

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)

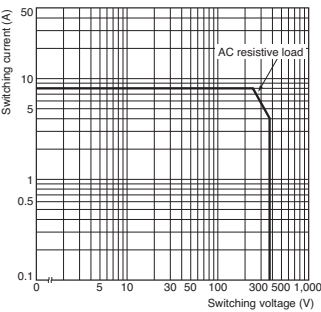
Model	Contact form	Coil rating	Contact rating
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EN 61810-1 (VDE Reg No. 6166)

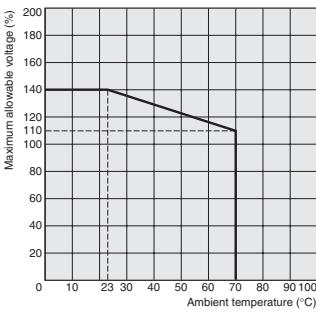
Model	Contact form	Coil rating	Contact rating
G2RG-2A4	DPST-NO	12, 24 VDC	8 A, 250 VAC $\cos\varphi \approx 1$

Engineering Data

Maximum Switching Capacity



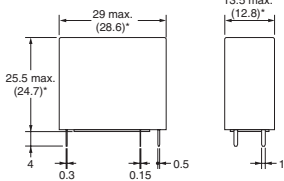
Ambient Temperature vs Maximum Allowable Voltage



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

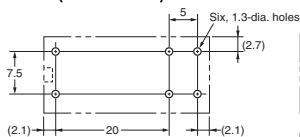
Dimensions

G2RG-2A4

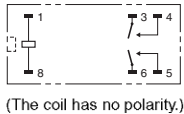


*Figures in parentheses indicate average values.

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.