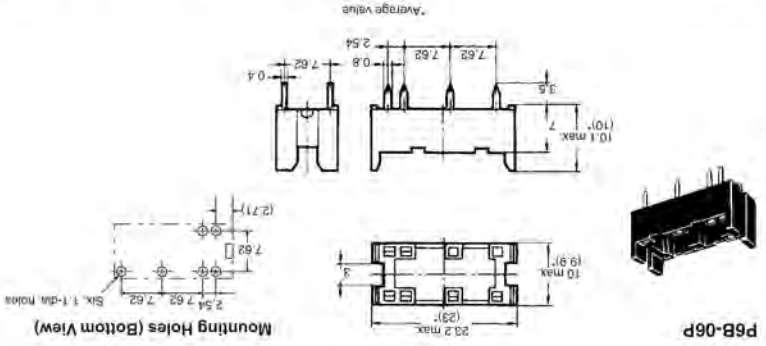
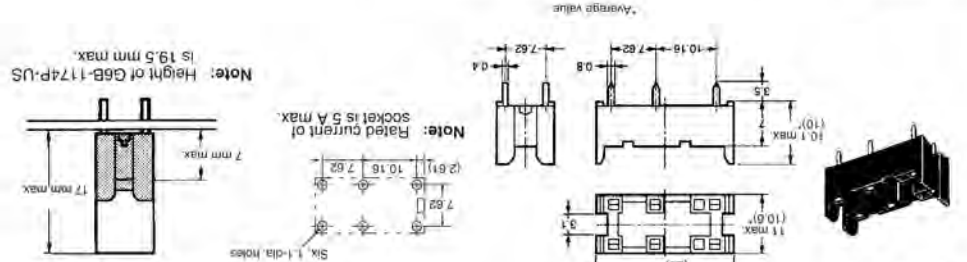


PCB Power Relay – G6B



P6B-06P
Mounting Holes (Bottom View) With Connecting Socket



P6B-26P
Mounting Holes (Bottom View) With Connecting Socket

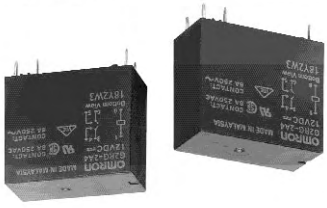
P6B-Y1
Removal Tool

P6B-C2
Hold-down Clips

Note: P6B-C2 Hold-down Clips cannot be used for G6B-1174P-US.

ALL DIMENSIONS SHOWN ARE IN MILLIMETRES. To convert millimetres into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

PCB Power Relay – G2RG



- 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.

Power Relay with 1.5mm Contact Gap

Model Number Legend
G2RG-□□□□
1 2 3

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

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

Ordering Information

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.

Specifications

Coil Ratings

PCB Power Relay – G2RG

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

Contact Ratings

Note: Note: P level: $\lambda_{50} = 0.1 \times 10^{-6}/\text{operation}$

Characteristics

Contact resistance (See note 2.)	100 m Ω max.	
Operate time	15ms max.	
Release time	5 ms max.	
Insulation resistance (See note 3.)	1,000 M Ω 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 M Ω min (at 500VDC)	
Impulse withstand voltage	10kV x50 μ s	
Insulation	Creepage (Typ)	10.0 mm
	Clearance (Typ)	9.3 mm
Tracking Resistance (TI)	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	
Impulse withstand voltage	10 kV (1.2 x 50 μ s)	
	10 to 55 to 10Hz, 0.75 mm single amplitude (1.5 mm double amplitude)	
Vibration resistance	Malfunction	10 to 55 to 10Hz, 0.75 mm single amplitude (1.5 mm double amplitude)
	Destruction	1,000 m/s ²
Shock resistance	Malfunction	200 m/s ² when energised
	Destruction	1,000,000 operations min. (at 18,000 operations/hr)
Endurance	Mechanical	1,000,000 operations min. (at 1,800 operations/hr under rated load)
	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).

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

Note 3. Measurement conditions: Measure with a 500 VDC megohmmeter at the same places as the dielectric strength.

PCB Power Relay – G2RG

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.

Model	G2RG-2A4	Contact form	DPST-NO	Coil rating	12 to 24 VDC	Contact rating	8 A, 250 VAC (general use)
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UK508 (File No. E41643)

Model	G2RG-2A4	Contact form	DPST-NO	Coil rating	12 to 24 VDC	Contact rating	8 A, 250 VAC (general use)
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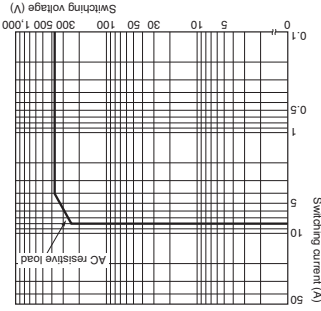
CSA C22.2 No. 14 (File No. LR31928)

Model	G2RG-2A4	Contact form	DPST-NO	Coil rating	12, 24 VDC	Contact rating	8 A, 250 VAC cos ϕ = 1
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EN 61810-1 (VDE Reg No. 6166)

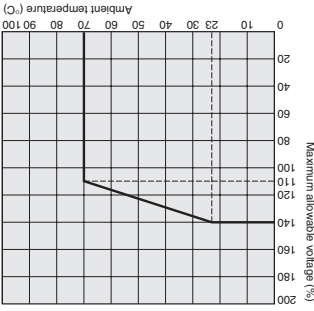
Engineering Data

Maximum Switching Capacity



Voltage

Ambient Temperature vs Maximum Allowable



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

PCB Power Relay – G2RG

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

Contact Ratings

Note: Note: P level: $\lambda_{50} = 0.1 \times 10^{-6}/\text{operation}$

Characteristics

Contact resistance (See note 2.)	100 m Ω max.	
Operate time	15ms max.	
Release time	5 ms max.	
Insulation resistance (See note 3.)	1,000 M Ω 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 M Ω min (at 500VDC)	
Impulse withstand voltage	10kV x50 μ s	
Insulation	Creepage (Typ)	10.0 mm
	Clearance (Typ)	9.3 mm
Tracking Resistance (TI)	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	
Impulse withstand voltage	10 kV (1.2 x 50 μ s)	
	10 to 55 to 10Hz, 0.75 mm single amplitude (1.5 mm double amplitude)	
Vibration resistance	Malfunction	10 to 55 to 10Hz, 0.75 mm single amplitude (1.5 mm double amplitude)
	Destruction	1,000 m/s ²
Shock resistance	Malfunction	200 m/s ² when energised
	Destruction	1,000,000 operations min. (at 18,000 operations/hr)
Endurance	Mechanical	1,000,000 operations min. (at 1,800 operations/hr under rated load)
	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).

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

Note 3. Measurement conditions: Measure with a 500 VDC megohmmeter at the same places as the dielectric strength.

PCB Power Relay – G2RG

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.

Model	G2RG-2A4	Contact form	DPST-NO	Coil rating	12 to 24 VDC	Contact rating	8 A, 250 VAC (general use)
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UK508 (File No. E41643)

Model	G2RG-2A4	Contact form	DPST-NO	Coil rating	12 to 24 VDC	Contact rating	8 A, 250 VAC (general use)
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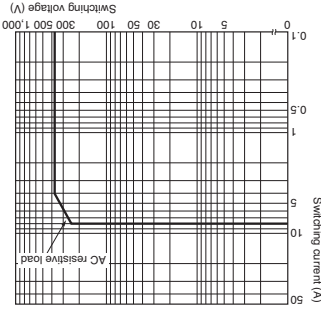
CSA C22.2 No. 14 (File No. LR31928)

Model	G2RG-2A4	Contact form	DPST-NO	Coil rating	12, 24 VDC	Contact rating	8 A, 250 VAC cos ϕ = 1
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EN 61810-1 (VDE Reg No. 6166)

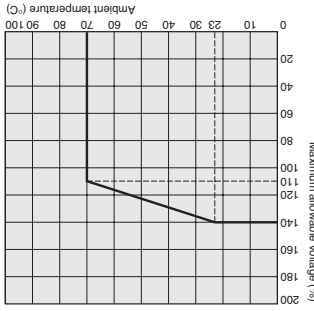
Engineering Data

Maximum Switching Capacity



Voltage

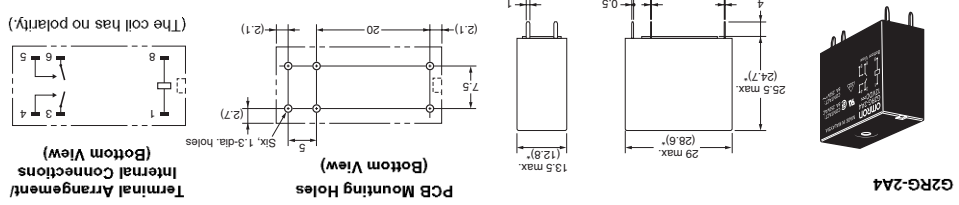
Ambient Temperature vs Maximum Allowable



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

PCB Power Relay – G2RG

Dimensions

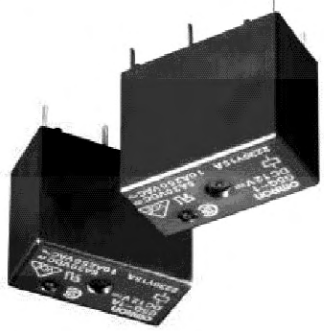


Correct Use

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.

Precautions

- ROHS compliant.
- Compact single pole relay with high isolation between coil and contacts.
- Up to 10 A 250 VAC switching on the NO contacts.
- Ensures a withstand impulse voltage of 8,000 V between the coil and contacts.
- Low coil power consumption (SPST-NO: 200 mW, SPDT: 400 mW)
- UL class F coil insulation.
- UL, CSA and EN approvals.
- Ideal for appliance and HVAC controls.
- Tracking resistance: CTI > 250.



Power Relays

PCB Power Relay – G5Q-EU

Compact, High Isolation Relay

Classification	Enclosure rating	Part number
Single contact, Class F coil	Vented	G5Q-1A-EU
	Sealed	G5Q-1A4-EU
SPST-NO	Vented	G5Q-1-EU
	Sealed	G5Q-14-EU
SPDT	Vented	G5Q-14-EU

Note: When ordering, add the rated coil voltage to the model number.

Examples : G5Q 12VDC

Rated Coil Voltage

Model Number Legend
 G5Q- □ □ -EU □ VDC
 1 2 3

1. Number of Poles
1: 1 pole
2. Contact Form
None: SPDT
A: SPST-NO
3. Rated Coil Voltage
5, 12, 24VDC

Specifications

Coil Ratings

Rated voltage (V)	Rated current (mA)	Coil resistance (Ω)	Pick-up voltage	Drop-out voltage	Maximum voltage	Power consumption (mW)
SPDT	80	63	75% of max.	5% of max.	190% at 23°C	400
	DC5	33.3	360			
SPST-NO	40	125				200
	DC5	40	125			
DC12	16.7	1440				
	DC12	16.7	720			
DC24	8.3	2880				
	DC24	8.3	2880			

Note: Rated current and coil resistance are measured at 23°C with a tolerance of 10%.

79

78

CAT. No. K142-E2-02A-X

ALL DIMENSIONS SHOWN ARE IN MILLIMETRES.
 To convert millimetres into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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