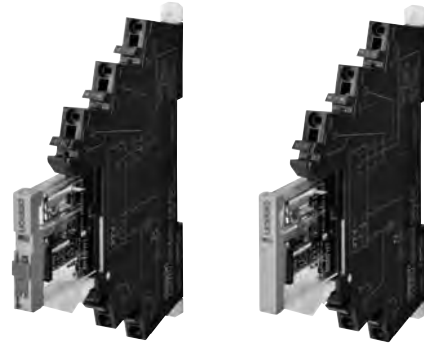


Slim Electromechanical I/O Relay

G2RV-SR

Global standard size, low profile,
slim (6.2 mm width) I/O relay



For the recent information on models that have been certified for safety standards, refer to your OMRON website.

Refer to *Safety Precautions* on page 20.

Features

Standard model/Micro load

- Terminal x 5
- Push-in
- Screw
- Release lever
- Operation display LED (Socket section)
- Mechanical indicator
- Operation verification which is linked to the contact



With latching lever (Test switch)

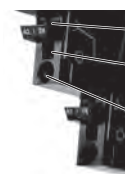
- Protective cover (Locked condition)
- Latching lever (Test switch)
- Circuit check operation Confirmation, reducing the inspection effort

PAT

"Foreign matter intrusion prevention structure"
"Malfunction prevention stopper"

Push-In Plus Terminal Block

- Short bar insertion holes
- Release hole
- Terminal (insertion) hole

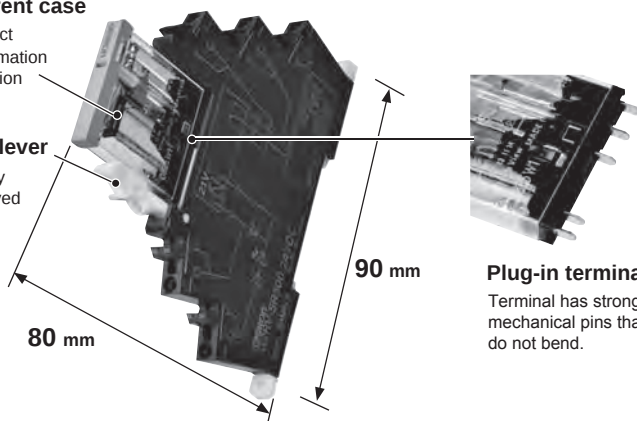


Transparent case

Relay contact
Easy confirmation of the situation

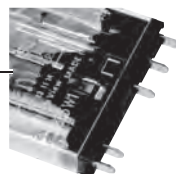
Release lever

Relay easily fixed/removed



Plug-in terminal

Terminal has strong mechanical pins that do not bend.



Model Number Structure

Model Number Legend

G2RV-SR -

(1) (2) (3) (4) (5) (6)

(1) Basic model name
G2RV: Slim I/O Relay

(2) Sub type
SR: Slim relay + integrated low profile socket

(3) Terminal (wire connection)
50: Push-In Plus Terminal
70: Screw terminal

(4) Latching lever (test switch)
0: Without latching lever
1: With latching lever

(5) Contact structure
Blank: Standard
AP: Microloads

(6) Rated input voltage
12, 24 VDC
24, 48 VAC/VC
100, 110, 200, 230 VAC

Ordering Information

Terminal (Wire connection)	Classification	Latching lever (Test switch)	Rated input voltage (V)		Model
Push-In Plus Terminal	Standard	No	DC	12	G2RV-SR500 DC12
				24	G2RV-SR500 DC24
			AC/DC	24	G2RV-SR500 AC/DC24
				48	G2RV-SR500 AC/DC48
			AC	100	G2RV-SR500 AC100
				110	G2RV-SR500 AC110
				200	G2RV-SR500 AC200
				230	G2RV-SR500 AC230
	Microloads	No	DC	12	G2RV-SR500-AP DC12
				24	G2RV-SR500-AP DC24
			AC/DC	24	G2RV-SR500-AP AC/DC24
				48	G2RV-SR500-AP AC/DC48
			AC	100	G2RV-SR500-AP AC100
				110	G2RV-SR500-AP AC110
				200	G2RV-SR500-AP AC200
				230	G2RV-SR500-AP AC230
Screw terminal	Standard	No	DC	12	G2RV-SR700 DC12
				24	G2RV-SR700 DC24
			AC/DC	24	G2RV-SR700 AC/DC24
				48	G2RV-SR700 AC/DC48
			AC	100	G2RV-SR700 AC100
				110	G2RV-SR700 AC110
				200	G2RV-SR700 AC200
				230	G2RV-SR700 AC230
	Microloads	No	DC	12	G2RV-SR700-AP DC12
				24	G2RV-SR700-AP DC24
			AC/DC	24	G2RV-SR700-AP AC/DC24
				48	G2RV-SR700-AP AC/DC48
			AC	100	G2RV-SR700-AP AC100
				110	G2RV-SR700-AP AC110
				200	G2RV-SR700-AP AC200
				230	G2RV-SR700-AP AC230

Note: Solid wire cannot be used for Push-In Plus terminal type. Make sure to use stranded wire or stranded wire with ferrules.

G2RV-SR

G3RV-SR

Common Precautions

Common Accessories

G2RV-SR

Relay for Maintenance

Model Number Legend

G2RV-1 - S □ - □ - G □
(1) (2) (3) (4) (5) (6)

(1) No. of poles
1: 1 pole

(2) Terminal
S: plug-in

(3) Latching lever (Test switch)
Blank: Without latching lever
L: With latching lever

(4) Contact material
Blank: Silver alloy
AP: Silver alloy + gold plate

(5) Types of relay for exchange
G: G2RV-SR series equipped
Relay

(6) Rated coil voltage
Number: 11, 21, 48 VDC

G2RV-1-SI-G



G2RV-1-S-G(-AP)



List of Models

Type	Latching Lever (Test switch)	Rated coil voltage (V)		Model	Applicable model
Standard	No	DC	11	G2RV-1-S-G DC11	G2RV-SR700/500 DC12V
			21	G2RV-1-S-G DC21	G2RV-SR700/500 DC24V
			48	G2RV-1-S-G DC48	G2RV-SR700/500 AC/DC24V
					G2RV-SR700/500 AC/DC48V
					G2RV-SR700/500 AC100V
					G2RV-SR700/500 AC110V
					G2RV-SR700/500 AC200V
					G2RV-SR700/500 AC230V
	Yes	DC	21	G2RV-1-SI-G DC21	G2RV-SR701/501 DC24V
					G2RV-SR701/501 AC/DC24V
Microload	No	DC	11	G2RV-1-S-AP-G DC11	G2RV-SR700/500-AP DC12V
			21	G2RV-1-S-AP-G DC21	G2RV-SR700/500-AP DC24V
			48	G2RV-1-S-AP-G DC48	G2RV-SR700/500-AP AC/DC24V
					G2RV-SR700/500-AP AC/DC48V
					G2RV-SR700/500-AP AC100V
					G2RV-SR700/500-AP AC110V
					G2RV-SR700/500-AP AC200V
					G2RV-SR700/500-AP AC230V

Specifications

Ratings

Coil ratings

Rated input voltage	Rated current		Operation voltage	Release voltage	Power consumption		Maximum allowable voltage
	AC		DC	Percentage of the rated voltage	AC (VA)	DC (mW)	Percentage of the rated voltage
	50 Hz	60 Hz					
12 VDC	—	—	27.2 mA	80% max.*	10% min.	—	110%
24 VDC	—	—	13.3 mA			—	
24 VAC/VDC	21.1 mA	22.5 mA	13.0 mA			Approx. 0.5 VA	
48 VAC/VDC	8.5 mA	9.0 mA	5.2 mA			Approx. 0.4 VA	
100 VAC	7.1 mA	7.5 mA	—			Approx. 0.8 VA	
110 VAC	7.1 mA	7.5 mA	—			Approx. 0.8 VA	
200 VAC	7.2 mA	7.9 mA	—			Approx. 1.7 VA	
230 VAC	7.3 mA	7.9 mA	—			Approx. 1.7 VA	

Note: The operating characteristics are measured at ambient temperature of 23°C.

* Operating voltage will be 85% max. for upside down mounting.

Contact ratings

Item	Standard (G2RV-SR700, 500, 701, 501)		For microloads (G2RV-SR700-AP, 500-AP) *2
Contact configuration	SPDT		
Load	Resistive load (cosφ=1)	Inductive load (cosφ=0.4, L/R=7ms)	Resistive load (cosφ=1)
Rated load	6 A at 250 VAC 6 A at 30 VDC	2.5 A at 250 VAC 2 A at 30 VDC	50 mA at 30 VAC 50 mA at 36 VDC
Rated carry current	6 A		50 mA
Maximum switching voltage	440 VAC, 125 VDC		30 VAC, 36 VDC
Maximum switching current	6 A		50 mA
Maximum switching power	1,500 VA 180 W	500 VA 60 W	—
Failure rate P value (reference value) *1	10 mA at 5 VDC		1 mA at 100 mVDC

*1. P level: $\lambda_{60}=0.1 \times 10^{-6}/\text{times}$

This value is the value in switching frequency 120 operations/min.

*2. If the gold plating layer is destroyed, the number will be the same as the standard type.

Characteristics

Item	Standard (G2RV-SR700, 500, 701, 501)		For microloads (G2RV-SR700-AP, 500-AP)
Contact resistance *	100 mΩ max.		
Operate (Set) time *	20 ms max.		
Release time *	AC, AC/DC: 40 ms max. DC: 20 ms max.		
Maximum operating frequency	Mechanical: 18,000 operations/h Electrical: 1,800 operations/h (rated load)		
Insulation resistance	1,000 MΩ min. (at 500 VDC)		
Dielectric strength	Between coil and contacts: 4,000VAC 50/60 Hz 1 min Contact between the same polarity: 1,000 VAC 50/60 Hz 1 min		
Vibration resistance	Destruction: 10 to 55 to 10 Hz, single amplitude 0.50 mm (double amplitude 1.0 mm) Malfunction: 10 to 55 to 10 Hz, single amplitude 0.50 mm (double amplitude 1.0 mm)		
Shock resistance	Destruction: 1,000 m/s ² Malfunction: Energized 200m/s ² , Non-energized 100m/s ²		
Endurance *	Mechanical	5,000,000 operations min.	
	Electrical	NO contact: 70,000 operations min. NC contact: 50,000 operations min.	5,000,000 operations min.
Ambient operating temperature	Operating: -40 to +55°C (with no icing or condensation)		
Ambient operating humidity	Operating: 5 to 85% RH		
Weight	Approx. 30 g		
Contact material	Ag alloy		Ag alloy + Au plating

Note: Above values are initial values.

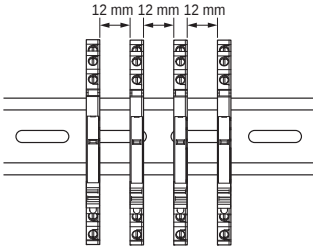
* Value is at ambient temperature of 23°C.

Approved standards

UL508 (file No.E41643)

Model	No. of poles	Operation coil ratings	Contact ratings	Operations
G2RV-SR series	SPDT	12 to 48 VDC 24 to 230 VAC	6 A at 250 VAC (Resistive load) 6 A at 30 VDC (Resistive load) 2 A at 400 VAC (Resistive load)*	6,000

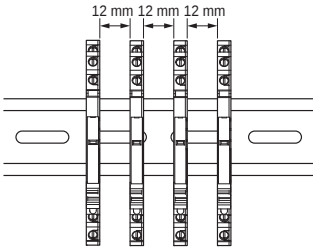
* If the load voltage exceeds 250 VAC, please attach with a spacing of 12 mm min., or use a separate plate (XW5Z-EP12).



VDE (EN 61810-1)

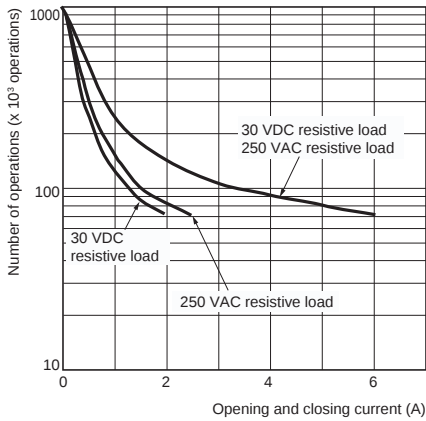
Model	No. of poles	Operation coil ratings	Contact ratings	Operations
G2RV-SR series	SPDT	12, 24 VDC 24, 48 VAC/VDC 100, 110, 200, 230 VAC	6 A at 250 VAC (Resistive load) 6 A at 30 VDC (Resistive load) 2 A at 400 VAC (Resistive load)*	50,000 50,000 6,000

* If the load voltage exceeds 250 VAC, please attach with a spacing of 12 mm min., or use a separate plate (XW5Z-EP12).

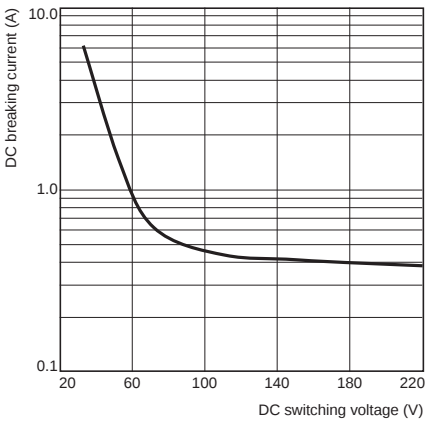


Engineering Data

Endurance curve (N.O. side)



Switching capacity of DC resistive load



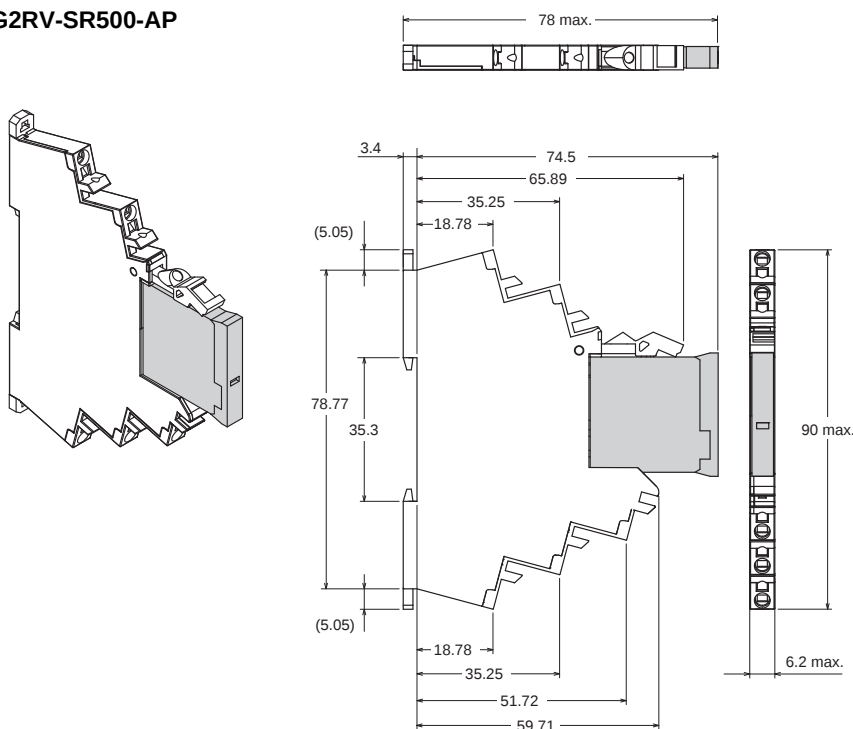
Dimensions

Slim I/O Relay + socket
Push-In Plus Terminal Block

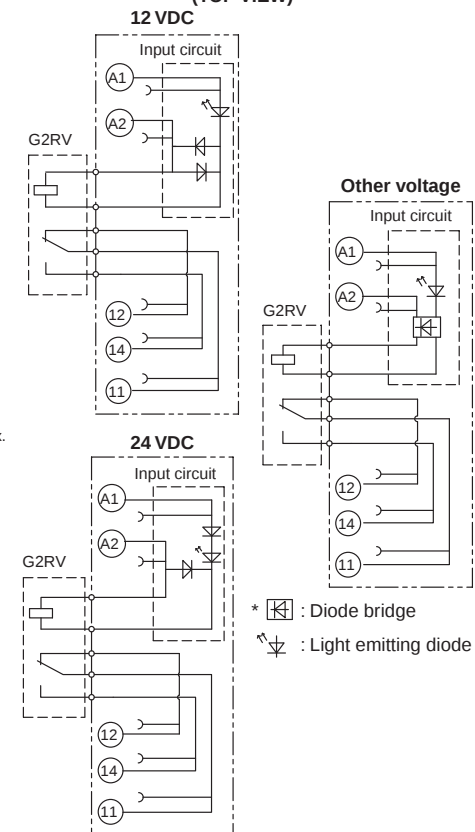
Models without latching lever (without test switch)

G2RV-SR500

G2RV-SR500-AP

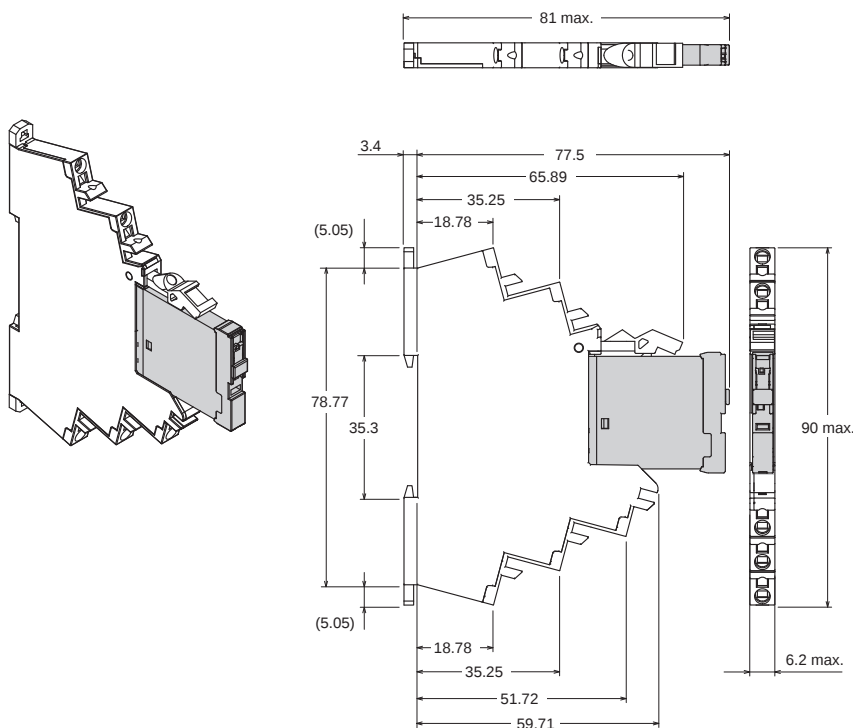


Terminal Arrangement/Internal Connection Diagram (TOP VIEW)

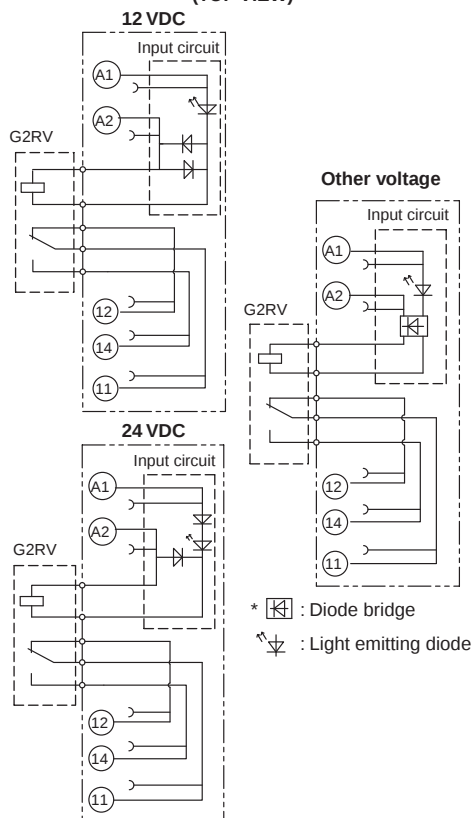


Models with latching lever (with test switch)

G2RV-SR501



Terminal Arrangement/Internal Connection Diagram (TOP VIEW)



G2RV-SR

G3RV-SR

Common Precautions

Common Accessories

G2RV-SR

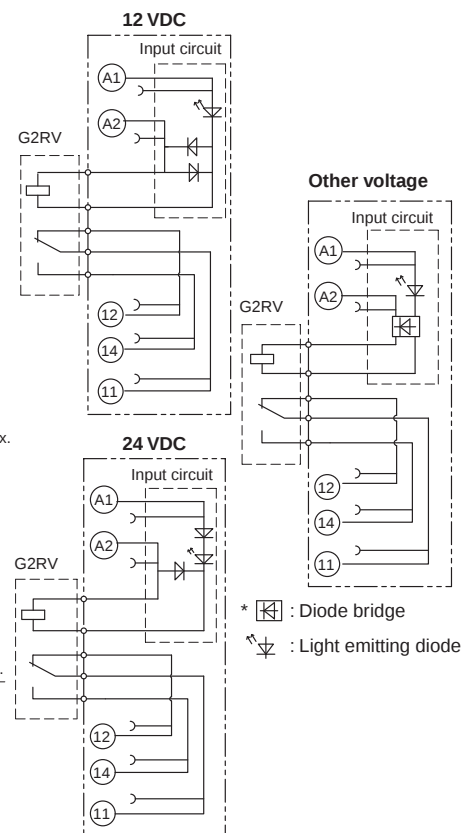
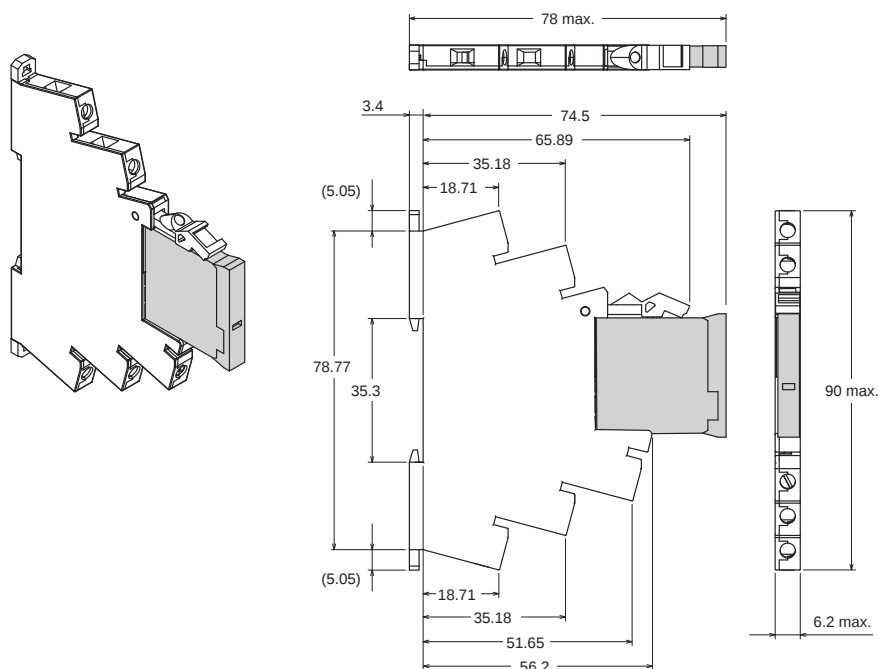
Screw terminal

Models without latching lever (without test switch)

G2RV-SR700

G2RV-SR700-AP

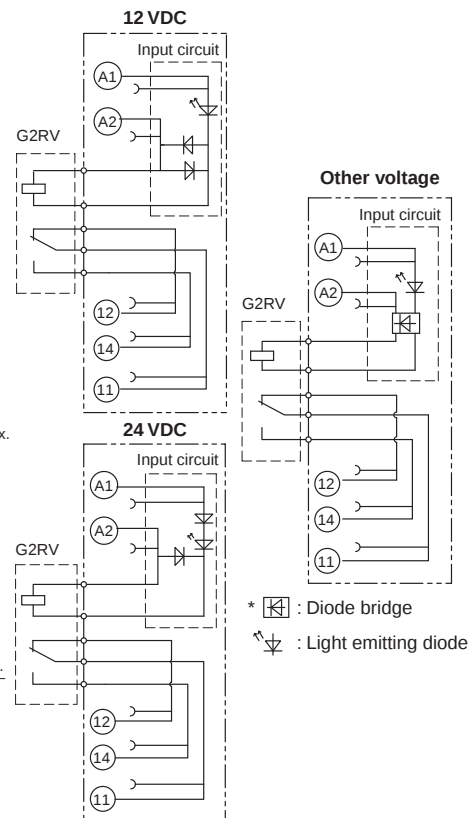
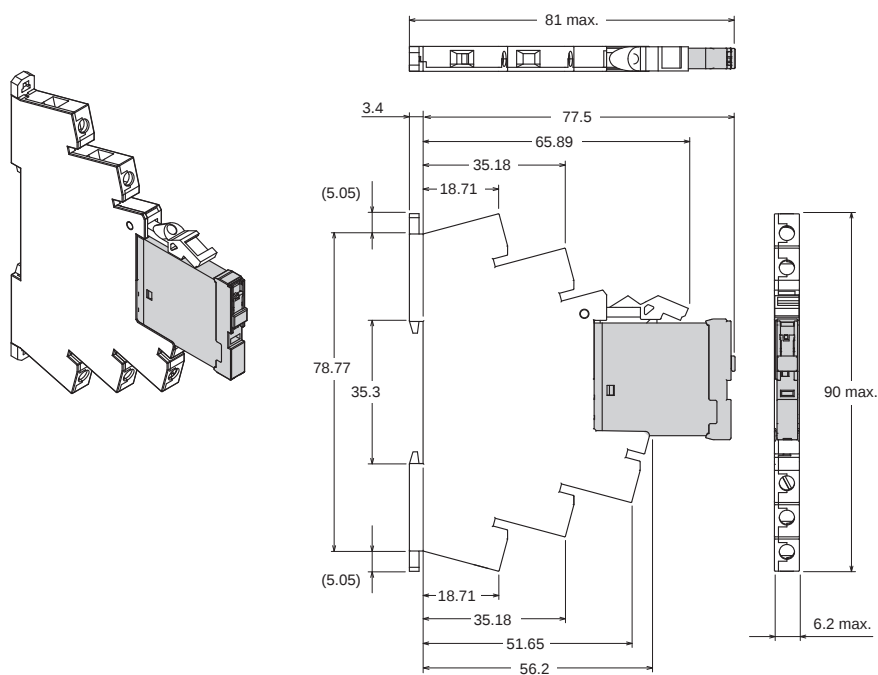
Terminal Arrangement/Internal Connection Diagram (TOP VIEW)



Models with latching lever (with test switch)

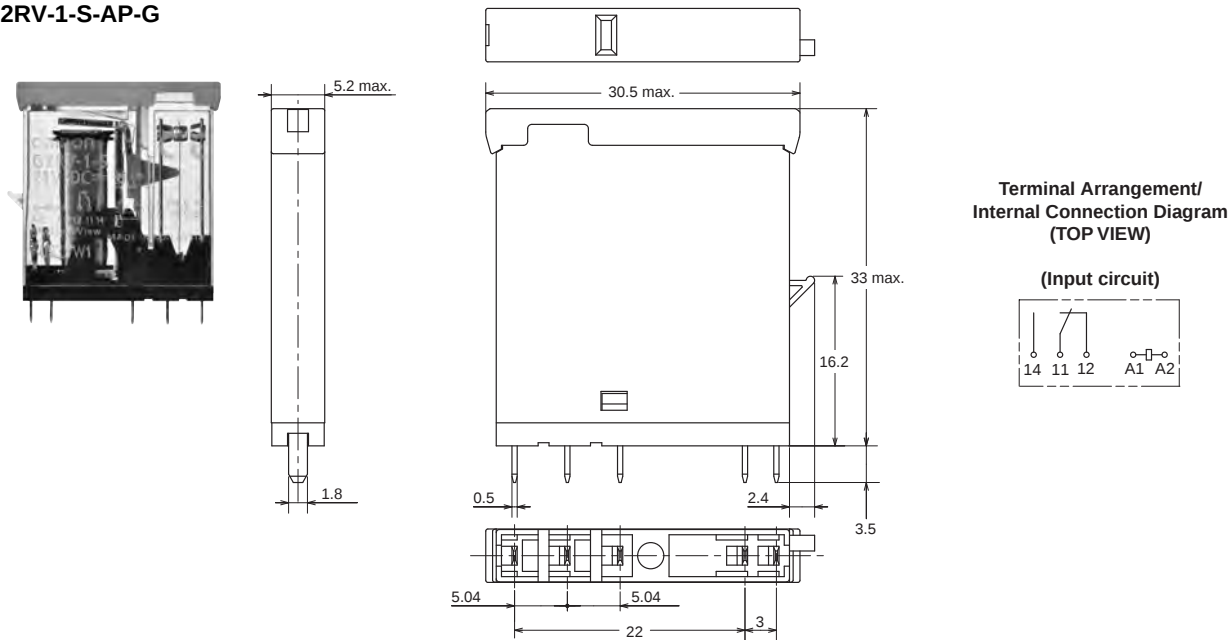
G2RV-SR701

Terminal Arrangement/Internal Connection Diagram (TOP VIEW)

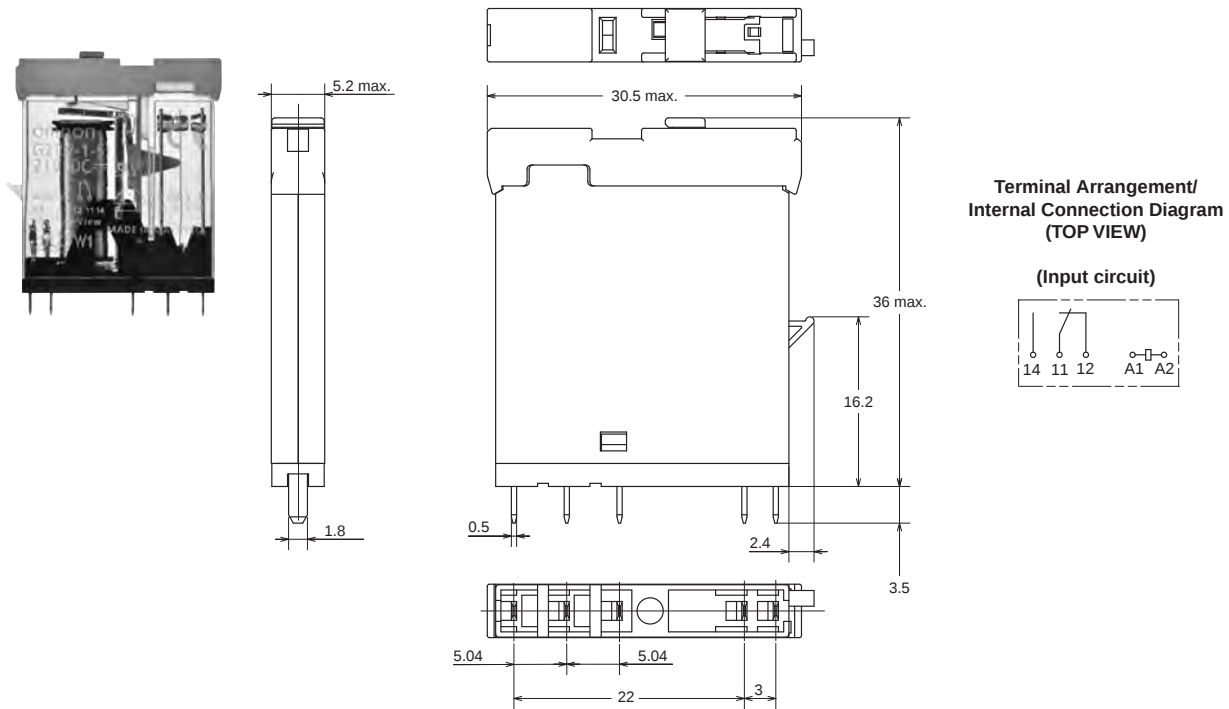


Relay for maintenance

Models without latching lever
G2RV-1-S-G
G2RV-1-S-AP-G



Models with latching lever (test switch)
G2RV-1-SI-G



G2RV-SR

G3RV-SR

Common Precautions

Common Accessories