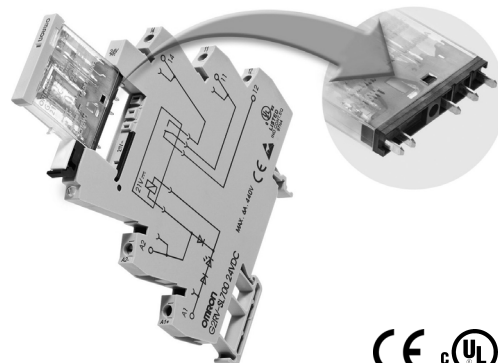


Slim Relay G2RV

Industrial Slim Relay Rated at 6 Amps

- Large plug-in terminals for reliable connection.
- LED indicator, clear case, and mechanical flag allows easy and immediate visual operation verification.
- Rated at full 6 A @ 250 VAC/30 VDC over 6,000 operations at 40° C, far exceeding other ratings in this profile.
- Slim outline to save space in high volume rack and PLC applications.
- Low power consumption for system energy savings.



Model Number Structure

Model Number Legend

G2RV-SL □□□□ - □
1 2 3 4 5

1. Auxiliary Type Designation

SL: Slim relay and socket combination

2. Wire Connection

- 7: Screw terminals
- 5: Push-in terminals
(future release)
double check status before hard copy printing

3. Relay LED

0: Without LED

4. Relay Pushbutton

0: Without pushbutton

5. Input Voltage

Note: LED indicator standard feature on Socket.

Ordering Information

List of Models

Classification		Enclosure rating	Input voltage	Type of connection	Contact form
					SPDT
Plug-in terminals	General-purpose	Unsealed	AC/DC	Screw terminals	G2RV-SL700
				Push-in terminals *	G2RV-SL500*

*Note: Future manufacturing release. Samples are available.

Relay and Socket Combinations

Input voltage	Screw terminals	Push-in terminals*
12 VDC	G2RV-SL700	G2RV-SL500
24 VDC	G2RV-SL700	G2RV-SL500
24 VAC/DC	G2RV-SL700	G2RV-SL500
48 VAC/DC	G2RV-SL700	G2RV-SL500
110 VAC	G2RV-SL700	G2RV-SL500
230 VAC	G2RV-SL700	G2RV-SL500

*Note: Future manufacturing release. Samples are available.

When ordering, add the rated coil voltage to the part number.
Example: G2RV-SL700-DC12 or G2RV-SL700-AC110.

Specifications

■ Input Ratings

Rated voltage	Rated current			Operate voltage	Release voltage	Power consumption		Input voltage
	AC		DC			% of rated voltage	AC (VA) Approx.	
	50 Hz	60 Hz		% of rated voltage				
12 VDC	---	---	27.2	80%	10%	---	300 mW	±10%
24 VDC	---	---	13.3			---	300 mW	
24 VAC/DC	21.1	22.5	13.0			0.5 VA	300 mW	
48 VAC/DC	8.5	9.0	5.2			0.4 VA	250 mW	
110 VAC	7.1	7.5	---			0.8 VA	---	
230 VAC	7.3	7.9	---			1.7 VA	---	

■ Contact Ratings

Number of poles	1 pole	
Load	Resistive load ($\cos\phi = 1$)	Inductive load ($\cos\phi = 0.4$, $L/R = 7$ ms)
Rated load	2A at 400 VAC; 6 A at 250 VAC; 6 A at 30 VDC	2.5 A at 250 VAC; 2 A at 30 VDC
Rated carry current	6 A	
Max. switching voltage	440 VAC, 125 VDC	
Max. switching current	6 A	
Max. switching power	1,500 VA 180 W	500 VA 60 W
Minimum load	5 mA at 5 VDC	

Note: P level: $\lambda_{60} = 0.1 \times 10^{-6}/\text{operation}$

■ Characteristics

Item	1 pole
Contact resistance	100 Ω max.
Operate (set) time	15 ms max.
Release time	5 ms max.
Max. operating frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr (under rated load)
Insulation resistance	1,000 MΩ min. (at 500 VDC)
Dielectric strength	4,000 VAC, 50/60 Hz for 1 min between coil and contacts* 1,000 VAC, 50/60 Hz for 1 min between contacts of same polarity
Vibration resistance	Destruction: 10 to 55 to 10 Hz, 0.50 mm single amplitude (1.0 mm double amplitude) Malfunction: 10 to 55 to 10 Hz, 0.50 mm single amplitude (1.0 mm double amplitude)
Shock resistance	Destruction: 1,000 m/s ² Malfunction: 200 m/s ² when energized; 100 m/s ² when not energized
Endurance	Mechanical: 5,000,000 operations min. Electrical: 70,000 operations min. (at 1,800 operations/hr under rated load), 100,000 operations typical
Ambient temperature	Operating: -40° C to 70° C (with no icing or condensation)
Ambient humidity	Operating: 5% to 85%
Weight	Approx. 21 to 35 g
Overvoltage category	III
Pollution degree	2

Note: Values in the above table are the initial values.

■ Approved Standards

UL 508 (File No. E41643)

Model	Contact form	Coil ratings	Contact ratings	Operations
G2RV-SL Series	SPDT	12 to 48 VDC 24 to 230 VAC	250 VAC 6 A (Resistive Load) 30 VDC 6 A (Resistive Load) 400 VAC 2 A (Resistive Load)	6,000

IEC/VDE (EN 61810)

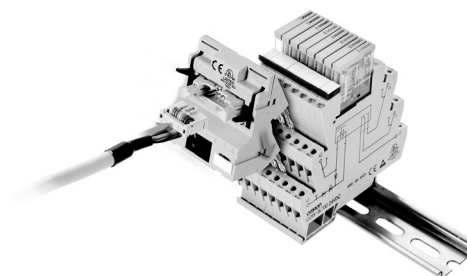
Contact form	Coil ratings	Contact ratings	Operations
1 pole	12, 24 VDC 24, 48 VAC/DC 110, 230 VAC	250 VAC 6 A (Res.) 30 VDC 6 A (Res.) 400 VAC 2 A (Res.)	50,000 50,000 6,000

Accessories

■ PLC Interface (for G2RV-SL700 series only)

List of Models

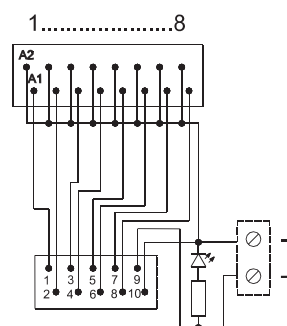
Model number	Description	Connection
P2RV-8-O-F	For output use	Flat cable



Specifications

Input	Rated voltage	30 VAC/VDC max.
	Current capacity	0.5 A per channel 2.0 A total current, power supply terminal
Characteristics	Ambient temperature	Operating: 0 to 55° C Storage: -20 to 85° C
	Overvoltage category	III
	Pollution degree	2

Electrical schematic P2RV-8-O-F



■ Stand-Alone Relays for MRO and Reference

Model Number Legend

G2RV-□ - □□□ - □ - □
1 2 3 4 5 6

1. Number of Poles

1: 1 pole

2. Terminals

S: Push-In

3. Relay LED

Blank: Without LED

4. Relay Pushbutton

Blank: Without pushbutton

4. Contact Material

Blank: AgSnIn

5. Rated Coil Voltage

11 VDC, 21 VDC, and 48 VDC

List of Models

Model number	Replacement for
G2RV-1-S DC11	G2RV-SL7□□/5□□ DC12
G2RV-1-S DC21	G2RV-SL7□□/5□□ DC24
	G2RV-SL7□□/5□□ AC/DC24
G2RV-1-S DC48	G2RV-SL7□□/5□□ AC/DC48
	G2RV-SL7□□/5□□ AC110
	G2RV-SL7□□/5□□ AC230



Accessories (Order Separately)

■ Cross Bars

Model Number Legend

P2RVM- □ □
1 2

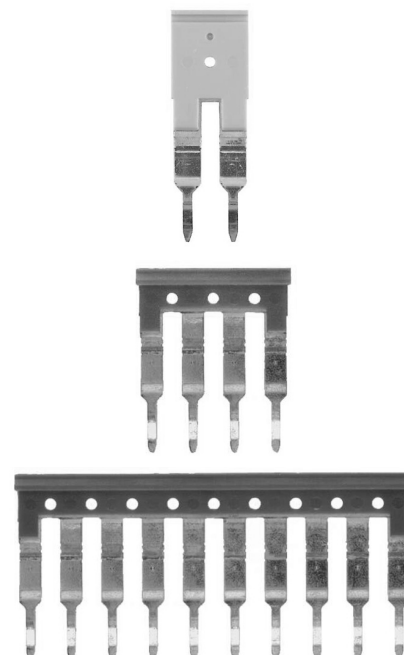
1. Number of Poles

- 020: 2 poles
- 030: 3 poles
- 040: 4 poles
- 100: 10 poles
- 200: 20 poles

2. Color

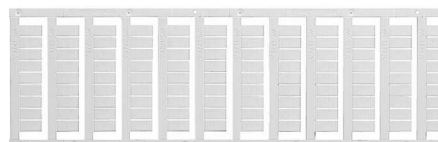
- R: Red
- S: Blue
- B: Black

Model number	Poles	Color
P2RVM-020□	2	Red (R) Blue (S) Black (B)
P2RVM-030□	3	
P2RVM-040□	4	
P2RVM-100□	10	
P2RVM-200□	20	



■ Plastic Labels for G2RV Sockets

Model number	Quantity	Color
R99-15 for G2RV	5 sheets x 120 labels = 600 labels (minimum order)	White

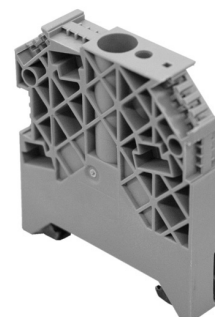


■ Labels (Stickers) for G2RV Sockets

Model number	Quantity	Color
R99-16 for G2RV	10 sheets x 484 labels = 4,840 labels (minimum order)	White

■ Separating Plates

Model number	Quantity	Description
P2RV-S	50 plates (minimum order)	Provides isolation between adjacent relays to achieve 440-V isolation.

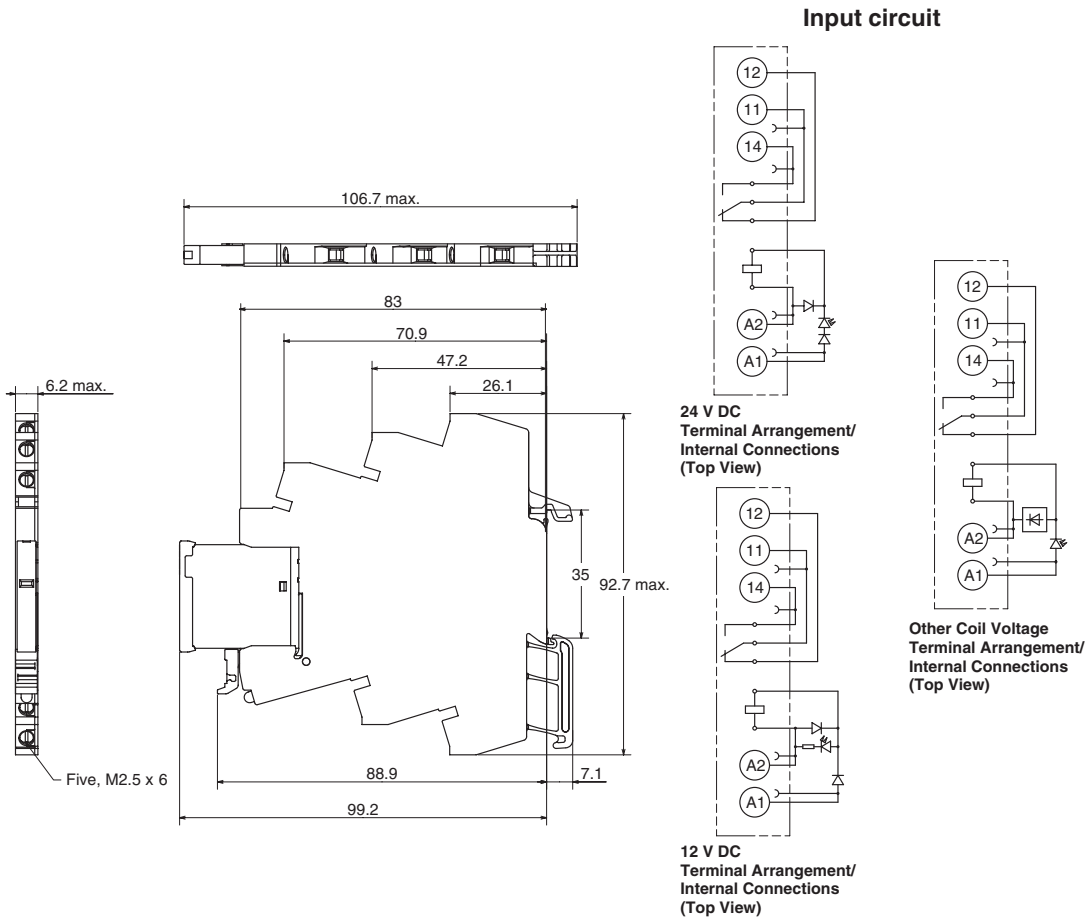


Dimensions

Note: All units are in millimeters unless otherwise indicated.

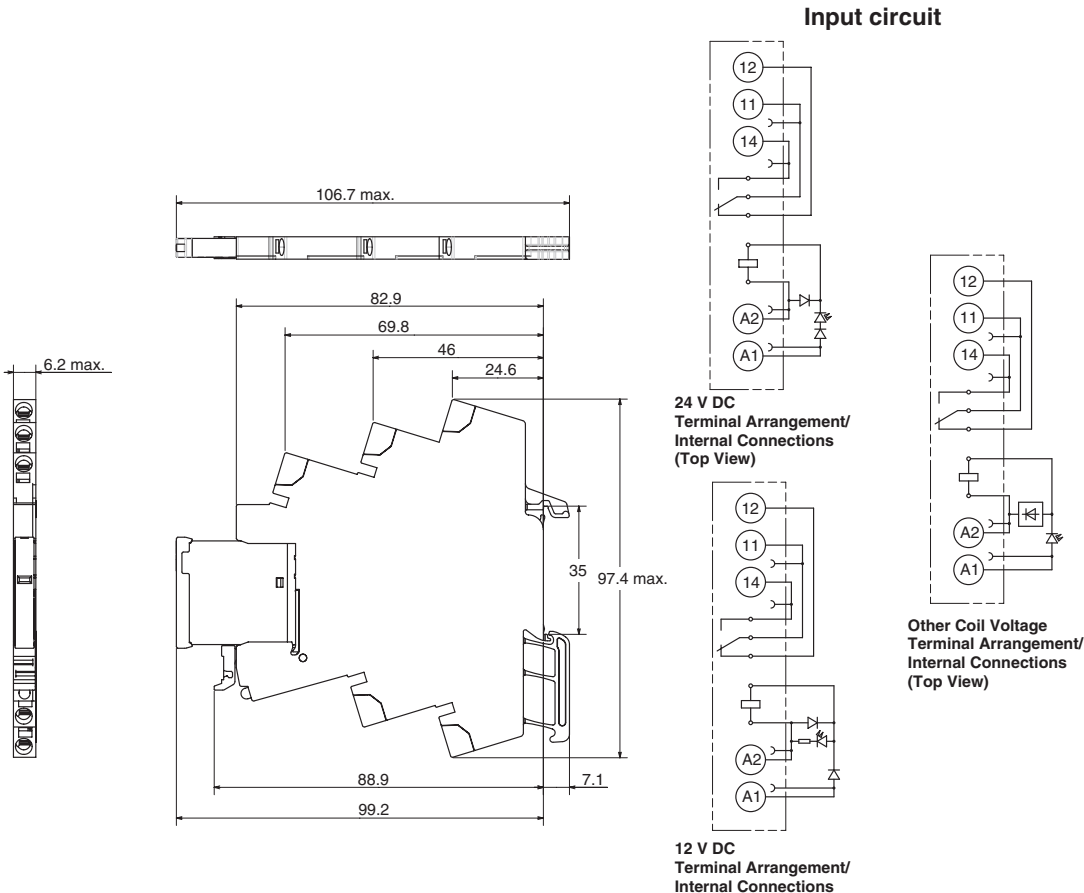
Complete Unit

G2RV-SL700



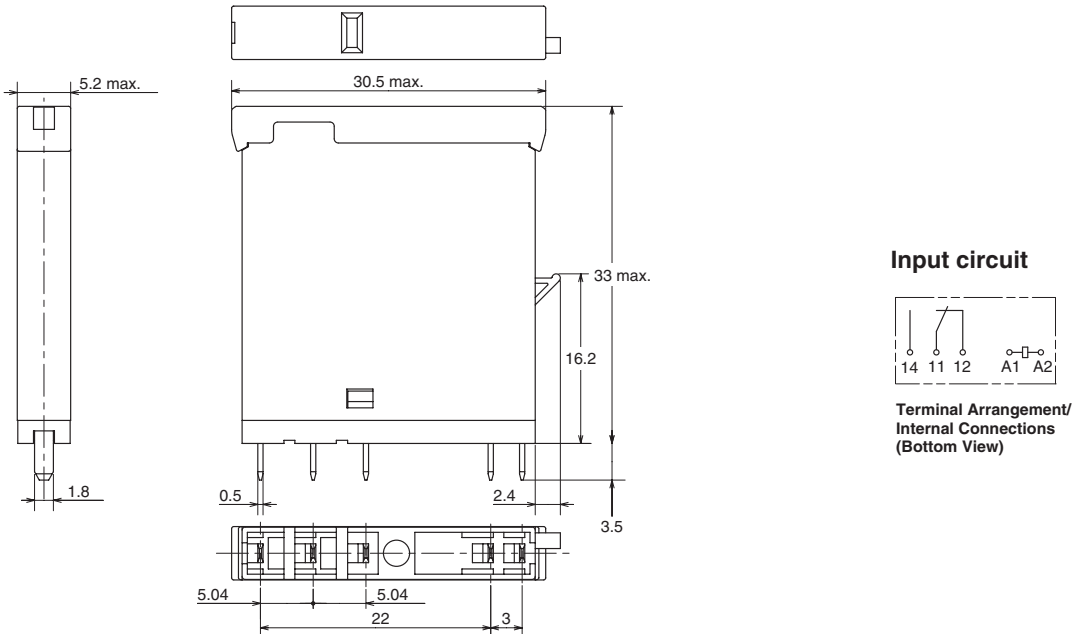
G2RV-SL500

(for information only, future release)



Single Relay

G2RV-1-S



Installation

■ Tools

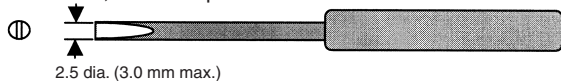
G2RV-SL700 series: Flat-blade screwdriver should be used for mounting and / or releasing cables.

G2RV-SL500 series: Flat-bade screwdriver should be used for mounting stranded wires without ferrules and / or releasing cables.

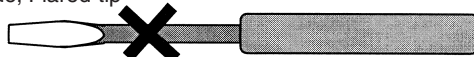
Applicable Screwdriver

- Flat-blade, Parallel-tip, 2.5 mm diameter (3.0 mm max.)

- Flat-blade, Parallel-tip



- Flat-blade, Flared-tip



Cannot be used.

Examples: FACOM AEF.2.5x75E (AEF. 3x75E)
 VESSEL No. 9900-(-)2.5x75 (No. 9900-(-)3x100)
 WAGO 210-119
 WIHA 260/2.5x40 (260/3x50)

*Chamfering the tip of the driver improves insertion when used as an exclusive tool.

■ Applicable Wires

Applicable Wire Sizes

G2RV-SL700 Series

Box Clamp Technology

Wire type	Applicable Wire Size	Stripping Length
Stranded without ferrules	0.5 - 2.5 mm ²	7 mm
Stranded with ferrules and plastic collar	0.5 - 2.5 mm ²	7 mm
Stranded with ferrules without plastic collar	0.5 - 2.5 mm ²	7 mm
Solid	0.5 - 4.0 mm ²	7 mm

G2RV-SL500 Series

(for information only, future release)

Push-in Technology

Wire type	Applicable Wire Size	Stripping Length
Stranded without ferrules	0.5 - 2.5 mm ²	12 mm
Stranded with ferrules and plastic collar	0.5 - 2.5 mm ²	12 mm
Stranded with ferrules without plastic collar	0.5 - 2.5 mm ²	12 mm
Solid	0.5 - 4.0 mm ²	12 mm

■ Wiring

Use wires of the applicable sizes specified above. The length of the exposed conductor should be 7 mm for a G2RV-SL700 series, 12 mm for a G2RV-SL500 series.

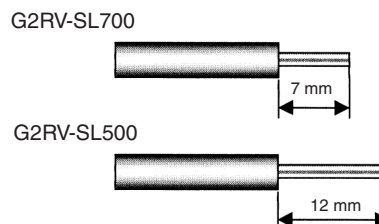


Fig. 1 Exposed Conductor Length

Precautions

■ Precautions for Connection

- Do not move the screwdriver up, down, or from side to side while it is inserted in the hole. Doing so may cause damage to internal components (e.g., deformation of the clamp spring or cracks in the housing) or cause deterioration of insulation.
- Do not insert the screwdriver at an angle. Doing so may break the side of socket and result in a short-circuit.
- Do not insert two or more wires in the hole. Wires may come in contact with the spring causing a temperature rise or be subject to sparks. (There are two wiring holes for each terminal.)
- Insert the screwdriver along the hole wall as shown below.
- If lubricating liquid, such as oil, is present on the tip of screwdriver, the screwdriver may fall out resulting in injury to the operator.
- Insert the screwdriver into the bottom of the hole. It may not be possible to connect cables properly if the screwdriver is inserted incorrectly.

■ General Precautions

- Do not use the product if it has been dropped on the ground. Dropping the product may adversely affect performance.
- Confirm that the socket is securely attached to the mounting track before wiring. If the socket is mounted insecurely it may fall and injure the operator.
- Ensure that the socket is not charged during wiring and maintenance. Not doing so may result in electric shock.
- Do not pour water or cleansing agents on the product. Doing so may result in electric shock.
- Do not use the socket in locations subject to solvents or alkaline chemicals.
- Do not use the socket in locations subject to ultraviolet light (e.g., direct sunlight). Doing so may result in markings fading, rust, corrosion, or resin deterioration.
- Do not dispose of the product in fire.

■ Removing from Mounting Rail

To remove the socket from the mounting rail, insert the tip of screwdriver in the fixture rail, and move it in the direction shown below.

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