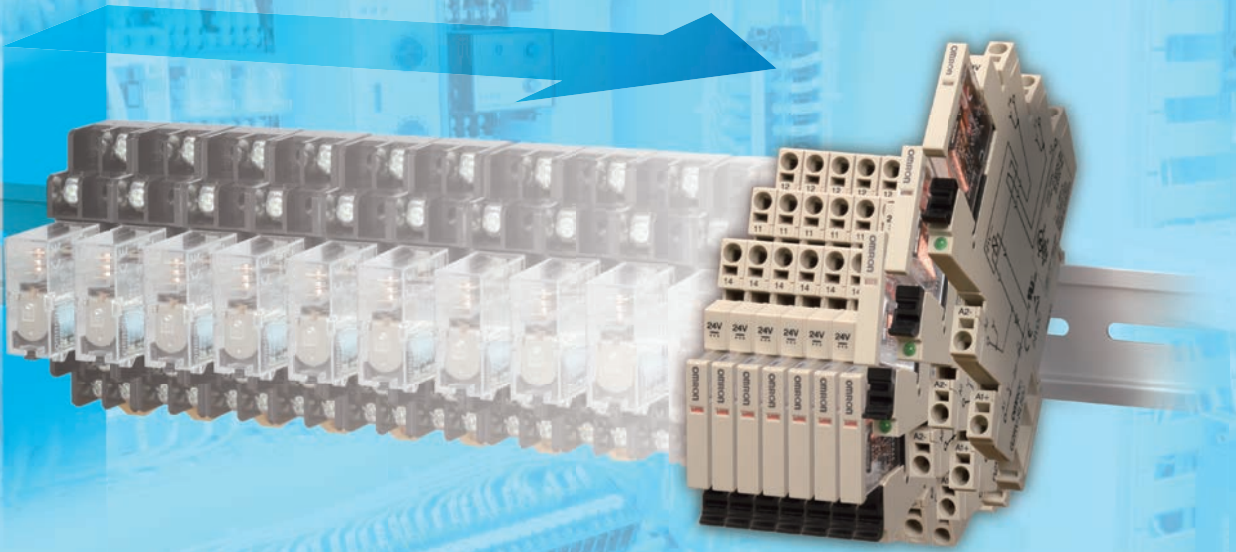


NEW

# Slim I/O Relays G2RV/G3RV Series

The slim shape of the I/O Relays gives flexibility in designing control panels  
Push-in terminals can reduce workloads

Value <sup>plus</sup> + 70% downsized



G2RV  
Standard model



G2RV  
Model with a  
latching lever



G2RV  
Model for micro load  
(gold plated contact)

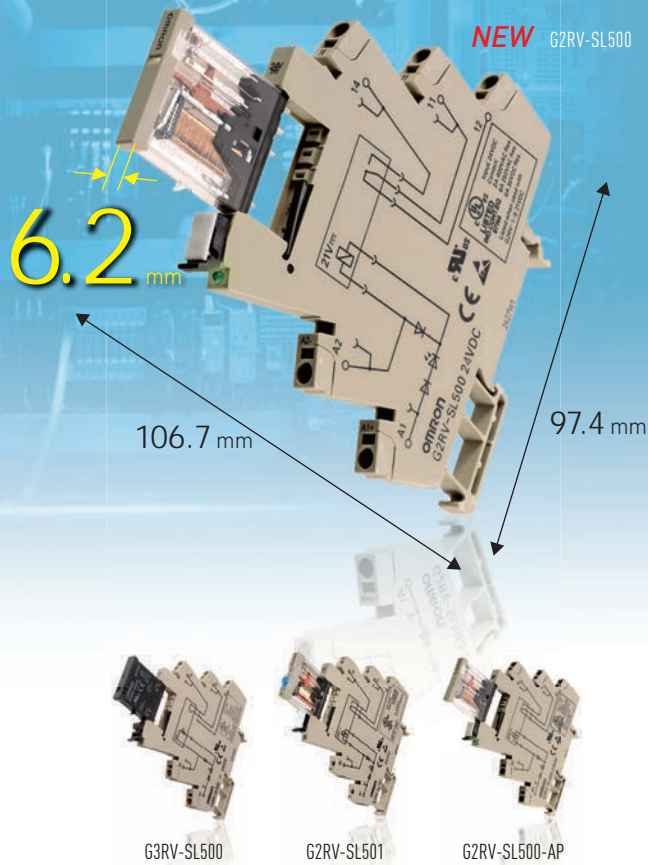


G3RV  
Solid State Relay

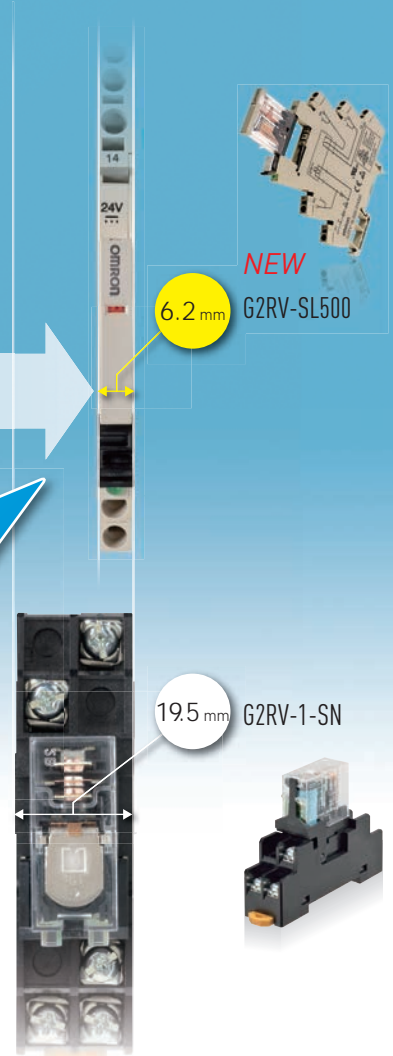


The slim shape of the I/O Relays gives flexibility in designing control panels

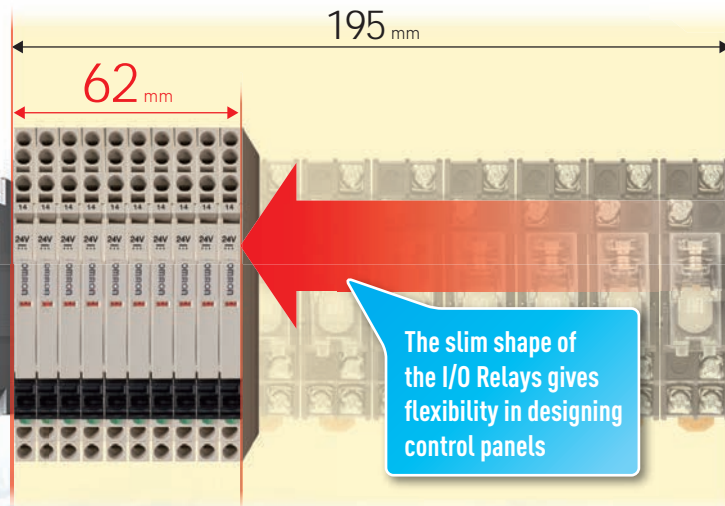
Slim size  $6.2^W \times 97.4^D \times 106.7^H$  mm



Thinner by  
**70%** compared with  
our previous product



## Advantages of Downsizing





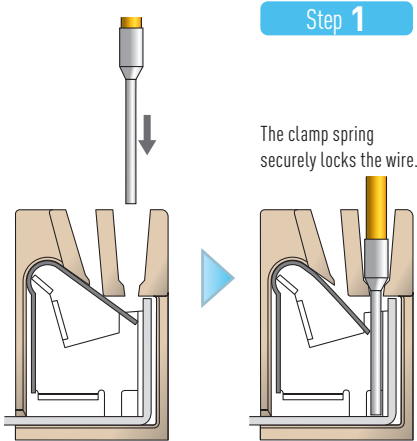


With push-in terminals, you can reduce wiring efforts and work processes \*When you use ferrules or solid wires

### Connecting a wire

Simple **one** step

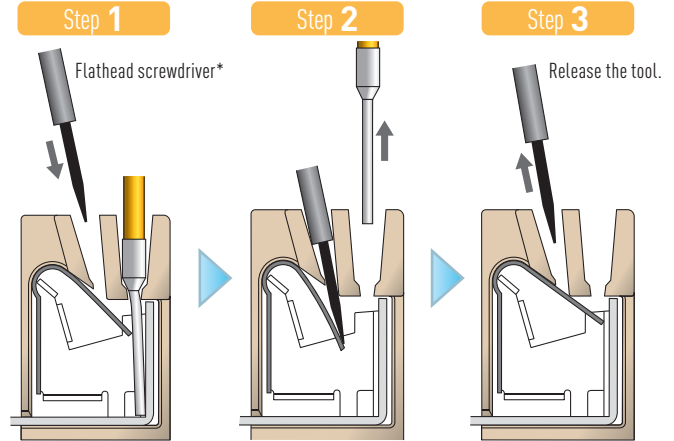
Insert a wire (or a ferrule).



### Removing a wire

Simple **three** step

Remove a wire (or a ferrule).



\*Use a flat-bladed screwdriver with parallel-tips of 2.5 mm diameter (3.0 mm max.).



## Improving Work Efficiency

With a push-in terminal, you can finish wiring in **2 seconds** by **inserting** a wire.

It is **25 seconds shorter** than with a round terminal.

It is **5 seconds shorter** than with a Y terminal.

		Wiring			
		1. Loosen the screw.	2. Remove the screw.	3. Attach the terminal.	4. Tighten the screw.
Traditional screw terminal	Round terminal	27 seconds			
	Y terminal	7 seconds			
G2RV/G3RV Push-in terminal	Ferrule	2 seconds			

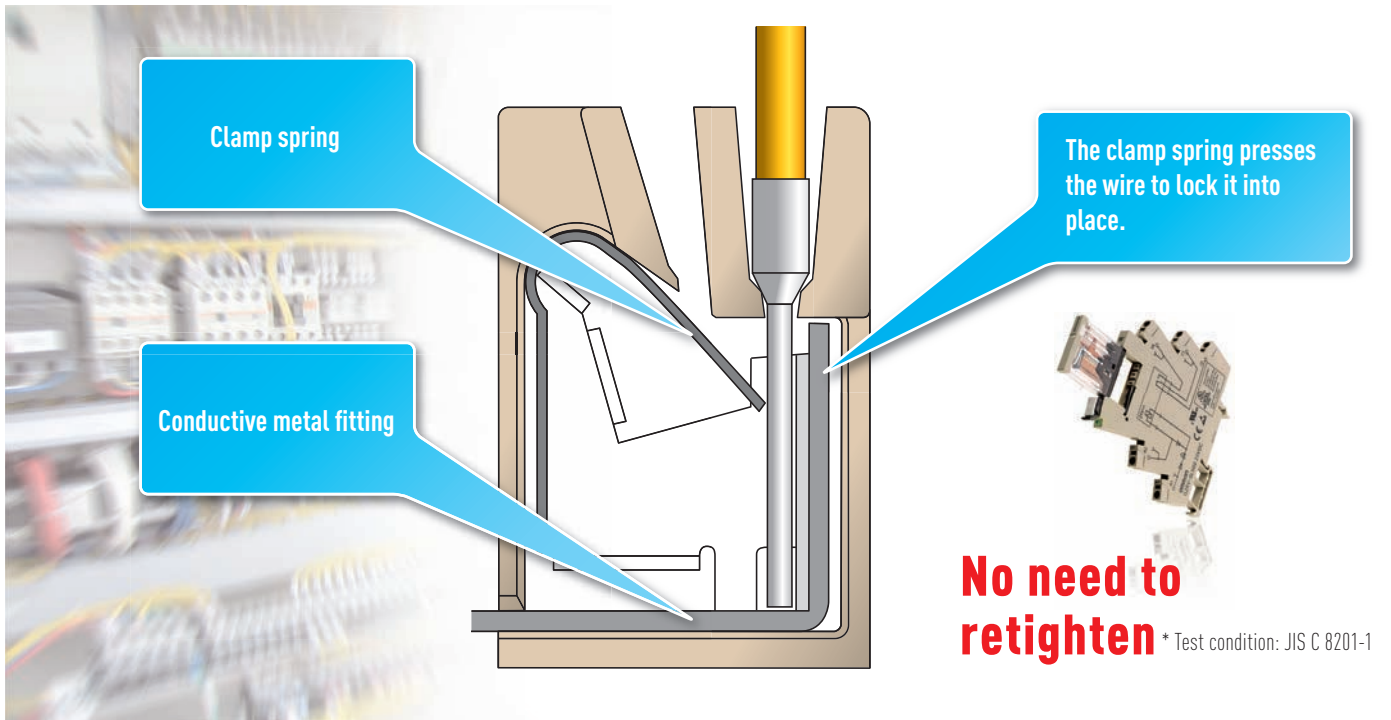
Y terminals can be attached only by tightening screws.

Screw-less terminals can be attached without tightening screws.

\*Based on our validation test results.

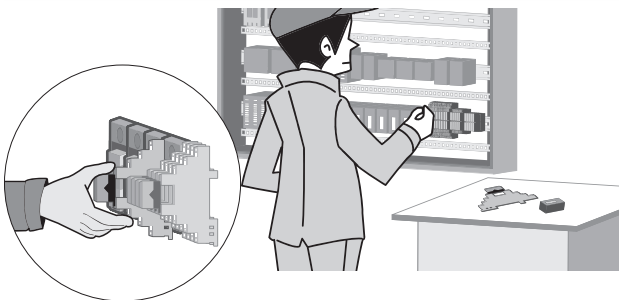


OMRON's push-in terminal blocks have spring structures which prevent contacts from becoming loose. The screws do not get loosened, and you don't have to retighten them.

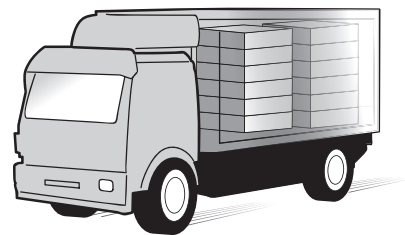


## Improving Work Efficiency (Compared with Screw Terminals)

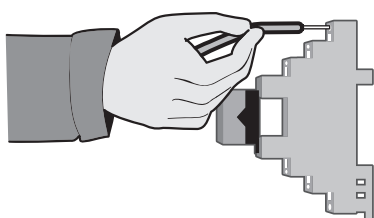
1. No need to retighten terminals after assembly.



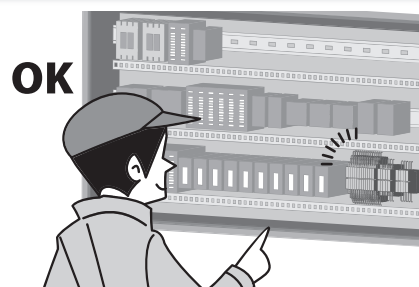
2. The terminals won't become loose due to vibration and shock during transportation and delivery. Therefore retightening is not necessary.



3. No need to retighten terminals after installing the control panel on the shop floor.



4. The terminals won't become loose due to vibration and shock during operation.







You can connect stranded wires easily without using crimp terminals.

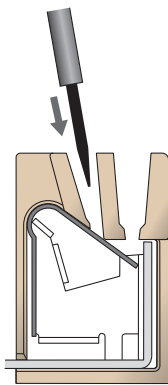
### Connecting a wire

## Simple **three** step

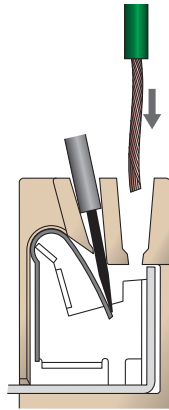
Insert a wire (i.e., a stranded wire\*).



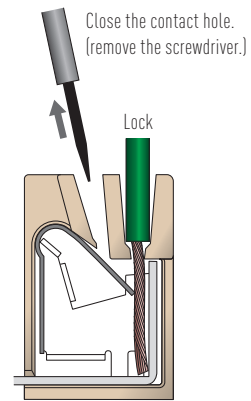
Step 1



Step 2



Step 3

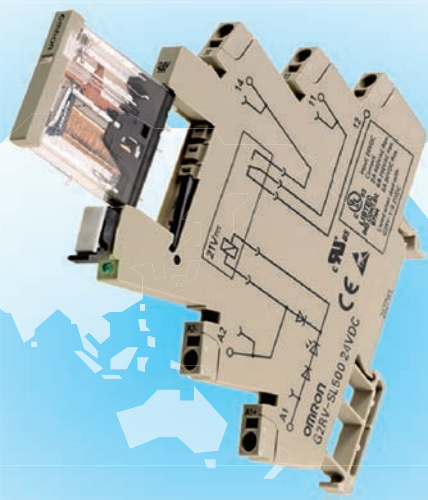


Close the contact hole.  
(remove the screwdriver.)

\*Applicable wire size: AWG22 (0.5 mm<sup>2</sup>) to AWG14 (2.5 mm<sup>2</sup>)



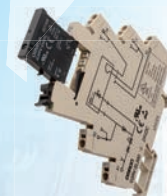
Reliable design standard that is acceptable around the world



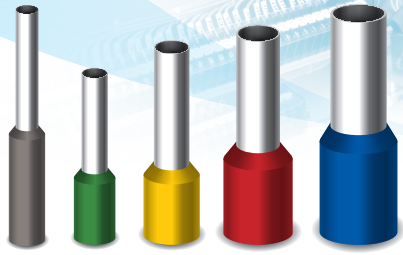
G2RV



G3RV



## Ferrule

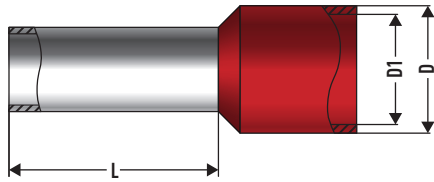


Ferrules with insulation collars can be used.

\*Applicable wire size: AWG22 (0.5 mm<sup>2</sup>) to AWG14 (2.5 mm<sup>2</sup>)

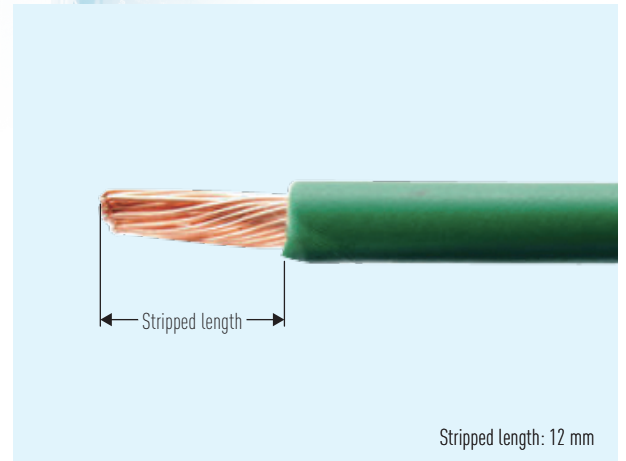
\*DIN46228, part4/09.90

## Ferrule Shape



L: 12 mm, Related standard: DIN46228

## Wire Stripped View



Stripped length: 12 mm

When using a stranded wire (or when a crimp terminal is not used)

\*Applicable wire size: AWG22 (0.5 mm<sup>2</sup>) to AWG14 (2.5 mm<sup>2</sup>)

### <Note> Minus Screw Terminals

For G2RV-SL700 and G3RV-SL700 Series, different stripped lengths apply to ferrules or stranded wires. Refer to the catalog for details.

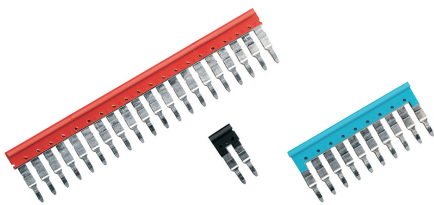
## Precautions for Selecting Ferrules

- Select a ferrule that is applicable to the wire size being used. Also the L length must match the wire stripped size for the terminal block.
- Ensure that the D diameter is smaller than the maximum wire sheathed diameter for the terminal block.
- Ensure that the D1 diameter is larger than the wire sheathed diameter.

## Accessories

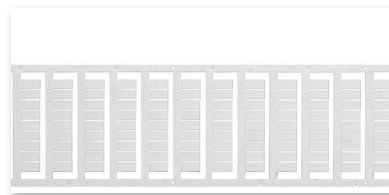
Crossbars

P2RVVM



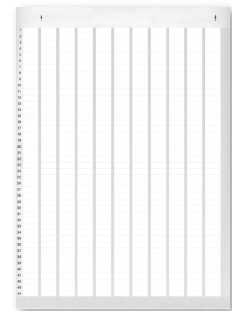
Plastic Labels for G2RV Sockets

R99-15 for G2RV



Labels (Stickers) for G2RV Sockets

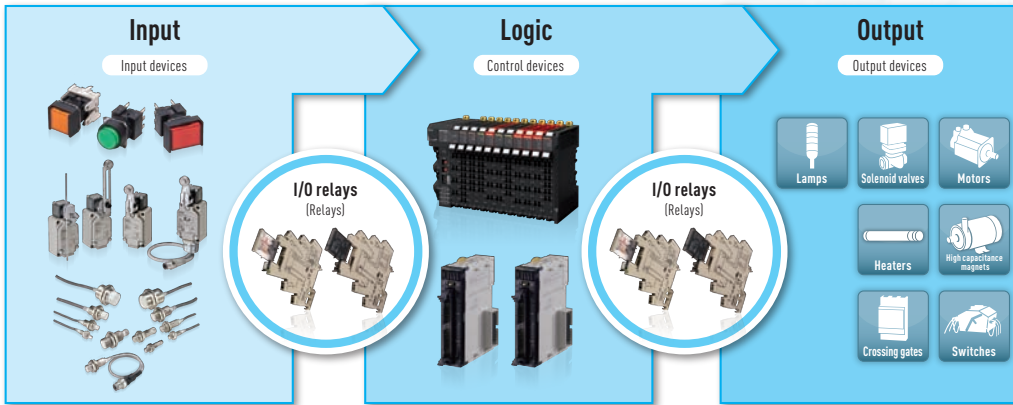
R99-16 for G2RV



Accessory	Type and box quantity	Model	Color		Model number
Crossbar	Bar with 2 poles (10 bars/box)	P2RVM-020	Red	R	P2RVM-020R
			Blue	S	P2RVM-020S
			Black	B	P2RVM-020B
	Bar with 3 poles (10 bars/box)	P2RVM-030	Red	R	P2RVM-030R
			Blue	S	P2RVM-030S
			Black	B	P2RVM-030B
	Bar with 4 poles (10 bars/box)	P2RVM-040	Red	R	P2RVM-040R
			Blue	S	P2RVM-040S
			Black	B	P2RVM-040B
	Bar with 10 poles (10 bars/box)	P2RVM-100	Red	R	P2RVM-100R
			Blue	S	P2RVM-100S
			Black	B	P2RVM-100B
Bar with 20 poles (10 bars/box)	P2RVM-200	Red	R	P2RVM-200R	
		Blue	S	P2RVM-200S	
		Black	B	P2RVM-200B	
Label	Plastic labels (5 sheets (600 labels)/box (1 sheet = 120 labels))	R99-15 for G2RV			R99-15 for G2RV
	Stickers (10 sheets (4,840 labels)/bag (1 sheet = 484 labels))	R99-16 for G2RV			R99-16 for G2RV

## Applications

This product is an I/O relay used in a control circuit. It can be used for inputting data to control devices and for activating output devices.



I/O relay functions: insulating input and output circuits, amplifying signals (i.e., switching large load with small signals), and changing signals (i.e., changing N.O. contact to N.C. contact)



## List of Models

### G2RV Slim I/O Relay

Wire connection	Type	Latching lever	Coil specification		Model number		
Push-in terminal	Standard model	No	DC	12	G2RV-SL500		
				24	G2RV-SL500		
			AC/DC	24	G2RV-SL500		
				48	G2RV-SL500		
			AC	110	G2RV-SL500		
				230	G2RV-SL500		
	Model for micro load	No	DC	24	G2RV-SL501		
				24	G2RV-SL501		
			AC/DC	24	G2RV-SL500-AP		
				48	G2RV-SL500-AP		
			AC	110	G2RV-SL500-AP		
				230	G2RV-SL500-AP		
Minus screw terminal	Standard model	No	DC	12	G2RV-SL700		
				24	G2RV-SL700		
			AC/DC	24	G2RV-SL700		
				48	G2RV-SL700		
			AC	110	G2RV-SL700		
				230	G2RV-SL700		
			Model for micro load	No	DC	24	G2RV-SL701
						24	G2RV-SL701
					AC/DC	24	G2RV-SL700-AP
	48	G2RV-SL700-AP					
	AC	110			G2RV-SL700-AP		
		230			G2RV-SL700-AP		

### Relays for Replacement

Type	Latching lever	Model	Coil specification		Model number
Standard model	No	G2RV-1-S	DC	11	G2RV-1-S
				21	G2RV-1-S
				48	G2RV-1-S
Model for micro load	No	G2RV-1-S-AP	DC	11	G2RV-1-S-AP
				21	G2RV-1-S-AP
				48	G2RV-1-S-AP

When ordering, designate the coil specification or the input specification.

### G3RV Slim I/O Solid State Relay

Wire connection	Applied output load	Zero cross function	Input specification		Model number	
Push-in terminal	for DC load	-	DC	12	G3RV-SL500-D	
				24	G3RV-SL500-D	
			AC/DC	24	G3RV-SL500-D	
				48	G3RV-SL500-D	
			AC	110	G3RV-SL500-D	
				230	G3RV-SL500-D	
	for AC load	Yes	-	DC	12	G3RV-SL500-A
					24	G3RV-SL500-A
				AC/DC	24	G3RV-SL500-A
					48	G3RV-SL500-A
				AC	110	G3RV-SL500-A
					230	G3RV-SL500-A
		No	-	DC	12	G3RV-SL500-AL
					24	G3RV-SL500-AL
				AC/DC	24	G3RV-SL500-AL
					48	G3RV-SL500-AL
				AC	110	G3RV-SL500-AL
					230	G3RV-SL500-AL
Minus screw terminal	for DC load	-	DC	12	G3RV-SL700-D	
				24	G3RV-SL700-D	
			AC/DC	24	G3RV-SL700-D	
				48	G3RV-SL700-D	
			AC	110	G3RV-SL700-D	
				230	G3RV-SL700-D	
	for AC load	Yes	-	DC	12	G3RV-SL700-A
					24	G3RV-SL700-A
				AC/DC	24	G3RV-SL700-A
					48	G3RV-SL700-A
				AC	110	G3RV-SL700-A
					230	G3RV-SL700-A
		No	-	DC	12	G3RV-SL700-AL
					24	G3RV-SL700-AL
				AC/DC	24	G3RV-SL700-AL
					48	G3RV-SL700-AL
				AC	110	G3RV-SL700-AL
					230	G3RV-SL700-AL



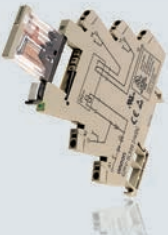
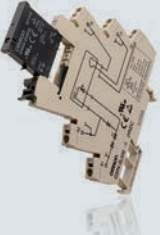
### Solid State Relays for Replacement

Output load	Zero cross function	Input specification		Model number	
for DC load	-	DC	12	G3RV-D03SL	
			24	G3RV-D03SL	
			48	G3RV-D03SL	
for AC load	Yes	DC	12	G3RV-202S	
			24	G3RV-202S	
			48	G3RV-202S	
	No	-	DC	12	G3RV-202SL
				24	G3RV-202SL
				48	G3RV-202SL





## G2RV/G3RV Series

	<b>First choice</b>	<b>Speedy, simple operation checks with latching levers</b>	<b>Higher reliability with gold plated contacts</b>	<b>High speed, frequent switching with semi-conductors</b>
	<b>Standard model</b> G2RV-SL500/700	<b>Model with a latching lever</b> G2RV-SL501/701	<b>Model for micro load (gold plated contact)</b> G2RV-SL500-AP/700-AP	<b>Solid State Relay (SSR)</b> G3RV-SL500/700
AC load	6 A at 250 VAC	6 A at 250 VAC	50 mA at 30 VAC	2 A at 100 to 240 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
				

### New Value for Control Panels

OMRON offers products and services to solve your diverse control panel challenges and contributes to growing your business.

Value <sup>plus</sup> +

**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 2015 All Rights Reserved.  
In the interest of product improvement,  
specifications are subject to change without notice.

CSM\_3\_1\_0516  
Cat. No. J204-E1-01

Printed in Japan  
0415 (0415)