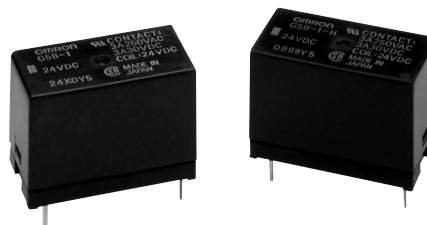


# Miniature Power Relay G5B

- Miniature: 22.10 L x 11.43 W x 13.97 H mm (0.87 L x 0.45 W x 0.55 in).
- Surge withstand voltage of 10,000 V.
- 4,000 V dielectric strength between coil and contacts.
- Low power consumption (200 mW).
- Ideal for appliance, HVAC and security market.
- Semi-sealed construction.



## Ordering Information

To Order: Select the part number and add the desired coil voltage rating, (e.g., G5B-1-DC12).

Type	Contact form	Model
Standard	SPST-NO	G5B-1
High-capacity		G5B-1-E
High-sensitivity		G5B-1-H

## Specifications

### ■ Contact Data

Load	Standard, high-sensitivity	High-capacity
	Resistive load (p.f. = 1)	
Rated load	3 A at 125 VAC, 3 A at 30 VDC	8 A at 125 VAC, 8 A at 30 VDC
Contact material	Ag	Ag alloy
Carry current	3 A	8 A
Max. operating voltage	250 VAC, 30 VDC	
Max. operating current	3 A	8 A
Max. switching capacity	750 VA, 90 W	2,000 VA, 240 W
Min. permissible load	10 mA at 5 VDC	

## ■ Coil Data

### Standard/High-Capacity

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Pick-up voltage	Dropout voltage	Maximum voltage at 70°C (158°F)	Power consumption (mW)
			% of rated voltage			
3	120	25	70% max.	5% min.	110%	Approx. 360
5	72	69.4	75% (high-capacity)			
6	60	100				
12	30	400				
18	20	900				
24	15	1600				

### High-Sensitivity

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Pick-up voltage	Dropout voltage	Maximum voltage at 70°C (158°F)	Power consumption (mW)
3	66.6	45	75% max.	5% min.	130%	200
5	40.0	125				
6	33.3	180				
12	16.7	720				
24	8.3	2880				

- Note:** 1. The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of ±10%.  
 2. The operating characteristics are measured at a coil temperature of 23°C (73°F).

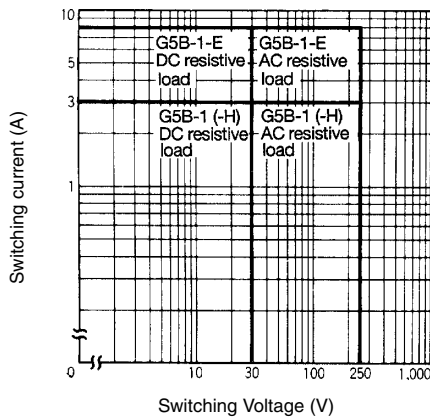
## ■ Characteristics

<b>Contact resistance</b>		100 mΩ max.
<b>Operate time</b>		10 ms max. (mean value: approx. 2.6 ms)
<b>Release time</b>		10 ms max. (mean value: approx. 5.6 ms)
<b>Bounce time</b>	<b>Operate</b>	Mean value: approx. 1.8 ms
<b>Operating frequency</b>	<b>Mechanical</b>	18,000 operations/hour
	<b>Electrical</b>	1,800 operations/hour standard/high-sensitivity
		1,200 operations/hour high-capacity
<b>Insulation resistance</b>		1,000 MΩ min (at 500 VDC)
<b>Dielectric strength</b>		4,000 VAC, 50/60 Hz for 1 minute between coil and contacts 1,000 VAC, 50/60 Hz for 1 minute between contacts of same polarity
<b>Vibration</b>	<b>Mechanical durability</b>	10 to 55 Hz, 1.52 mm (0.06 in) double amplitude
	<b>Malfuction durability</b>	10 to 55 Hz, 1.52 mm (0.06 in) double amplitude
<b>Shock</b>	<b>Mechanical durability</b>	1,000 m/s <sup>2</sup> (approx. 100 G)
	<b>Malfuction durability</b>	100 m/s <sup>2</sup> (approx. 10 G)
<b>Ambient temperature</b>	<b>Operating/storage</b>	-40° to 70°C (-40° to 158°F)
<b>Humidity</b>		35% to 85% RH
<b>Service life</b>	<b>Mechanical</b>	5,000,000 operations min. (at operating frequency of 15,000 operations/hour)
	<b>Electrical</b>	See "Characteristic Data"
<b>Weight</b>		Approx. 7 g (25 oz)

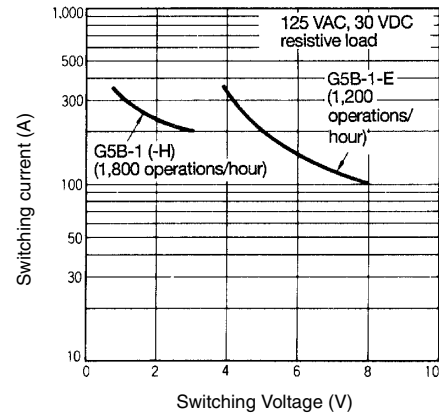
**Note:** Data shown are of initial value.

## Characteristic Data

### Maximum switching capacity



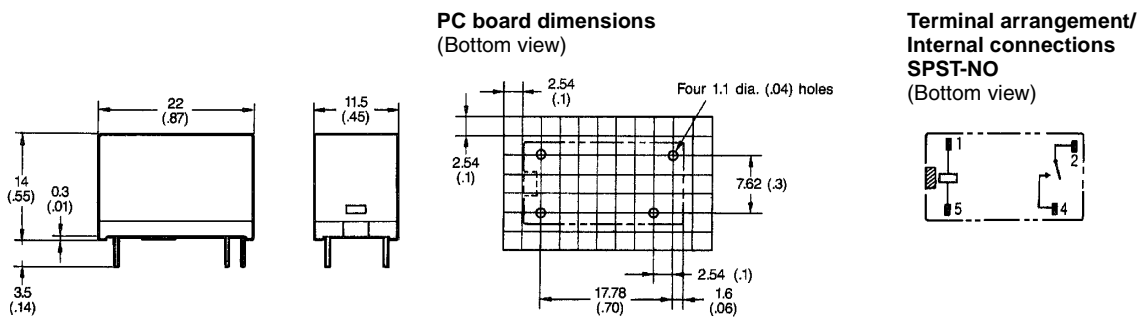
### Service life



## Dimensions

Unit: mm (inch)

### G5B



- Note: 1. and indicate mounting orientation marks.  
2. Tolerance is  $\pm 0.10$  mm (0.004 in).

## Approvals

UL (File No. E41463)/CSA (File No. LR31928)

Type	Contact form	Coil ratings	Contact ratings
G5B-1 G5B-1-H	SPST-NO	3 to 24 VDC	3 A at 250 VAC (General use) 3 A at 30 VDC (Resistive) 1/8 HP, 125 VAC 1/8 HP, 250 VAC TV-2, 125 VAC
G5B-1-E	SPST-NO	3 to 24 VDC	8 A at 250 VAC (Resistive) 1/8 hp, 125 VAC; 250 VA, 125 VAC, (pilot duty); 100 K ops. 8 A at 30 VDC (Resistive)

- Note: 1. The rated values approved by each of the safety standards (e.g., UL, CSA) may be different from the performance characteristics individually defined in this catalog.  
2. In the interest of product improvement, specifications are subject to change.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters into inches, divide by 25.4

MEMO

A large grid of dashed lines for taking notes, consisting of 20 columns and 25 rows of squares.

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**OMRON**

**OMRON ELECTRONIC  
COMPONENTS LLC**

55 E. Commerce Drive, Suite B  
Schaumburg, IL 60173

**847-882-2288**

**OMRON CANADA, INC.**

885 Milner Avenue  
Toronto, Ontario M1B 5V8

**416-286-6465**

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