

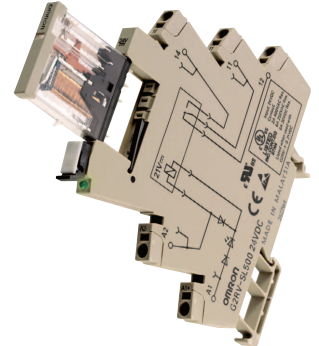
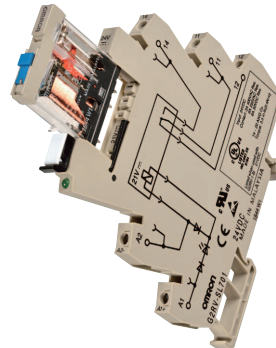
# Slim Relay G2RV

## The only truly industrial 6 mm relay

- Lockable test switch models now available.
- Large plug-in terminals for reliable connection.
- LED indicator and mechanical flag for status indication.
- Input type with gold plated contacts available.
- Transparent housing allows inspection of contact condition.
- Slim width to save space.
- Push-in terminals and accessories for easy wiring.
- Lloyd's approval

Test switch type

No test switch type

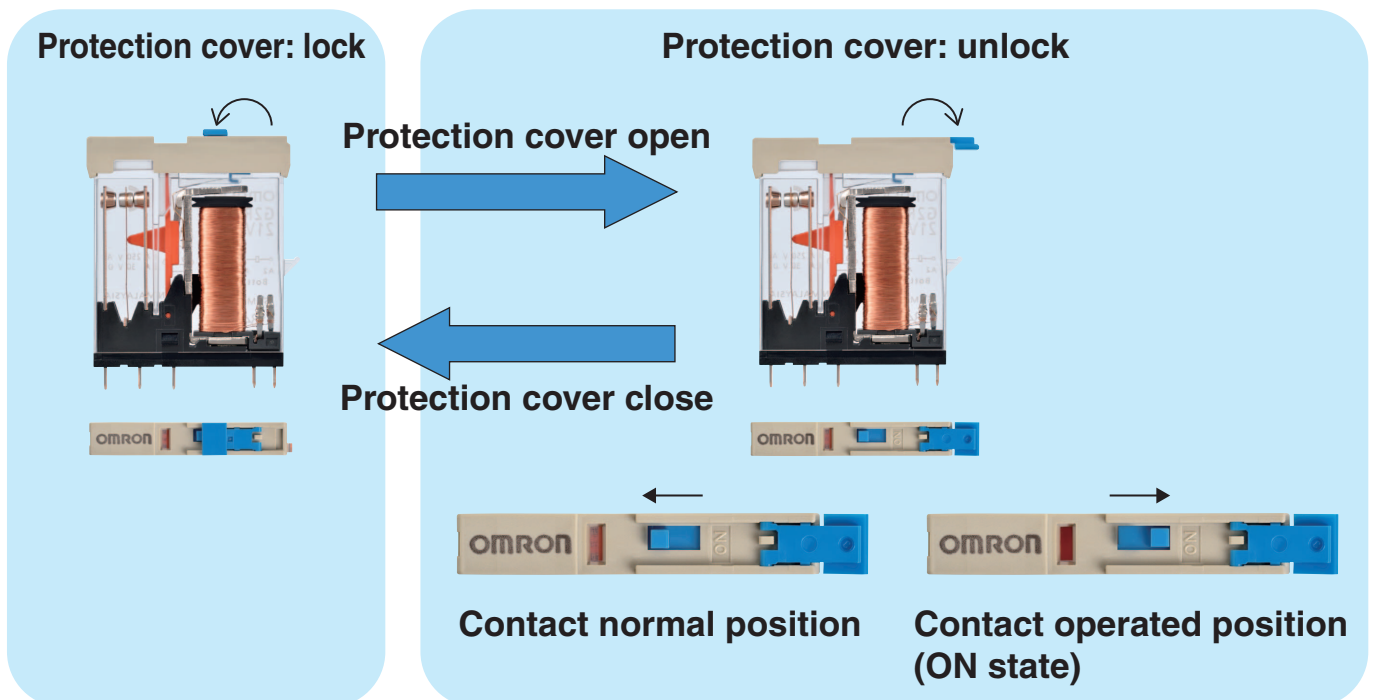


**PATENTED**

CE cUL US LISTED VDE LR

## Features

### ■ Test switch operation



#### OMRON Lockable test switch can be used in this way:

When the protection cover (located directly over the test switch) is closed, the test switch is retained in normal position (OFF state) by the protection cover. After opening the protection cover, the test switch can be unlocked. The test switch can then be moved to the operated position (ON state). After using the test switch, move it to the normal position (OFF state) and close the protection cover to prevent unwanted operation of the test switch.

\* Please check Precautions (Page. 17 : Precaution of test switch operation) when using test switch.

#### Application of test switch:

Example: Checking operation of Relays and sequence circuits.

# Model Number Structure

## Model Number Legend

G2RV-SL       -    

1   2   3   4   5   6

### 1. Auxiliary Type Designation

SL: Slim relay and socket combination

### 2. Wire Connection

7: Screw terminals

5: Push-in terminals

### 3. Relay LED

0: Without LED

### 4. Relay Test switch

0: No test switch type

1: Test switch type

### 5. Contact form

AP: Input type

Blank: Standard type

### 6. Input Voltage

**Note:** LED indicator available on socket.

## Ordering Information

### List of Models

| Classification    |                 | Enclosure rating | Input voltage | Type of connection | Test switch | Contact form (SPDT) |               |
|-------------------|-----------------|------------------|---------------|--------------------|-------------|---------------------|---------------|
|                   |                 |                  |               |                    |             | Standard type       | Input type    |
| Plug-in terminals | General-purpose | Unsealed         | AC/DC         | Screw terminals    | No          | G2RV-SL700          | G2RV-SL700-AP |
|                   |                 |                  |               |                    | Yes         | G2RV-SL701          | ---           |
|                   |                 |                  |               | Push-in terminals  | No          | G2RV-SL500          | G2RV-SL500-AP |
|                   |                 |                  |               |                    | Yes         | G2RV-SL501          | ---           |

### Relay and Socket Combinations

#### No test switch type

| Input voltage | Contact form (SPDT)                 |                      |                                  |                         |
|---------------|-------------------------------------|----------------------|----------------------------------|-------------------------|
|               | Standard type (No test switch type) |                      | Input type (No test switch type) |                         |
|               | Screw terminals                     | Push-in terminals    | Screw terminals                  | Push-in terminals       |
| 12 VDC        | G2RV-SL700 12 VDC                   | G2RV-SL500 12 VDC    | G2RV-SL700-AP 12 VDC             | G2RV-SL500-AP 12 VDC    |
| 24 VDC        | G2RV-SL700 24 VDC                   | G2RV-SL500 24 VDC    | G2RV-SL700-AP 24 VDC             | G2RV-SL500-AP 24 VDC    |
| 24 VAC/DC     | G2RV-SL700 24 VAC/DC                | G2RV-SL500 24 VAC/DC | G2RV-SL700-AP 24 VAC/DC          | G2RV-SL500-AP 24 VAC/DC |
| 48 VAC/DC     | G2RV-SL700 48 VAC/DC                | G2RV-SL500 48 VAC/DC | G2RV-SL700-AP 48 VAC/DC          | G2RV-SL500-AP 48 VAC/DC |
| 110 VAC       | G2RV-SL700 110 VAC                  | G2RV-SL500 110 VAC   | G2RV-SL700-AP 110 VAC            | G2RV-SL500-AP 110 VAC   |
| 230 VAC       | G2RV-SL700 230 VAC                  | G2RV-SL500 230 VAC   | G2RV-SL700-AP 230 VAC            | G2RV-SL500-AP 230 VAC   |

#### Test switch type

| Input voltage | Contact form (SPDT)              |                      |                               |                   |
|---------------|----------------------------------|----------------------|-------------------------------|-------------------|
|               | Standard type (Test switch type) |                      | Input type (Test switch type) |                   |
|               | Screw terminals                  | Push-in terminals    | Screw terminals               | Push-in terminals |
| 24 VDC        | G2RV-SL701 24 VDC                | G2RV-SL501 24 VDC    | ---                           | ---               |
| 24 VAC/DC     | G2RV-SL701 24 VAC/DC             | G2RV-SL501 24 VAC/DC | ---                           | ---               |

# Specifications

## Input Ratings

| Rated voltage | Rated current <sup>*1</sup> |         |         | Must operate voltage | Must release voltage | Power consumption |                 | Input voltage      |
|---------------|-----------------------------|---------|---------|----------------------|----------------------|-------------------|-----------------|--------------------|
|               | AC                          |         | DC      | % of rated voltage   |                      | AC (VA) Approx.   | DC (mW) Approx. | % of rated voltage |
|               | 50 Hz                       | 60 Hz   |         |                      |                      |                   |                 |                    |
| 12 VDC        | ---                         | ---     | 27.2 mA | 80%                  | 10%                  | ---               | 300 mW          | ±10%               |
| 24 VDC        | ---                         | ---     | 13.3 mA |                      |                      | ---               | 300 mW          |                    |
| 24 VAC/DC     | 21.1 mA                     | 22.5 mA | 13.0 mA |                      |                      | 0.5 VA            | 300 mW          |                    |
| 48 VAC/DC     | 8.5 mA                      | 9.0 mA  | 5.2 mA  |                      |                      | 0.4 VA            | 250 mW          |                    |
| 110 VAC       | 7.1 mA                      | 7.5 mA  | ---     |                      |                      | 0.8 VA            | ---             |                    |
| 230 VAC       | 7.3 mA                      | 7.9 mA  | ---     |                      |                      | 1.7 VA            | ---             |                    |

\*1) Rated currents are measured at 23 degrees Celsius (ambient)

## Contact Ratings

| Item                                         | Standard type (G2RV-SL700, 500, 701, 501) |                                                      | Input type (G2RV-SL700-AP, 500-AP) <sup>*2</sup> |
|----------------------------------------------|-------------------------------------------|------------------------------------------------------|--------------------------------------------------|
| Number of poles                              | 1 pole                                    |                                                      |                                                  |
| Load                                         | Resistive load<br>( $\cos\phi = 1$ )      | Inductive load<br>( $\cos\phi = 0.4$ , $L/R = 7$ ms) | Resistive load<br>( $\cos\phi = 1$ )             |
| Rated load                                   | 6 A at 250 VAC;<br>6 A at 30 VDC          | 2.5 A at 250 VAC;<br>2 A at 30 VDC                   | 50 mA at 30 VAC;<br>50 mA at 36 VDC              |
| Rated carry current                          | 6 A                                       |                                                      | 50 mA                                            |
| Max. switching voltage                       | 400 VAC, 125 VDC                          |                                                      | 30 VAC, 36 VDC                                   |
| Max. switching current                       | 6 A                                       |                                                      | 50 mA                                            |
| Max. switching power                         | 1,500 VA<br>180 W                         | 500 VA<br>60 W                                       | ---                                              |
| Failure rate (reference value) <sup>*1</sup> | 10 mA at 5 VDC (P level)                  |                                                      | 1 mA at 100 mVDC (P level)                       |

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

\*2) If a gold layer is destroyed, contact ratings of standard type are applicable.

## Characteristics

| Item                     | Standard type (G2RV-SL700, 500, 701, 501)                                                                                                                                | Input type (G2RV-SL700-AP, 500-AP)                                             |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Contact resistance       | 100 mΩ max.                                                                                                                                                              |                                                                                |
| Operate (set) time       | 20 ms max.                                                                                                                                                               |                                                                                |
| Release time             | 40 ms max.                                                                                                                                                               |                                                                                |
| Max. operating frequency | Mechanical: 18,000 operations/hr<br>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*;<br>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)<br>Malfunction: 10 to 55 to 10 Hz, 0.50 mm single amplitude (1.0 mm double amplitude) |                                                                                |
| Shock resistance         | Destruction: 1,000 m/s <sup>2</sup><br>Malfunction: 200 m/s <sup>2</sup> when energized; 100 m/s <sup>2</sup> when not energized                                         |                                                                                |
| Endurance                | Mechanical: 5,000,000 operations min.<br>Electrical: 100,000 Typical;<br>NO 70,000 operations min. ;<br>NC 50,000 operations min.                                        | Mechanical: 5,000,000 operations min.<br>Electrical: 5,000,000 operations min. |
| Ambient temperature      | Operating: -40°C to 55°C (with no icing or condensation)                                                                                                                 |                                                                                |
| Ambient humidity         | Operating: 5% to 85%                                                                                                                                                     |                                                                                |
| Weight                   | Approx. 35 g                                                                                                                                                             |                                                                                |
| Overvoltage category     | III                                                                                                                                                                      |                                                                                |
| Pollution degree         | 2                                                                                                                                                                        |                                                                                |
| Contact material         | AgSnIn                                                                                                                                                                   | AgSnIn + Gold Plating                                                          |
| Creepage distance        | 7.0 mm                                                                                                                                                                   |                                                                                |
| Clearance distance       | 5.5 mm                                                                                                                                                                   |                                                                                |

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<br>24 to 230 VAC | 250 VAC 6 A (Resistive Load)<br>30 VDC 6 A (Resistive Load)<br>400 VAC 2 A (Resistive Load) | 6,000      |

### IEC/VDE (EN 61810)

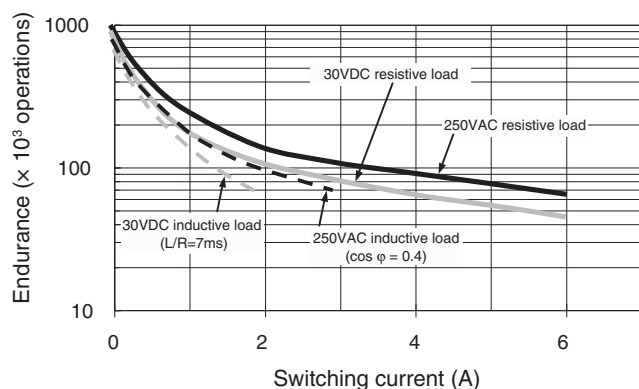
| Contact form | Coil ratings                                | Contact ratings                                                                             | Operations                |
|--------------|---------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------|
| SPDT         | 12, 24 VDC<br>24, 48 VAC/DC<br>110, 230 VAC | 250 VAC 6 A (Resistive Load)<br>30 VDC 6 A (Resistive Load)<br>400 VAC 2 A (Resistive Load) | 50,000<br>50,000<br>6,000 |

### Lloyd's (File No. 07/10027 (E2))

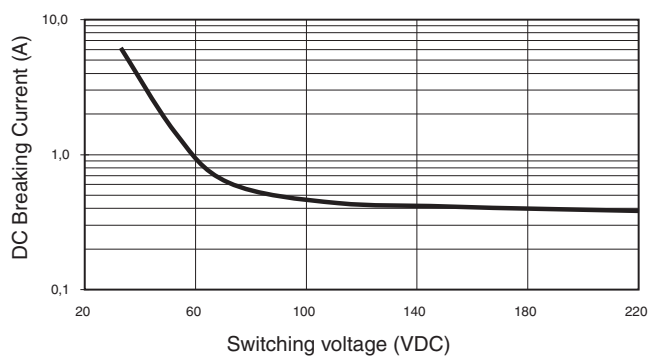
| Model          | Contact form | Coil ratings                                | Contact ratings                                                                                              |
|----------------|--------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| G2RV-SL Series | SPDT         | 12, 24 VDC<br>24, 48 VAC/DC<br>110, 230 VAC | 250 VAC 6 A (Resistive load)<br>250 VAC 2.5 A (PF0.4)<br>30 VDC 6 A (Resistive load)<br>30 VDC 2 A (L/R=7ms) |

## Engineering Data

### ■ Endurance



### Switching capacity of DC resistive load



### Typical Operating and Release Time

| Model number           | Operating time (typical) | Release time (typical) |
|------------------------|--------------------------|------------------------|
| G2RV-SL7□□/5□□ DC12    | 5 ~ 7 ms                 | 5 ~ 8 ms               |
| G2RV-SL7□□/5□□ DC24    | 5 ~ 7 ms                 | 6 ~ 9 ms               |
| G2RV-SL7□□/5□□ AC/DC24 | 5 ~ 7 ms                 | 17 ~ 22 ms             |
| G2RV-SL7□□/5□□ AC/DC48 | 5 ~ 7 ms                 | 22 ~ 30 ms             |
| G2RV-SL7□□/5□□ AC110   | 12 ~ 15 ms               | 22 ~ 30 ms             |
| G2RV-SL7□□/5□□ AC230   | 12 ~ 15 ms               | 22 ~ 30 ms             |

# Accessories

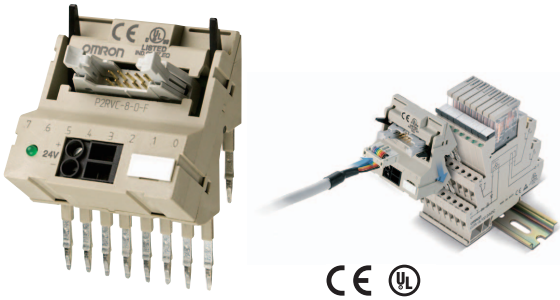
## ■ PLC Interface P2RVC-8-□-F

| Contact form  | Relay                | PLC Interface |
|---------------|----------------------|---------------|
| Standard type | G2RV-SL70□ series    | P2RVC-8-O-F   |
| Input type    | G2RV-SL700-AP series | P2RVC-8-I-F   |

### P2RVC-8-O-F (for G2RV-SL70□ series only)

#### List of Models

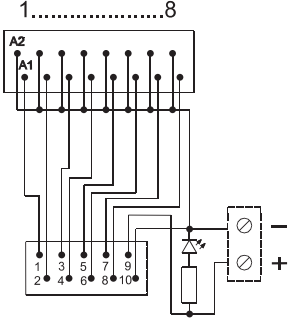
| Model number | Description                                                 | Connection                                  |
|--------------|-------------------------------------------------------------|---------------------------------------------|
| P2RVC-8-O-F  | PLC Output Interface for 8x G2RV-SL70□-series<br>PNP - type | Ribbon cable connector<br>10 Pole, IEC603/1 |



#### Specifications

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

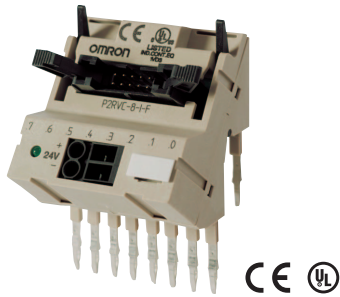
#### Electrical schematic P2RVC-8-O-F



### P2RVC-8-I-F (for G2RV-SL700-AP series only)

#### List of Models

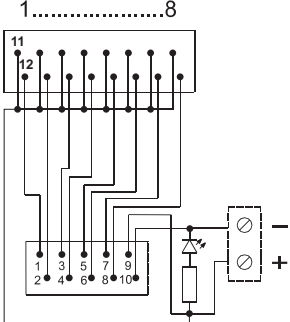
| Model number | Description                                                 | Connection                                  |
|--------------|-------------------------------------------------------------|---------------------------------------------|
| P2RVC-8-I-F  | PLC Output Interface for 8x G2RV-SL700-series<br>PNP - type | Ribbon cable connector<br>10 Pole, IEC603/1 |



#### Specifications

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

#### Electrical schematic P2RVC-8-I-F



# Cables for PLC Interface P2RVC-8-□-F

## Cables selection List

| Output               |                                               |
|----------------------|-----------------------------------------------|
| Model number         | To be used for (combined with P2RVC-8-O-F)    |
| P2RV-4-100C          | CJ1W-OD232/OD262                              |
| P2RV-4-200C          | CJ1W-OD232/OD262                              |
| P2RV-4-300C          | CJ1W-OD232/OD262                              |
| P2RV-4-500C          | CJ1W-OD232/OD262                              |
| P2RV-A100C           | Universal (stranded wires)                    |
| P2RV-A200C           | Universal (stranded wires)                    |
| P2RV-A300C           | Universal (stranded wires)                    |
| P2RV-A500C           | Universal (stranded wires)                    |
| P2RV-A050C-OMR GRT1  | GRT1-OD8(G)-1                                 |
| P2RV-A100C-OMR GRT1  | GRT1-OD8(G)-1                                 |
| P2RV-A050C-OMR NX    | NX-OD4256                                     |
| P2RV-A100C-OMR NX    | NX-OD4256                                     |
| P2RV-200C-SIM S7/300 | 6ES7 322-1BL00-0AA0, 32DO                     |
| P2RV-250C-SIM S7/300 | 6ES7 322-1BL00-0AA0, 32DO                     |
| P2RV-300C-SIM S7/300 | 6ES7 322-1BL00-0AA0, 32DO                     |
| P2RV-500C-SIM S7/300 | 6ES7 322-1BL00-0AA0, 32DO                     |
| P2RV-200C-SIM S7/400 | 6ES7422-1BL00-0AA0 & 6ES7422-7BL00-0AB0, 32DO |
| P2RV-250C-SIM S7/400 | 6ES7422-1BL00-0AA0 & 6ES7422-7BL00-0AB0, 32DO |
| P2RV-300C-SIM S7/400 | 6ES7422-1BL00-0AA0 & 6ES7422-7BL00-0AB0, 32DO |
| P2RV-500C-SIM S7/400 | 6ES7422-1BL00-0AA0 & 6ES7422-7BL00-0AB0, 32DO |

| Input                |                                               |
|----------------------|-----------------------------------------------|
| Model number         | To be used for (combined with P2RVC-8-I-F)    |
| P2RV-4-100IFC        | CJ1W-ID231/ID233/ID261                        |
| P2RV-4-100IMC        | CJ1W-ID233/ID262                              |
| P2RV-4-200IFC        | CJ1W-ID231/ID233/ID261                        |
| P2RV-4-200IMC        | CJ1W-ID233/ID262                              |
| P2RV-4-300IFC        | CJ1W-ID231/ID233/ID261                        |
| P2RV-4-300IMC        | CJ1W-ID233/ID262                              |
| P2RV-4-500IFC        | CJ1W-ID231/ID233/ID261                        |
| P2RV-4-500IMC        | CJ1W-ID233/ID262                              |
| P2RV-A100C           | Universal (stranded wires)                    |
| P2RV-A200C           | Universal (stranded wires)                    |
| P2RV-A300C           | Universal (stranded wires)                    |
| P2RV-A500C           | Universal (stranded wires)                    |
| P2RV-A050IC-OMR GRT1 | GRT1-ID8-1                                    |
| P2RV-A100IC-OMR GRT1 | GRT1-ID8-1                                    |
| P2RV-A050IC-OMR NX   | NX-ID4442                                     |
| P2RV-A100IC-OMR NX   | NX-ID4442                                     |
| P2RV-200C-SIM S7/300 | 6ES7 321-1BL00-0AA0, 32DI                     |
| P2RV-250C-SIM S7/300 | 6ES7 321-1BL00-0AA0, 32DI                     |
| P2RV-300C-SIM S7/300 | 6ES7 321-1BL00-0AA0, 32DI                     |
| P2RV-500C-SIM S7/300 | 6ES7 321-1BL00-0AA0, 32DI                     |
| P2RV-200C-SIM S7/400 | 6ES7421-1BL00-0AA0 & 6ES7421-1BL01-0AA0, 32DI |
| P2RV-250C-SIM S7/400 | 6ES7421-1BL00-0AA0 & 6ES7421-1BL01-0AA0, 32DI |
| P2RV-300C-SIM S7/400 | 6ES7421-1BL00-0AA0 & 6ES7421-1BL01-0AA0, 32DI |
| P2RV-500C-SIM S7/400 | 6ES7421-1BL00-0AA0 & 6ES7421-1BL01-0AA0, 32DI |

## P2RV-4-□□□C

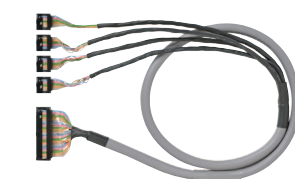
## P2RV-4-□□□IMC

## P2RV-4-□□□IFC

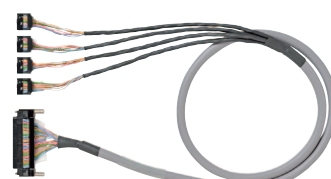
Cable to connect CJ1 to 4 × P2RVC-8-□-F

## List of Models

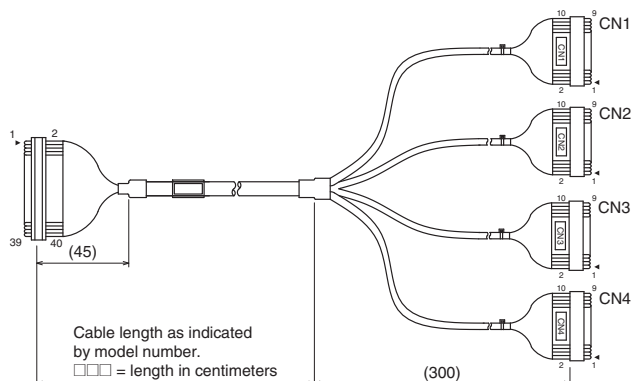
| I/O    | Model number  | Cable length | Interface unit     | PLC Connection                      | Connectors           |
|--------|---------------|--------------|--------------------|-------------------------------------|----------------------|
| Output | P2RV-4-100C   | 1.0 m        | P2RVC-8-O-F<br>× 4 | OMRON PLC<br>CJ1 Series: MIL        | MIL40 - MIL10<br>× 4 |
|        | P2RV-4-200C   | 2.0 m        |                    |                                     |                      |
|        | P2RV-4-300C   | 3.0 m        |                    |                                     |                      |
|        | P2RV-4-500C   | 5.0 m        |                    |                                     |                      |
| Input  | P2RV-4-100IMC | 1.0 m        | P2RVC-8-I-F<br>× 4 | OMRON PLC<br>CJ1 Series: MIL        | MIL40 - MIL10<br>× 4 |
|        | P2RV-4-200IMC | 2.0 m        |                    |                                     |                      |
|        | P2RV-4-300IMC | 3.0 m        |                    |                                     |                      |
|        | P2RV-4-500IMC | 5.0 m        |                    |                                     |                      |
| Input  | P2RV-4-100IFC | 1.0 m        | P2RVC-8-I-F<br>× 4 | OMRON PLC<br>CJ1 Series:<br>Fujitsu | FCN40 - MIL10<br>× 4 |
|        | P2RV-4-200IFC | 2.0 m        |                    |                                     |                      |
|        | P2RV-4-300IFC | 3.0 m        |                    |                                     |                      |
|        | P2RV-4-500IFC | 5.0 m        |                    |                                     |                      |



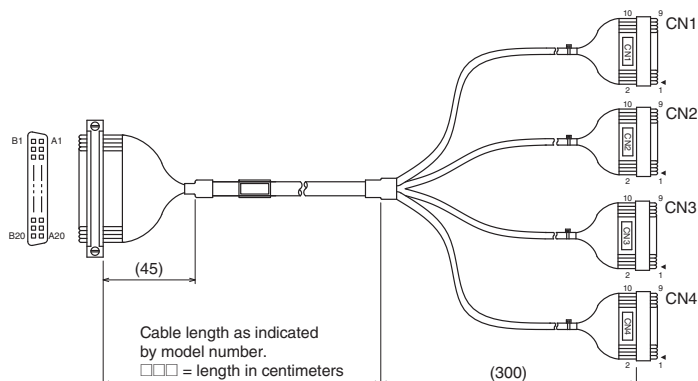
P2RV-4-□□□C/P2RV-4-□□□IMC



P2RV-4-□□□IFC



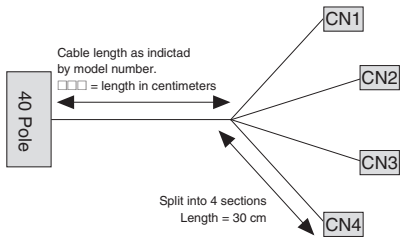
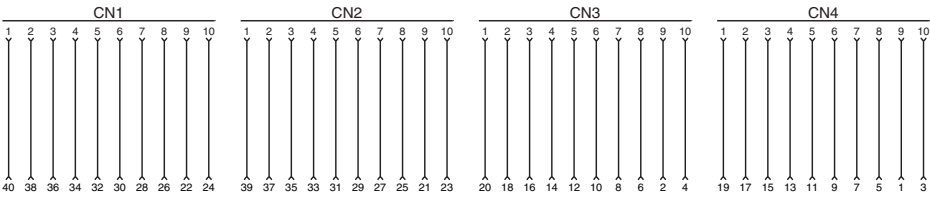
P2RV-4-□□□C/P2RV-4-□□□IMC



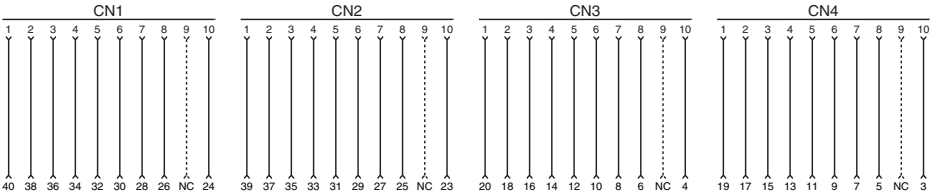
P2RV-4-□□□IFC

4 × 10 pole IDC mounting to 4 × P2RVC-8-□-F

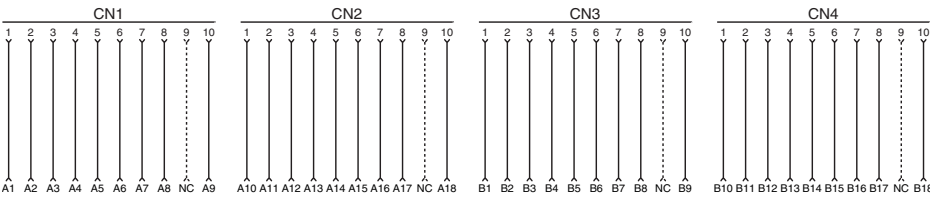
P2RV-4-□□□C



P2RV-4-□□□IMC



P2RV-4-□□□IFC



40 pole IDC mounting to Omron PLC CJ1-OD232

Technical data

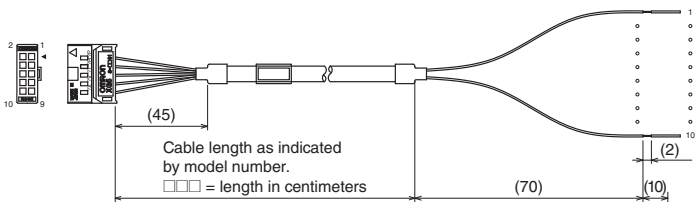
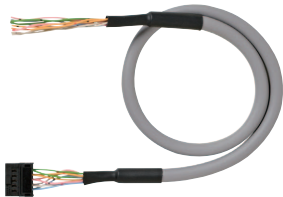
|                                    |                                                      |
|------------------------------------|------------------------------------------------------|
| Control line                       | AWG28/0.08 mm <sup>2</sup> , tin-plated copper       |
| Diameter cable                     | 10.7 mm (one end splits into 4 sections: A, B, C, D) |
| Operating voltage                  | 60 VDC                                               |
| Continuous current per signal wire | 0.5 A                                                |
| Max. total current, 4 bytes, each  | 1.0 A                                                |
| Test voltage                       | 0.5 KV, 50 Hz, 1 min                                 |
| Operating temperature range        | -20°C to +50°C                                       |

P2RV-A□□□C

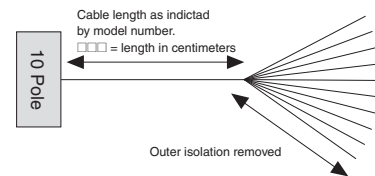
Cable, single sided 10 pole IDC connector, to connect to P2RVC-8-□-F

List of Models

| I/O                             | Model number | Cable length | Interface unit | PLC interface | Connectors              |
|---------------------------------|--------------|--------------|----------------|---------------|-------------------------|
| Universal<br>(Output/<br>Input) | P2RV-A100C   | 1.0 m        | P2RVC-8-□-F    | -             | MIL10 -<br>No connector |
|                                 | P2RV-A200C   | 2.0 m        |                |               |                         |
|                                 | P2RV-A300C   | 3.0 m        |                |               |                         |
|                                 | P2RV-A500C   | 5.0 m        |                |               |                         |



## 10 pole IDC mounting to P2RVC-8-□-F



## Technical data

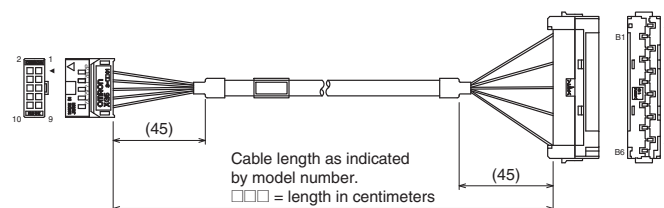
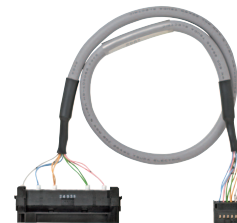
|                                    |                                                |
|------------------------------------|------------------------------------------------|
| Control line                       | AWG26/0.14 mm <sup>2</sup> , tin-plated copper |
| Diameter cable                     | 7.6 mm                                         |
| Operating voltage                  | 60 VDC                                         |
| Continuous current per signal wire | 0.5 A                                          |
| Max. total current                 | 1.0 A                                          |
| Test voltage                       | 0.5 KV, 50 Hz, 1 min                           |
| Operating temperature range        | -20°C to +50°C                                 |

## P2RV-A□□□C-OMR GRT1

## P2RV-A□□□IC-OMR GRT1

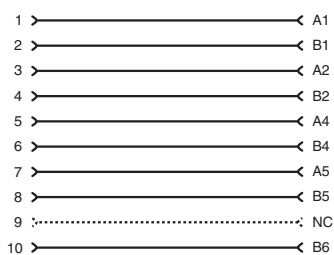
## List of Models

| I/O    | Model number         | Cable length | Interface unit | PLC interface                                          | Connectors          |
|--------|----------------------|--------------|----------------|--------------------------------------------------------|---------------------|
| Output | P2RV-A050C-OMR GRT1  | 0.5 m        | P2RVC-8-O-F    | OMRON Smart slice I/O module GRT1 Series GRT1-OD8(G)-1 | XW7E 12pole - MIL10 |
|        | P2RV-A100C-OMR GRT1  | 1.0 m        |                |                                                        |                     |
| Input  | P2RV-A050IC-OMR GRT1 | 0.5 m        | P2RVC-8-I-F    | OMRON Smart slice I/O module GRT1 Series GRT1-ID9(G)-1 |                     |
|        | P2RV-A100IC-OMR GRT1 | 1.0 m        |                |                                                        |                     |

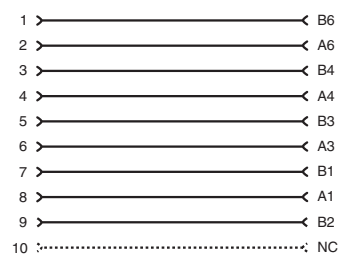


## 10 pole IDC mounting to P2RVC-8-□-F

### P2RV-A□□□C-OMR GRT1



### P2RV-A□□□IC-OMR GRT1

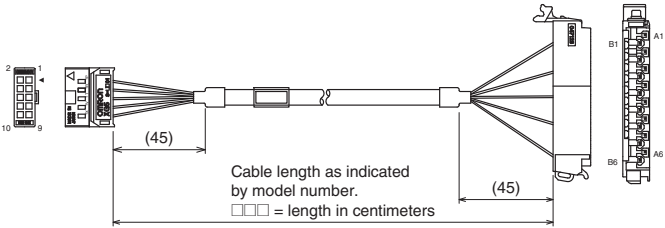
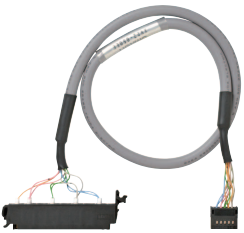




**P2RV-A□□□C-OMR NX**  
**P2RV-A□□□IC-OMR NX**

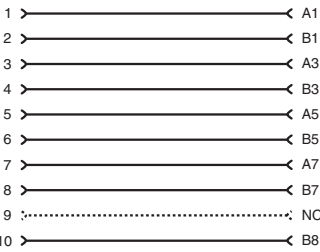
**List of Models**

| I/O    | Model number         | Cable length | Interface unit | PLC interface              | Connectors        |
|--------|----------------------|--------------|----------------|----------------------------|-------------------|
| Output | P2RV-A050C-OMR GRT1  | 0.5 m        | P2RVC-8-O-F    | OMRON I/O module NX Series | XW7F 16pole-MIL10 |
|        | P2RV-A100C-OMR GRT1  | 1.0 m        |                |                            |                   |
| Input  | P2RV-A050IC-OMR GRT1 | 0.5 m        | P2RVC-8-I-F    |                            |                   |
|        | P2RV-A100IC-OMR GRT1 | 1.0 m        |                |                            |                   |

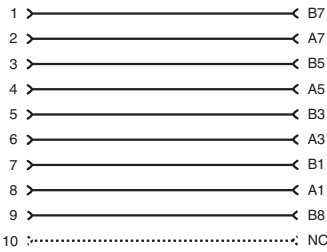


**10 pole IDC mounting to P2RVC-8-□-F**

P2RV-A□□□C-OMR NX



P2RV-A□□□IC-OMR NX



**P2RV-□□□C-SIM S7/□00**

Cables to connect Siemens S7/300 or S7/400 to 4 x P2RVC-8-□-F

**List of Models**

| Model number         | Cable length | PLC type                   | Configuration |
|----------------------|--------------|----------------------------|---------------|
| P2RV-200C-SIM S7/300 | 2.0 m        | Siemens S7/300<br>4x1 Byte |               |
| P2RV-250C-SIM S7/300 | 2.5 m        |                            |               |
| P2RV-300C-SIM S7/300 | 3.0 m        |                            |               |
| P2RV-500C-SIM S7/300 | 5.0 m        |                            |               |
| P2RV-200C-SIM S7/400 | 2.0 m        | Siemens S7/400<br>4x1 Byte |               |
| P2RV-250C-SIM S7/400 | 2.5 m        |                            |               |
| P2RV-300C-SIM S7/400 | 3.0 m        |                            |               |
| P2RV-500C-SIM S7/400 | 5.0 m        |                            |               |

## ■ Single Relays for Maintenance

### Model Number Legend

G2RV-□ - □ □ □ - □ - □  
1 2 3 4 5 6

#### 1. Number of Poles

1: 1 pole

#### 2. Terminals

S: Plug-In

#### 3. Relay LED

Blank: Without LED

#### 4. Relay Test switch

Blank: No test switch

I: Test switch

#### 5. Contact Material

Blank: AgSnIn

AP: AgSnIn hard gold-plated

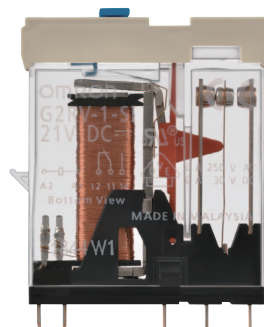
#### 6. Rated Coil Voltage

11 VDC, 21 VDC, 48 VDC

### List of Models

| Model number       | Replacement for             |
|--------------------|-----------------------------|
| G2RV-1-S 11 VDC    | G2RV-SL700/500 12 VDC       |
| G2RV-1-S 21 VDC    | G2RV-SL700/500 24 VDC       |
|                    | G2RV-SL700/500 24 VAC/DC    |
| G2RV-1-S 48 VDC    | G2RV-SL700/500 48 VAC/DC    |
|                    | G2RV-SL700/500 110 VAC      |
|                    | G2RV-SL700/500 230 VAC      |
| G2RV-1-S-AP 11 VDC | G2RV-SL700/500-AP 12 VDC    |
| G2RV-1-S-AP 21 VDC | G2RV-SL700/500-AP 24 VDC    |
|                    | G2RV-SL700/500-AP 24 VAC/DC |
| G2RV-1-S-AP 48 VDC | G2RV-SL700/500-AP 48 VAC/DC |
|                    | G2RV-SL700/500-AP 110 VAC   |
|                    | G2RV-SL700/500-AP 230 VAC   |
| G2RV-1-SI 21 VDC   | G2RV-SL701/501 24 VDC       |
|                    | G2RV-SL701/501 24 VAC/DC    |

G2RV-1-SI



G2RV-1-S



## ■ Cross bars

### Model Number Legend

P2RVM - □ □  
1 2

#### 1. Number of Poles

020: 2 poles

030: 3 poles

040: 4 poles

100: 10 poles

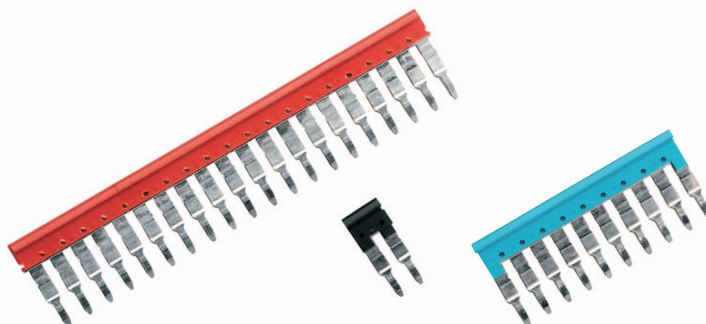
200: 20 poles

#### 2. Color

R: Red

S: Blue

B: Black



### List of Models

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

□ select color: R = Red, S=Blue, B=Black

### Specification

|                                                                                         |         |
|-----------------------------------------------------------------------------------------|---------|
| Max current<br>(EN60947-7-1 section 8.3.3 / 1991)                                       | 32 A    |
| Max. Voltage                                                                            | 400 VAC |
| Max. Voltage<br>when cutting Cross-bar without using separation<br>plate or end-bracket | 250 VAC |

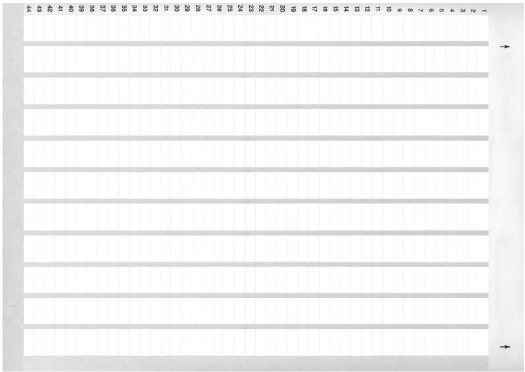
## ■ Plastic Labels for G2RV Sockets

| Model number    | Box quantity                   | Color |
|-----------------|--------------------------------|-------|
| R99-15 for G2RV | 1 piece = 1 sheet = 120 labels | White |



■ Labels (Stickers) for G2RV Sockets

| Model number    | Box quantity                              | Color |
|-----------------|-------------------------------------------|-------|
| R99-16 for G2RV | 1 piece = 1 sheet = 484 labels (stickers) | White |



■ Separating Plates

| Model number | Description                                                            |
|--------------|------------------------------------------------------------------------|
| P2RV-S       | Provides isolation between adjacent relays to achieve 400 V isolation. |



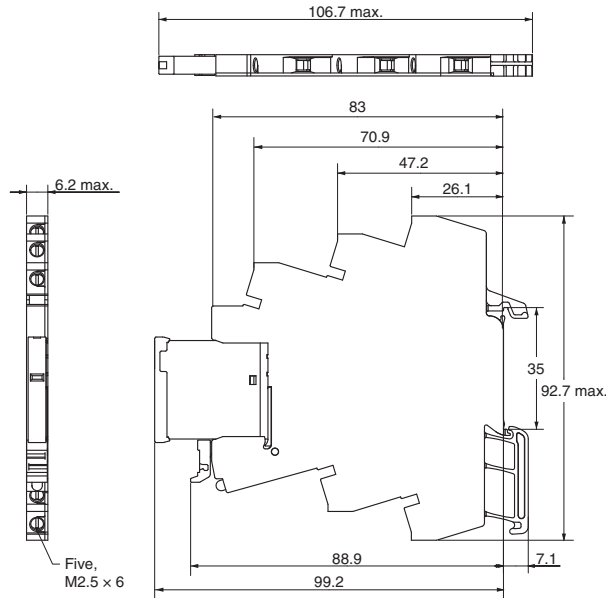
# Dimensions

**Note:** All units are in millimeters unless otherwise indicated.

## Complete Unit

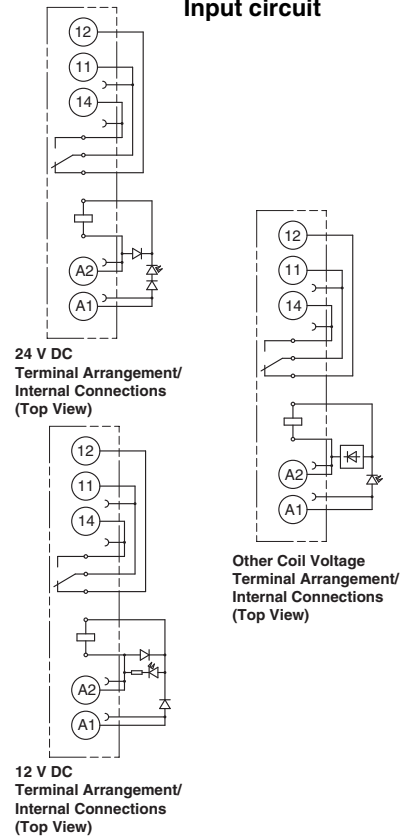
**G2RV-SL700**  
**G2RV-SL700-AP**

**Dimensions**



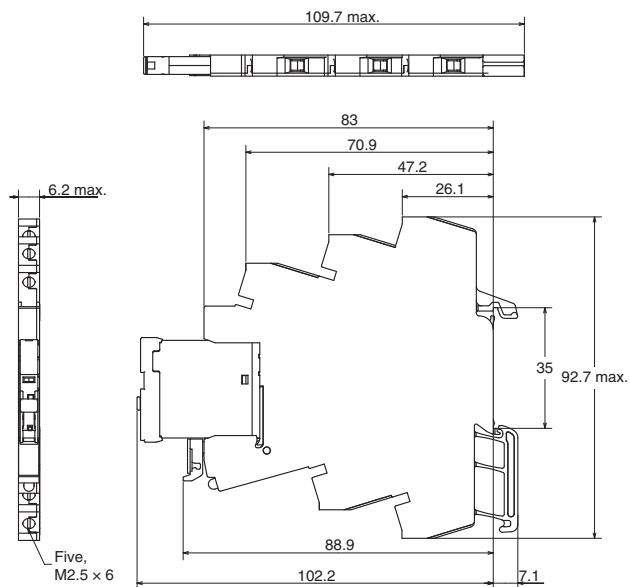
**Terminal Arrangement**

**Input circuit**



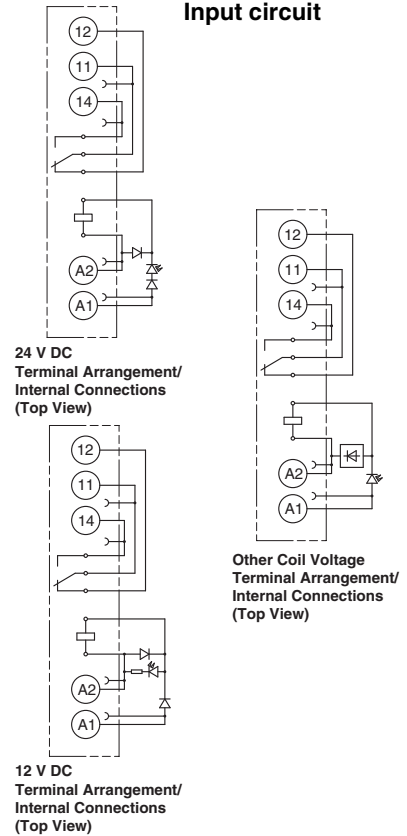
**G2RV-SL701**

**Dimensions**



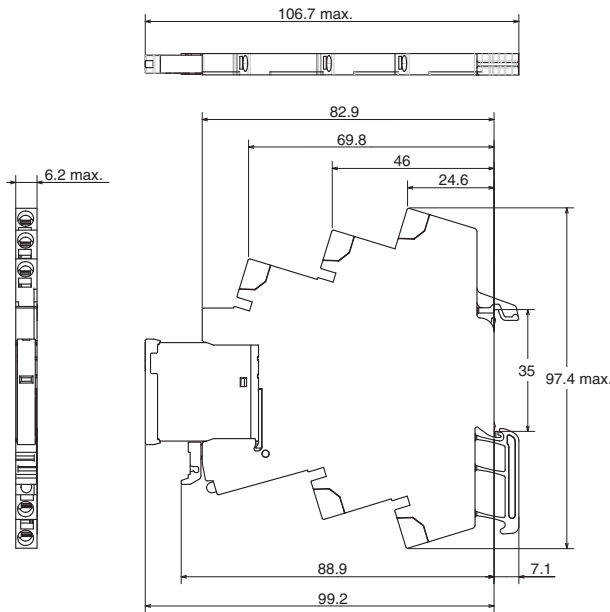
**Terminal Arrangement**

**Input circuit**

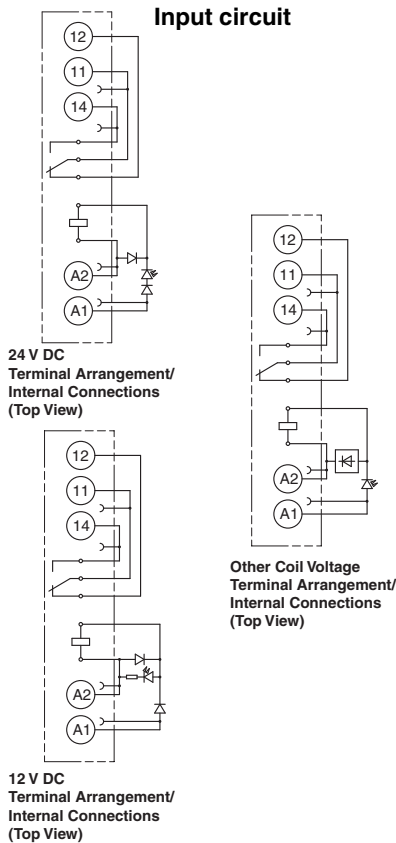


**G2RV-SL500**  
**G2RV-SL500-AP**

**Dimensions**

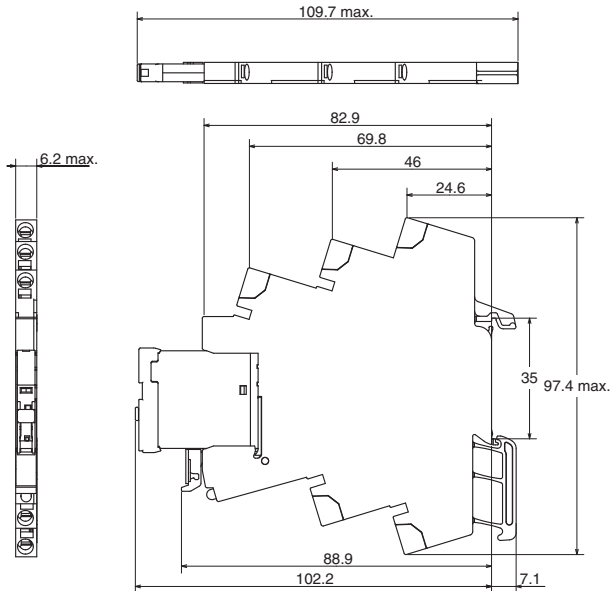


**Terminal Arrangement**

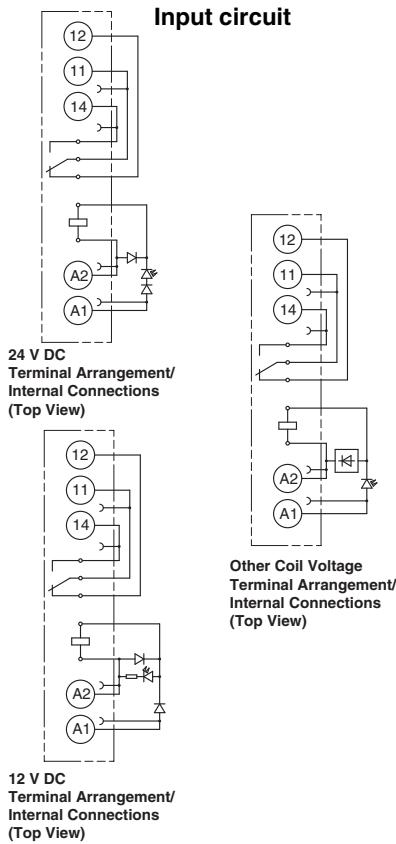


**G2RV-SL501**

**Dimensions**

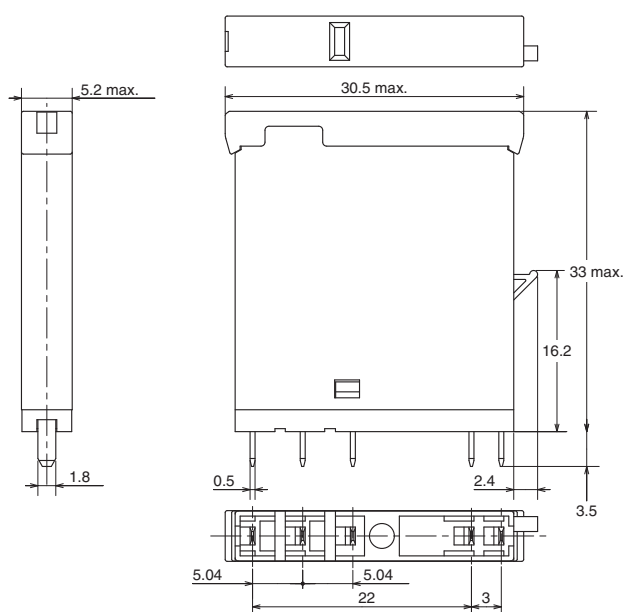


**Terminal Arrangement**

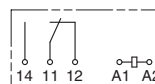


# Single Relay

G2RV-1-S  
G2RV-1-S-AP

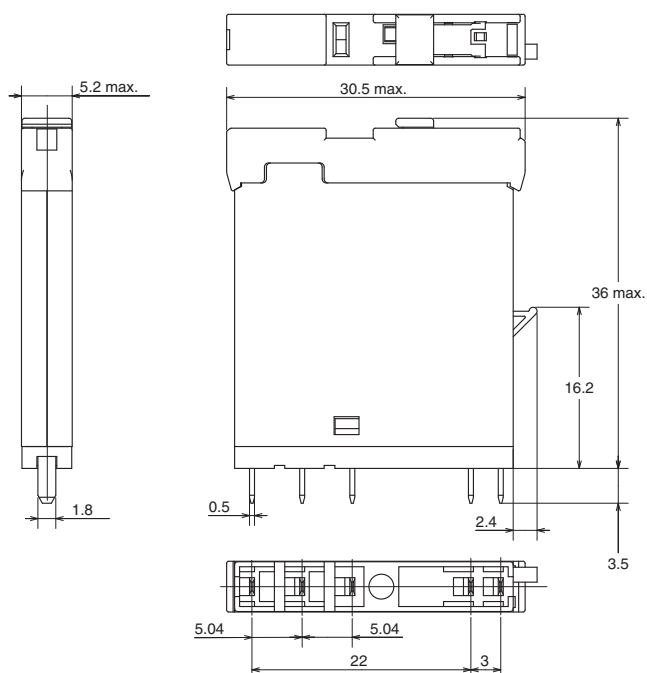


## Input circuit

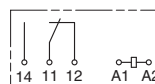


Terminal Arrangement/  
Internal Connections  
(Bottom View)

G2RV-1-SI



## Input circuit



Terminal Arrangement/  
Internal Connections  
(Bottom View)

# Installation

## ■ Tools

G2RV-SL70□ series: Flat-Blade screwdriver should be used for mounting and / or releasing cables.

G2RV-SL50□ series: Flat-Blade screwdriver should be used for mounting stranded wires without ferrules and / or releasing cables.

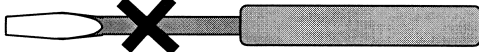
### Applicable Screwdriver

- 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.2.5×75E (AEF. 3×75E)  
 VESSEL No. 9900-(-)2.5×75 (No. 9900-(-)3×100)  
 WAGO 210-119  
 WIHA 260/2.5×40 (260/3×50)

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

### P2RVC-8-O-F (for G2RV-SL70□ series only)

#### List of Models

| Model number | Description                                              | Connection                               |
|--------------|----------------------------------------------------------|------------------------------------------|
| P2RVC-8-O-F  | PLC Output Interface for 8x G2RV-SL70□-series PNP - type | Ribbon cable connector 10 Pole, IEC603/1 |

## ■ 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 <sup>2</sup> | 7 mm             |
| Stranded with ferrules and plastic collar     | 0.5 - 2.5 mm <sup>2</sup> | 7 mm             |
| Stranded with ferrules without plastic collar | 0.5 - 2.5 mm <sup>2</sup> | 7 mm             |
| Solid                                         | 0.5 - 2.5 mm <sup>2</sup> | 7 mm             |

#### G2RV-SL500 Series

##### Push-in technology

| Wire type                                     | Applicable wire size      | Stripping length |
|-----------------------------------------------|---------------------------|------------------|
| Stranded without ferrules                     | 0.5 - 2.5 mm <sup>2</sup> | 12 mm            |
| Stranded with ferrules and plastic collar     | 0.5 - 2.5 mm <sup>2</sup> | 12 mm            |
| Stranded with ferrules without plastic collar | 0.5 - 2.5 mm <sup>2</sup> | 12 mm            |
| Solid                                         | 0.5 - 2.5 mm <sup>2</sup> | 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.

G2RV-SL700



G2RV-SL500

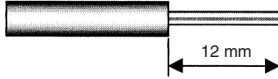
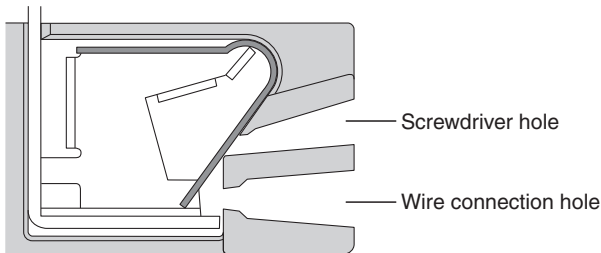
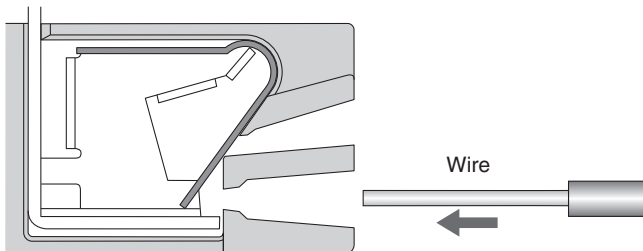


Fig. 1 Exposed Conductor Length

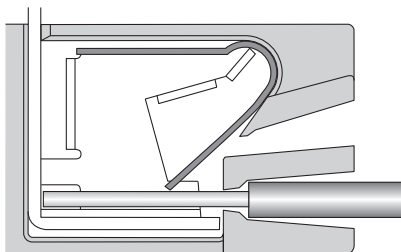
## Wiring Procedure for G2RV-SL500 series



### ● Wiring



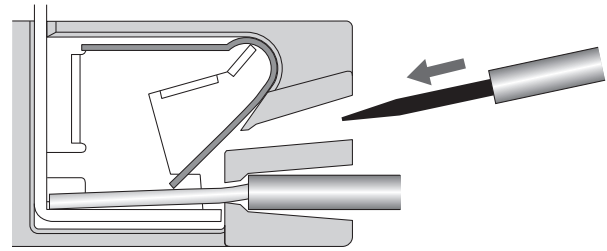
Insert the exposed conductor into the connection hole.



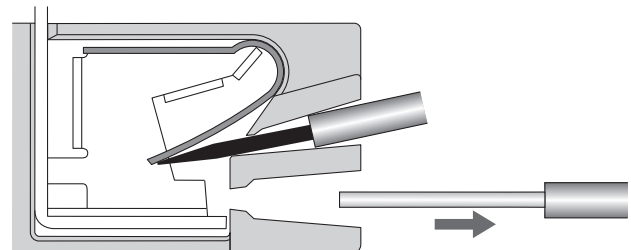
No other tools are required.

**Note:** In case of wiring stranded wires without ferrules screwdriver should be inserted before inserting the wire.  
Screwdriver should be removed after fully insertion of the wire.

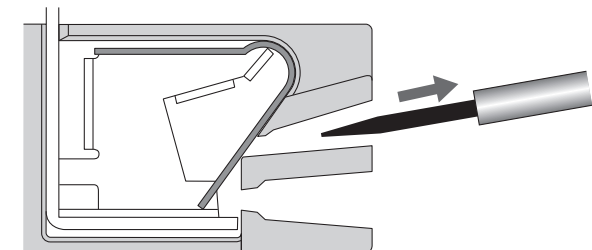
### ● Removing



Insert the specified screwdriver into the release hole.



Removing wire.



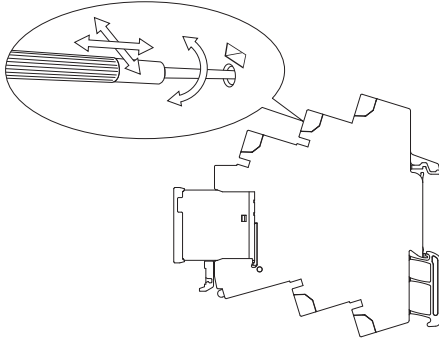
Removing screwdriver.



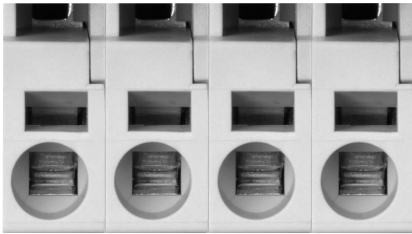
# Precautions

## Precautions for Connection

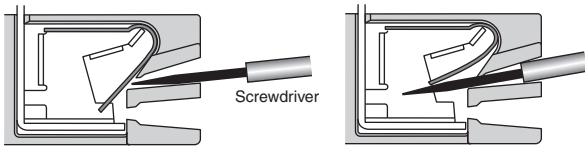
- Do not move the screwdriver up, down, or from side to side while it is inserted in the hole. Doing so may cause damage to internal components (e.g., deformation of the clamp spring or cracks in the housing) or cause deterioration of insulation.
- Do not insert the screwdriver at an angle. Doing so 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.



- 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.

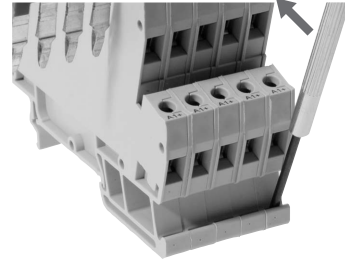
## General Precautions

- 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 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.



## Precaution for Operation of Test switch

■ **Tool: G2RV-SL701/501 series: 2.5 mm width Flat-Blade screwdriver should be used for operation of test switch.**

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

- Flat-blade, Parallel-tip



- Flat-blade, Flared-tip



Cannot be used.

## ■ Cautions:

- When you operate a test switch, please turn off electrical power supply.
- After you have finished to operate a test switch, return the test switch to its original state
- Do not use test switch as a switch.
- Durability of test switch operation is more than 100 times.
- Please avoid to use the latching lever by ON state with carry current in long time, more than 24 hours to maintain the initial performance for operation checking.

**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.