I/O Solid State Relays
G3R-I/O

CSM_G3R-I/O_DS_E_4_2

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).

RoHS Compliant

Note: The socket is optional.

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

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

Ordering Information

List of Models

Input Modules for Microloads

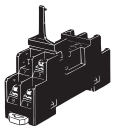
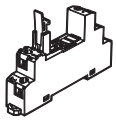
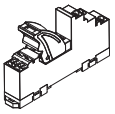
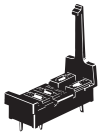
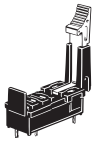
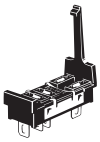
Insulation method	Operation indicator	Response speed	Applicable load	Input rated voltage	Model
Photocoupler	Yes	---	4 to 32 VDC 0.1 to 100 mA	100 to 240 VAC	**G3R-IAZR1SN AC100-240**
		High-speed		5 VDC	**G3R-IDZR1SN DC5**
				12 to 24 VDC	**G3R-IDZR1SN DC12-24**
		Low-speed		5 VDC	**G3R-IDZR1SN-1 DC5**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

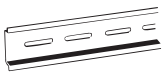
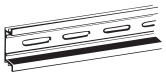
Accessories (Order Separately)

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

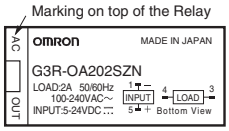
Model	Item	Load voltage	Load current*1	Surge withstand current
G3R-OA202SZN		75 to 264 VAC	0.05 to 2 A*2	30 A (60 Hz, 1 cycle)
G3R-OA202SLN				
G3R-ODX02SN		4 to 60 VDC	0.01 to 2 A*2	8 A (10 ms)
G3R-OD201SN		40 to 200 VDC	0.01 to 1.5 A*2	8 A (10 ms)

*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/s²		
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		

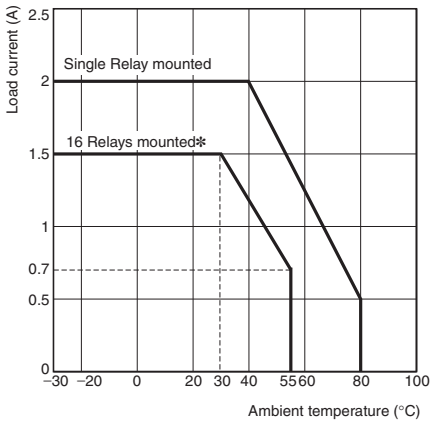
Output Modules for Standard Loads

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/s²			
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			

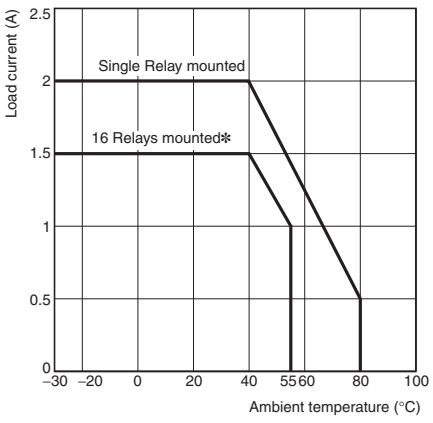
Engineering Data

Load Current vs. Ambient Temperature Rating

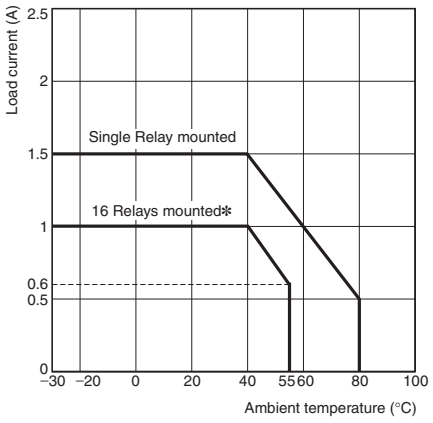
G3R-OA202S□N



G3R-ODX02SN (4 to 60 VDC)



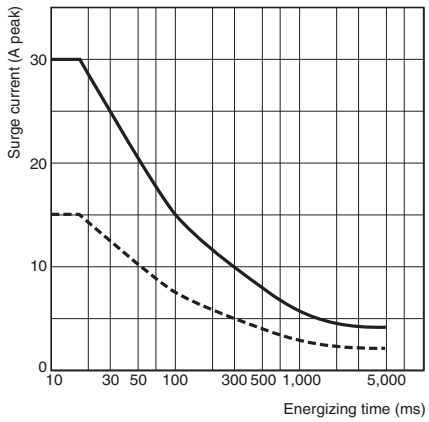
G3R-OD201SN (40 to 200 VDC)



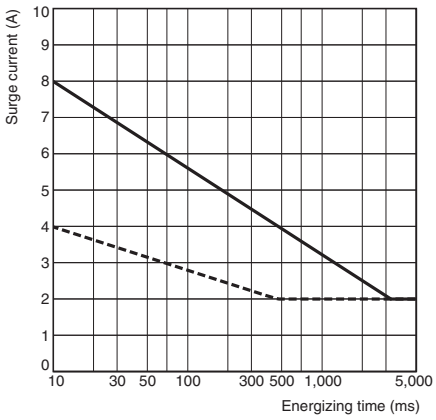
* On G70A-ZOC16, fully mounted.

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

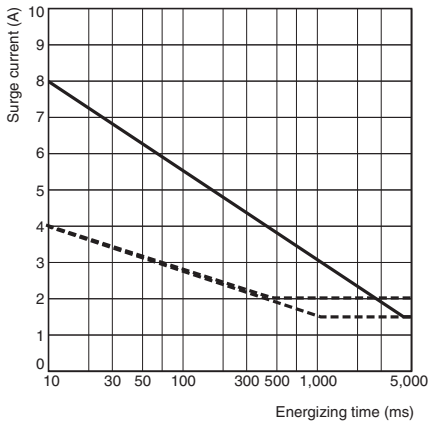
G3R-OA202S□N



G3R-ODX02SN (4 to 60 VDC)



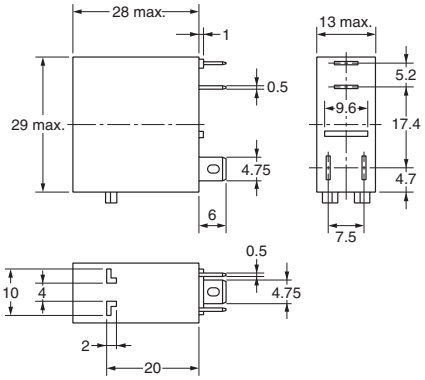
G3R-OD201SN (40 to 200 VDC)



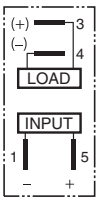
Dimensions

(Unit: mm)

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/

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

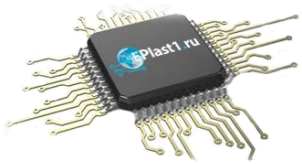
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.