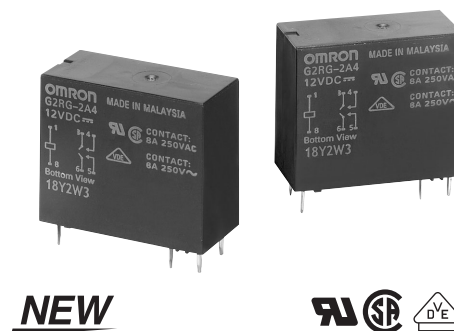


### Power Relay with 1.5-mm Contact Gap

- Clearance between contact terminals of the same polarity: 1.5 mm min.
- Meets the requirements of European UPS standards.

**Note:** UPS: Uninterruptible power systems.

- Conforms to VDE0435 (VDE approval: C250 insulation grade), UL508, CSA22.2.
- Meets VDE0700 requirements for household products according to VDE0110.
- Cadmium-free contacts ensuring environment-friendly use.
- Tracking resistance: CTI > 250 V.



**NEW**



### Model Number Structure

#### ■ Model Number Legend

**G2RG-**        

1 2 3

- 1. Number of Poles**  
2: 2 poles
- 2. Contact Form**  
A: N.O. contact
- 3. Protective Structure**  
4: Plastic sealing

### Ordering Information

Contact form	Rated coil voltage	Model number
DPST-NO	12 VDC 24 VDC	G2RG-2A4

### Specifications

#### ■ Coil Ratings

Rated voltage	Rated current	Coil resistance	Must-operate voltage	Must-release voltage	Maximum allowable voltage	Power consumption
12 VDC	66.6 mA	180 Ω	80% max.	10% min.	140% (at 23°C)	Approx. 800 mW
24 VDC	33.3 mA	720 Ω				

- Note**
1. The rated current and coil resistance are for a coil temperature of 23°C and have a tolerance of ±10%.
  2. The operating characteristics given in the above table are for a coil temperature of 23°C.
  3. The maximum allowable voltage is the maximum possible value of the voltage that can be applied to the relay coil.

## ■ Contact Ratings

Load	Resistive load
Contact mechanism	Single
Contact material	Ag alloy
Rated load	250 VAC, 8 A
Rated carry current	8 A
Maximum switching voltage	380 VAC, 125 VDC
Maximum switching current	8 A
Failure rate (P level, reference value) (See note.)	5 VDC, 10 mA

**Note:** This value is for a switching frequency of 120 operations/min.

## ■ Characteristics

Contact resistance (See note 1.)		100 mΩ max.
Operate time		15 ms max.
Release time		5 ms max.
Maximum switching frequency	Mechanical	18,000 operations/hr
	Electrical	1,800 operations/hr (under rated load)
Insulation resistance (See note 2.)		1,000 MΩ min. (at 500 VDC)
Dielectric strength		5,000 VAC, 50/60 Hz for 1 min between coil and contacts 3,000 VAC, 50/60 Hz for 1 min between contacts of different polarity 1,000 VAC, 50/60 Hz for 1 min between contacts of the same polarity
Impulse withstand voltage		10 kV (1.2 × 50 μs)
Vibration resistance	Destruction	10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude)
	Malfunction	10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude)
Shock resistance	Destruction	1,000 m/s <sup>2</sup>
	Malfunction	200 m/s <sup>2</sup> when energized
Endurance	Mechanical	1,000,000 operations min. (at 18,000 operations/hr)
	Electrical	10,000 operations min. (at 1,800 operations/hr under rated load)
Ambient operating temperature		-40 to 70 °C (with no icing or condensation)
Ambient operating humidity		5% to 85%
Weight		Approx. 17.2 g

**Note 1.** The above values are initial values (at an ambient temperature of 23°C.)

**2.** Measurement conditions: 5 VDC, 1 A, voltage-drop method.

**3.** Measurement conditions: Measured with a 500-VDC megohmmeter at the same places as the dielectric strength.

## ■ Approved Standards

The approved rated values for international standards are different to the individually specified characteristic values. Be sure to confirm that required standards are satisfied before actual use.

### UL508 (File No. E41643)

Model	Contact form	Coil rating	Contact rating
G2RG-2A4	DPST-NO	12 to 24 VDC	8 A, 250 VAC (general use)

### CSA C22.2 No. 14 (File No. LR31928)

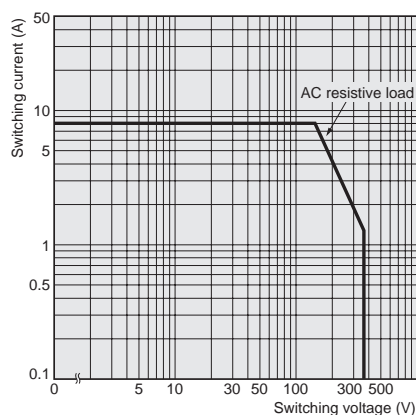
Model	Contact form	Coil rating	Contact rating
G2RG-2A4	DPST-NO	12 to 24 VDC	8 A, 250 VAC (general use)

### VDE0435 (Approval No. 6166)

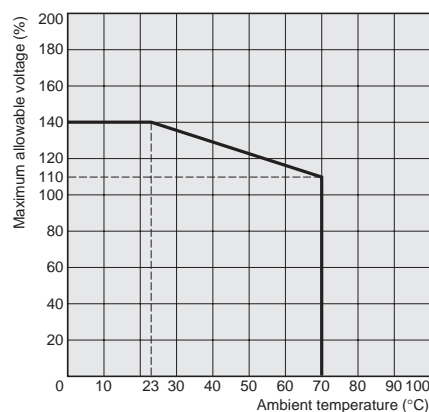
Model	Contact form	Coil rating	Contact rating
G2RG-2A4	DPST-NO	12, 24 VDC	8 A, 250 VAC (cos φ = 1)

# Engineering Data

## Maximum Switching Capacity



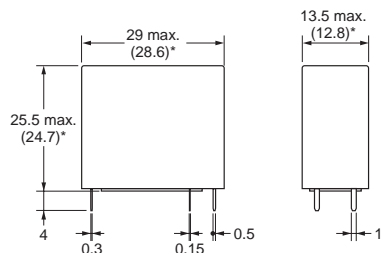
## Ambient Temperature vs Maximum Allowable Voltage



**Note:** The maximum allowable voltage is the maximum possible value of the voltage that can be applied to the relay coil.

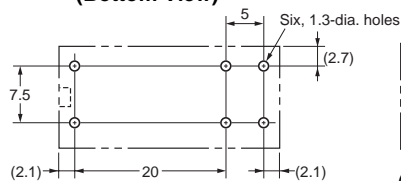
## Dimensions

### G2RG-2A4

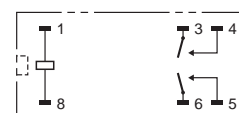


\*Figures in parentheses indicate average values.

### PCB Mounting Holes (Bottom View)



### Terminal Arrangement/ Internal Connections (Bottom View)



(The coil has no polarity.)

## Precautions

---

### ■ Correct Use

#### Differences with the G2R

The G2RG-2A4 has the same terminal arrangement as the G2R-2A4 but the switching capacity and electrical endurance are different. Confirm that correct operation is possible in the actual operating conditions before using in applications.

**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

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

Cat. No. J142-E1-01    **In the interest of product improvement, specifications are subject to change without notice.**

### **OMRON Corporation**

**Electronic Components Company**

**C&C Components Division H.Q.**

Shiokoji Horikawa, Shimogyo-ku,

Kyoto, 600-8530 Japan

Tel: (81)75-344-7097/Fax: (81)75-344-7049