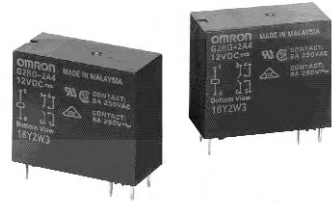


Power Relay with 1.5mm Contact Gap

- ROHS compliant.
- 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 EN 61810-1, UL508, CSA22.2.
- Meets EN60335-1 requirements.
- Tracking resistance: CTI > 250 V.



Ordering Information

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

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

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 | AgSnIn |
| Rated load | 8 A at 250 VAC |
| 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: Note: P level: $\lambda_{60} = 0.1 \times 10^{-6}/\text{operation}$

■ Characteristics

| | | |
|-------------------------------------|--|--|
| Contact resistance (See note 2.) | 100 mΩ max. | |
| Operate time | 15ms max. | |
| Release time | 5 ms max. | |
| Insulation resistance (See note 3.) | 1,000 MΩ min (at 500VDC) | |
| Max. 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 500VDC) | |
| Impulse withstand voltage | 10KV x50μs | |
| Insulation Distance | Creepage (Typ) | 10.0 mm |
| | Clearance (Typ) | 9.3 mm |
| Tracking Resistance (CTI) | 250 V | |
| Dielectric Strength | 5,000 VAC, 50/60Hz for 1.min between coil and contacts 3,000 VAC, 50/60Hz for 1 min between contacts of different polarity 1,000 VAC, 50/50 Hz for 1 min between contacts of the same polarity | |
| Impulse withstand voltage | 10 kV (1.2 x 50μs) | |
| Vibration resistance | Destruction | 10 to 55 to 10Hz, 0.75 mm single amplitude (1.5 mm double amplitude) |
| | Malfunction | 10 to 55 to 10Hz, 0.75 mm single amplitude (1.5 mm double amplitude) |
| Shock resistance | Destruction | 1,000 m/s ² |
| | Malfunction | 200 m/s ² when energised |
| 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: Measure with a 500 VDC megohmmeter at the same places as the dielectric strength.

■ Approved Standards

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

UK508 (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)

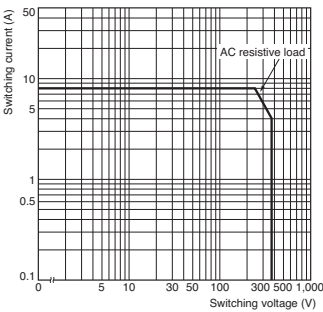
| Model | Contact form | Coil rating | Contact rating |
|----------|--------------|--------------|----------------------------|
| G2RG-2A4 | DPST-NO | 12 to 24 VDC | 8 A, 250 VAC (general use) |

EN 61810-1 (VDE Reg No. 6166)

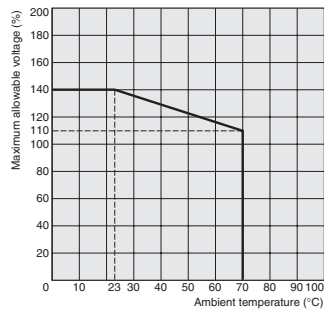
| Model | Contact form | Coil rating | Contact rating |
|----------|--------------|-------------|-----------------------------------|
| G2RG-2A4 | DPST-NO | 12, 24 VDC | 8 A, 250 VAC $\cos\varphi = 1$ |

Engineering Data

Maximum Switching Capacity



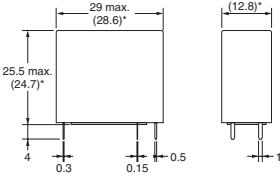
Ambient Temperature vs Maximum Allowable Voltage



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

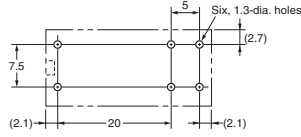
Dimensions

G2RG-2A4

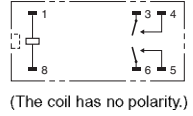


*Figures in parentheses indicate average values.

PCB Mounting Holes (Bottom View)



Terminal Arrangement/ Internal Connections (Bottom View)



Precautions

■ Correct Use

Differences with the G2R

The G2RG-2A4 has the same terminal arrangement as the G2R-2A4 but the switch 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 MILLIMETRES.

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