Modules.

The I/O Module classification and AC/DC classification are also indicated in the markings on top of the Relay.

| Marking | Specifications |
|---------|--|
| AC IN | Input Modules for Microloads, AC input |
| DC IN | Input Modules for Microloads, DC input |
| AC OUT | Output Modules for Standard Loads, AC output |
| DC OUT | Output Modules for Standard Loads, DC output |



Characteristics

Input Modules for Microloads

| Model | Item | G3R-IAZR1SN | G3R-IDZR1SN | G3R-IDZR1SN-1 |
|-------------------------------|------|---|-------------|---------------|
| Operation time | | 20 ms max. | 0.1 ms max. | 15 ms max. |
| Release time | | | | |
| Response frequency | | 10 Hz | 1 kHz | 10 Hz |
| Output ON voltage drop | | 1.6 V max. | | |
| Leakage current | | 5 μA max. | | |
| Insulation resistance | | 100 MΩ min. between I/O | | |
| Dielectric strength | | 4,000 VAC for 1 min. between I/O | | |
| Vibration resistance | | 10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude) | | |
| Shock resistance | | 1,000 m/s ² | | |
| Storage temperature | | -30 to 100°C (with no icing) | | |
| Ambient operating temperature | | -30 to 80°C (with no icing) | | |
| Ambient operating humidity | | 45% to 85% RH | | |
| Weight | | Approx. 18 g | | |

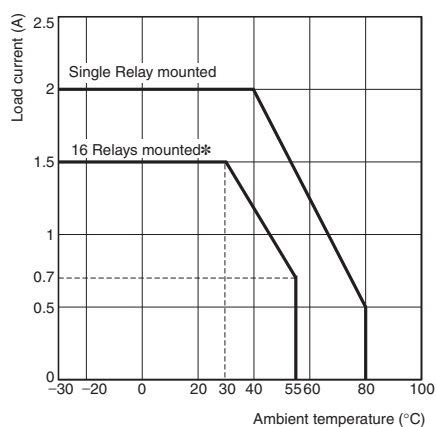
Output Modules for Standard Loads

| Model | Item | G3R-OA202SZN | G3R-OA202SLN | G3R-ODX02SN | G3R-OD201SN |
|-------------------------------|------|---|--------------|-------------|-------------|
| Operation time | | 1/2 load power supply cycle + 1 ms max. | 1 ms max. | | |
| Release time | | 1/2 load power supply cycle + 1 ms max. | | 2 ms max. | |
| Response frequency | | 20 Hz | | 100 Hz | |
| Output ON voltage drop | | 1.6 V max. | | | 2.5 V max. |
| Leakage current | | 1.5 mA max. | | 1 mA max. | |
| Insulation resistance | | 100 MΩ min. between I/O | | | |
| Dielectric strength | | 4,000 VAC for 1 min. between I/O | | | |
| Vibration resistance | | 10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude) | | | |
| Shock resistance | | 1,000 m/s ² | | | |
| Storage temperature | | -30 to 100°C (with no icing) | | | |
| Ambient operating temperature | | -30 to 80°C (with no icing) | | | |
| Ambient operating humidity | | 45% to 85% RH | | | |
| Weight | | Approx. 18 g | | | |

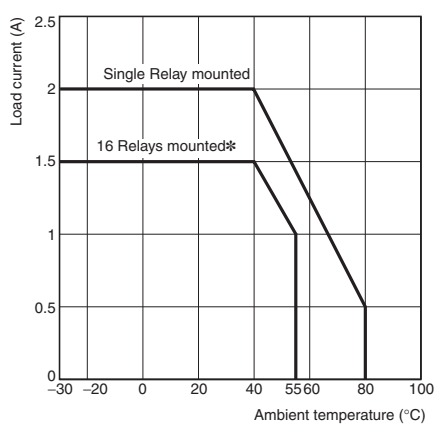
Engineering Data

Load Current vs. Ambient Temperature Rating

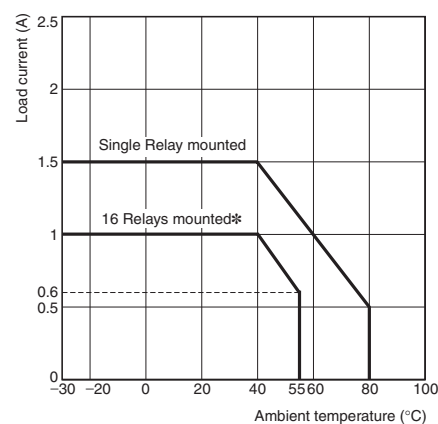
G3R-OA202S□N



G3R-ODX02SN (4 to 60 VDC)



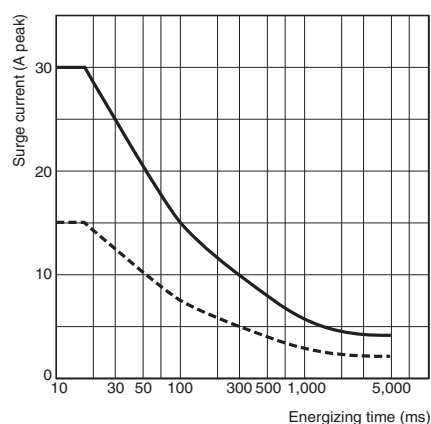
G3R-OD201SN (40 to 200 VDC)



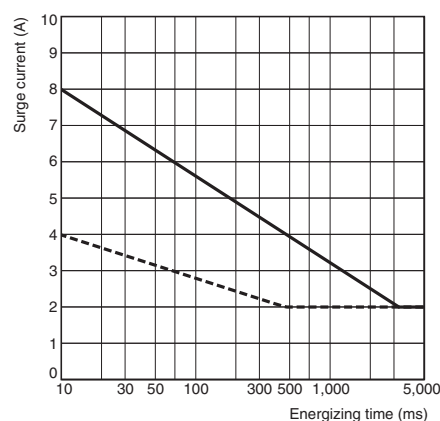
* On G70A-ZOC16, fully mounted.

Non-repetitive Surge Withstand Current (If repetitive, keep the inrush current below the dotted line.)

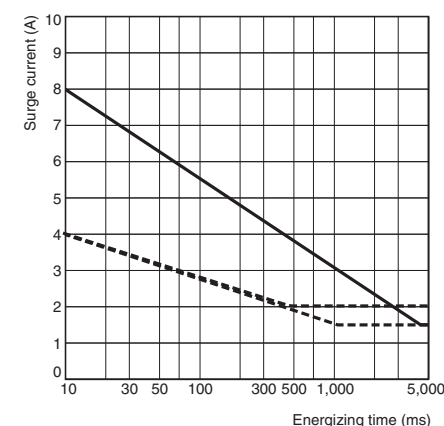
G3R-OA202S□N



G3R-ODX02SN (4 to 60 VDC)

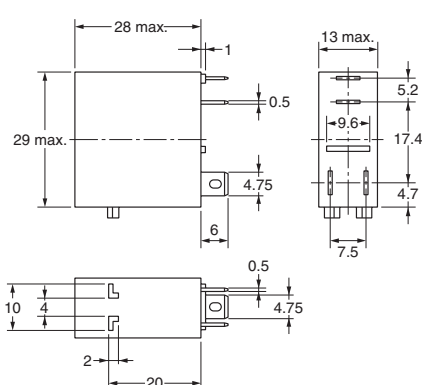


G3R-OD201SN (40 to 200 VDC)

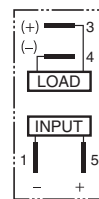


Dimensions

Relay



Terminal Arrangement/
Internal Connections
(Bottom View)



The information in parentheses
in for a DC output.

Note: The load can be connected to either the positive or negative terminals.

Accessories (Order Separately)

Connection Socket

DIN Track Mounting Parts

Refer to *Products Related to Common Sockets and DIN Tracks* for precautions on the applicable Sockets of your OMRON website.

Refer to *PYF-□□-PU/P2RF-□□-PU* for precautions on Push-In Plus Terminal Block Sockets of your OMRON website.

Safety Precautions

Be sure to read 'the Common Precautions' in the website at the following URL:

<http://www.ia.omron.com/>.

Refer to *Safety Precautions for All Solid State Relays* of your OMRON website.

Refer to *Products Related to Common Sockets and DIN Tracks* for precautions on the applicable Sockets of your OMRON website.

Refer to *PYF-□□-PU/P2RF-□□-PU* for precautions on Push-In Plus Terminal Block Sockets of your OMRON website.

Terms and Conditions Agreement

Read and understand this catalog.

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

Warranties.

(a) Exclusive Warranty. Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.

(b) Limitations. OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) Buyer Remedy. Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty.

See <http://www.omron.com/global/> or contact your Omron representative for published information.

Limitation on Liability; Etc.

OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY.

Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.

Suitability of Use.

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

Programmable Products.

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

Performance Data.

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

Change in Specifications.

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

Errors and Omissions.

Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

2016.6

In the interest of product improvement, specifications are subject to change without notice.

OMRON Corporation
Industrial Automation Company

<http://www.ia.omron.com/>

(c)Copyright OMRON Corporation 2016 All Right Reserved.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Omron:

[P2R-05P](#) [P2RF-05-E](#) [P2R-08P](#) [P2RF-08-E](#) [P2R-057P](#) [P2R-05A](#) [P2RM-SB](#) [P2RM-SR](#) [P2R-08A](#)

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: ocean@oceanchips.ru

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А