

# OMRON

## PCB Relay

## G5LA

### A Cubic, Single-pole 10A Power Relay



- Sub miniature “Sugar Cube ”relay with universal terminal footprint.
- Conforms to VDE0435,UL508,CSA22.2,CQC
- High switching power:10A 250VAC
- Withstands impulse of up to 4,500V
- Coil power consumption:360mW
- UL class-F insulation type also available
- Tracking resistance :CTI>250
- Contains no lead inside and features
- Cadmium-free contacts ensuring environment-friendly use

### Ordering Information

Enclosure ratings	Contact form	Model number
Flux protection	SPDT	G5LA-1
		G5LA-1-CF
	SPST-NO	G5LA-1A
		G5LA-1A-CF
Fully sealed	SPDT	G5LA-14
		G5LA-14-CF
	SPST-NO	G5LA-1A4
		G5LA-1A4-CF

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

Example: G5LA-1 12VDC

Rated coil voltage

### Model Number Legend

G5LA - □-□-□-□-□-□ □ VDC  
           1 2 3 4 5 6 7

**1. Number of Poles**

1: 1pole

**2. Contact Form**

None: SPDT

A: SPST-NO

**3. Enclosure Ratings**

None: flux protection

4: fully sealed

**4. Contact Material**

None: AgSnO2

**5. Insulation System**

None: Class A

CF : Class F

**6. Coil Power Consumption**

None: 360mW

**7. Rated Coil Voltage**

5, 9, 12, 24, 48 VDC

## Specifications

### ■ Coil Ratings

Rated Voltage (V)	Rated current (mA)	Coil resistance (Ω)	Must operate voltage	Must release voltage	Rated power consumption (W)	Max voltage
DC5	72	69.4	75%max. of rated voltage	10%min. of rated voltage	Approx. 0.36	130% of rated voltage at 85°C 170% of rated voltage at 23°C
DC9	40	225				
DC12	30	400				
DC24	15	1600			Approx. 0.48	
DC48	10	4800				

(1) The value of above list is measured at ambient temperature 23°C with the tolerances of coil resistance ±10%.

(2) The other items are value at 23°C .

- Note:** 1. Please avoid to do the ultrasonic cleaning, for this relay  
Because there are afraid of open coil or contact sticking by the vibration of ultrasonic.  
2. Please pay attention to the drop of relay  
if you dropped the product on the floor, please avoid to use it on your unit

### ■ Contact Ratings

Load	Resistive load(cosΦ=1)
Rated load	10A at 250VAC (N.O) 10A at 24VDC (N.O) 5A at 125VAC (N.O/N.C) 5A at 24VDC (N.O/N.C)
Rated carry current	10A(N.O) 5A(N.C)
Max. switching voltage	250VAC 24VDC
Max. switching current	AC10A DC10A( N.O) AC5A DC5A (N.C)
Max. switching power	AC2500VA DC240W(N.O) AC625VA DC120W(N.C)
Failure rate(reference value)	100mA at DC5V

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

### ■ Characteristics

Contact resistance	100 mΩ max.
Operation time	10 ms max.
Release time	5 ms max.
Max. operating frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr(under rated load)
Insulation resistance	1,000 MΩ min. (at 500 VDC)
Dielectric strength	2,000 VAC. 1mA 50/60Hz for 1 min between coil and contacts 750 VAC 1mA 50/60Hz for 1 min between contacts of same polarity
Vibration resistance	Destruction: 10 to 55 Hz, 1.5-mm double amplitude Malfunction: 10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Destruction: 1,000 m/s <sup>2</sup> (approx. 100G) Malfunction: 100 m/s <sup>2</sup> when energized ; 100 m/s <sup>2</sup> when no energized
Endurance	Mechanical: 10,000,000 operations min. (at 18,000 operations/hr under no load) Electrical: 100,000 operations average. (at 1,800 operations/hr under rated load)
Ambient temperature	Operating: -40°C to 85°C (with no icing) Storage: -40°C to 85°C (with no icing)

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<b>Ambient humidity</b>	Operating: 35% to 85% Storage: 35% to 85%
<b>Weight</b>	Approx. 7.5g

**Note:** Values in the above table are the initial values.

## ■ Approved standards

UL508 (File No. E41643) & CSA C22.2 No. 14 (File No. LR31928)

<b>Model</b>	<b>Coil rating</b>	<b>Contact rating</b>
G5LA	5 to 48 VDC	NO: 10 A, 277 V ac, general use 15 A, 125 V ac, general use 10 A, 24 V dc, resistive 1/2 Hp, 125 V ac 1/2 Hp, 250 V ac 10 A, 277 V ac, general use, 85°C (-CF) NC: 10 A, 125 V ac, resistive

VDE0435(EN61810-1)

<b>Model</b>	<b>Coil rating</b>	<b>Contact rating</b>
G5LA	5 to 48 VDC	NO: 10 A, 250 V ac, resistive, 85°C - flux protection: 50,000 cycles - fully sealed: 10,000 cycles 12 A, 125 V ac, resistive, 85°C, 10,000 cycles CO: 5 A, 250 V ac, resistive, 85°C - flux protection: 50,000 cycles - fully sealed: 10,000 cycles

CQC

<b>Model</b>	<b>Coil rating</b>	<b>Contact rating</b>
G5LA	5 to 48 VDC	NO: 10 A, 250 V ac, resistive, 10,000 cycles 12 A, 120 V ac, resistive, 10,000 cycles

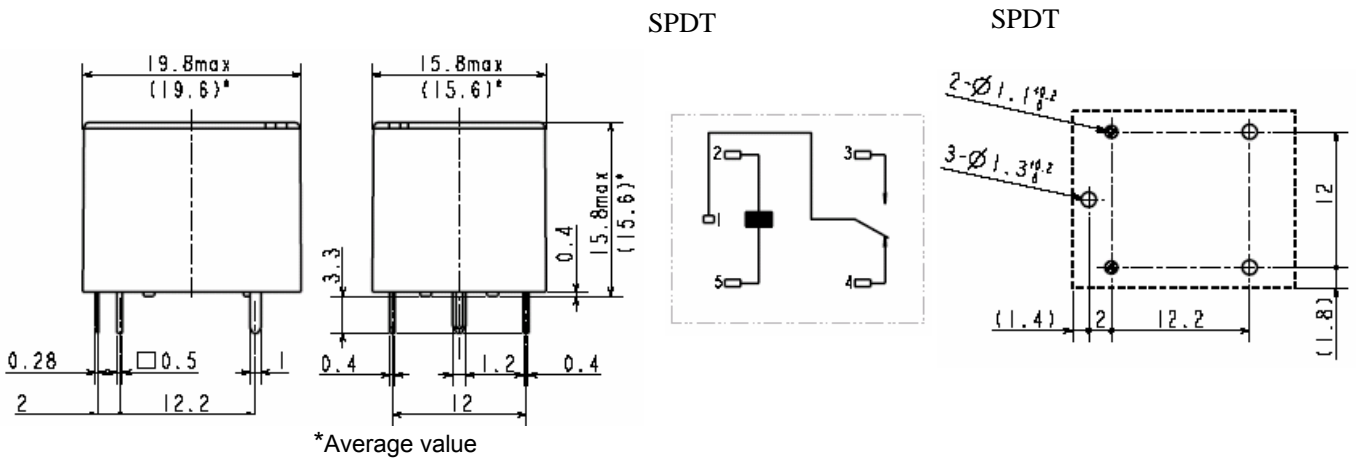
## Dimensions

Note: All units are in millimeters unless otherwise indicated.

### ■ SPDT Models

Terminal  
Arrangement/Internal  
Connections (Bottom View)

Mounting Holes  
(Bottom Views)  
Tolerance:  $\pm 0.1\text{mm}$   
Unless specified



### ■ SPST Models

Terminal  
Arrangement/Internal  
Connections (Bottom View)

Mounting Holes  
(Bottom Views)  
Tolerance:  $\pm 0.1\text{mm}$   
Unless specified

