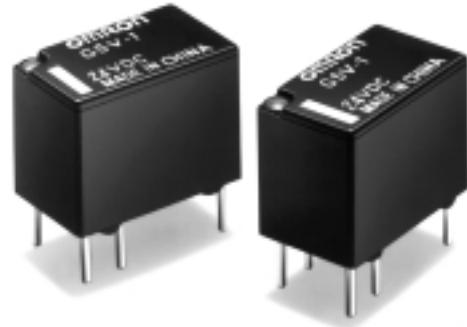


Ultra-miniature, Highly Sensitive SPDT Relay for Signal Circuits

- Ultra-miniature at 12.5 x 7.5 x 10 mm (L x W x H).
- Wide switching power of 1 mA to 1 A.
- High sensitivity: 150-mW nominal coil power.
- Fully sealed construction.
- International 2.54-mm terminal pitch.
- Conforms to FCC Part 68 requirements for coil to contacts.



RC

Ordering Information

Classification				Model
Contact form	Contact type	Contact material	Structure	
SPDT	Single crossbar	Ag + Au-clad	Fully sealed	G5V-1

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

Example: G5V-1 12 VDC

Rated coil voltage

Model Number Legend

G5V - VDC
1 2

1. Contact Form
1: SPDT

2. Rated Coil Voltage
3, 5, 6, 9, 12, 24 VDC

Specifications

Coil Ratings

Rated voltage		3 VDC	5 VDC	6 VDC	9 VDC	12 VDC	24 VDC
Rated current		50 mA	30 mA	25 mA	16.7 mA	12.5 mA	6.25 mA
Coil resistance		60 Ω	167 Ω	240 Ω	540 Ω	960 Ω	3,840 Ω
Coil inductance (H) (ref. value)	Armature OFF	0.05	0.15	0.20	0.45	0.85	3.48
	Armature ON	0.11	0.29	0.41	0.93	1.63	6.61
Must operate voltage		80% max. of rated voltage					
Must release voltage		10% min. of rated voltage					
Max. voltage		200% of rated voltage at 50°C, 160% at 70°C					
Power consumption		Approx. 150 mW					

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

■ Contact Ratings

Load	Resistive load ($\cos\phi = 1$)
Rated load	0.5 A at 125 VAC; 1 A at 24 VDC
Contact material	Ag + Au-clad
Rated carry current	2 A
Max. switching voltage	125 VAC, 60 VDC
Max. switching current	1 A
Max. switching power	62.5 VA, 30 W
Min. permissible load	1 mA at 5 VDC

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

■ Characteristics

Contact resistance	100 m Ω max.
Operate time	5 ms max. (mean value: approx. 2.5 ms)
Release time	5 ms max. (mean value: approx. 0.9 ms)
Bounce time	Operate: approx. 0.2 ms Release: approx. 5 ms
Max. operating frequency	Mechanical: 36,000 operations/hr Electrical: 1,800 operations/hr (under rated load)
Insulation resistance	1,000 M Ω min. (at 500 VDC between coil and contacts, at 250 VDC between contacts of same polarity.)
Dielectric strength	1,000 VAC, 50/60 Hz for 1 min between coil and contacts 400 VAC, 50/60 Hz for 1 min between contacts of same polarity
Impulse withstand voltage	1,500 V (10 x 160 μ s) between coil and contacts (conforms to FCC Part 68)
Vibration resistance	Destruction: 10 to 55 Hz, 3.3-mm double amplitude Malfunction: 10 to 55 Hz, 3.3-mm double amplitude
Shock resistance	Destruction: 1,000 m/s ² Malfunction: 100 m/s ²
Life expectancy	Mechanical: 5,000,000 operations min. (at 18,000 operations/hr) Electrical: 100,000 operations min. (under rated load, at 1,800 operations/hr)
Ambient temperature	Operating: -40°C to 70°C (with no icing) Storage: -40°C to 70°C (with no icing)
Ambient humidity	Operating: 35% to 85%
Weight	Approx. 2 g

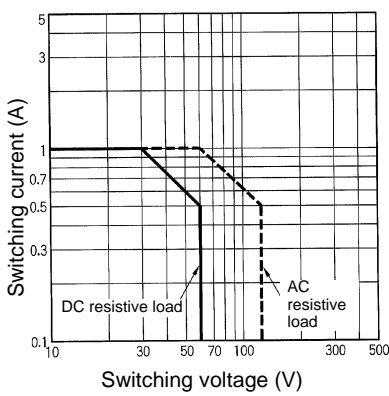
■ Approved Standards

UL478, 1950 (File No. E41515)/CSA C22.2 No.0, No.14 (File No. LR24825)

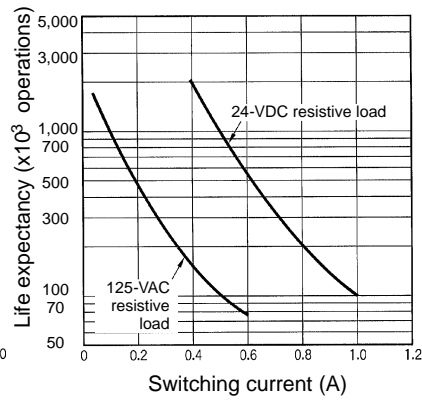
Model	Contact form	Coil ratings	Contact ratings
G5V-1	SPDT	3 to 24 VDC	0.5 A, 125 VAC (general use) 0.3 A, 60 VDC (resistive load) 1 A, 30 VDC (resistive load)

Engineering Data

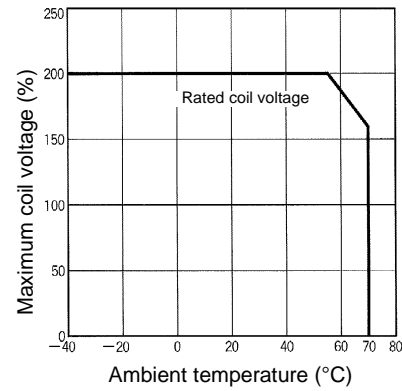
Maximum Switching Power



Life Expectancy





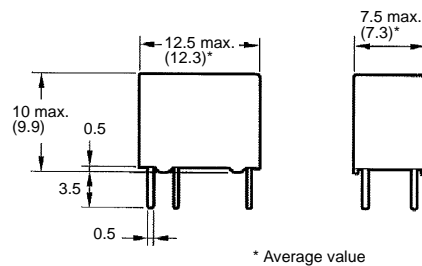
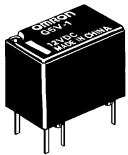
Ambient Temperature vs. Maximum Coil Voltage



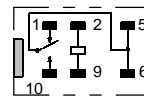
Note: The maximum coil voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

Dimensions

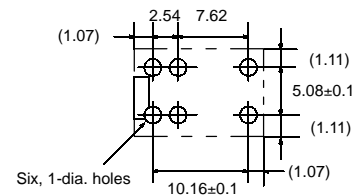
- Note:**
- All units are in millimeters unless otherwise indicated.
 - Numbers in parentheses are reference values.
 - Tolerance: ± 0.1
 - Orientation marks are indicated as follows:  



Terminal Arrangement/ Internal Connections (Bottom View)



Mounting Holes (Bottom View)



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

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

Cat. No. K048-E1-1D