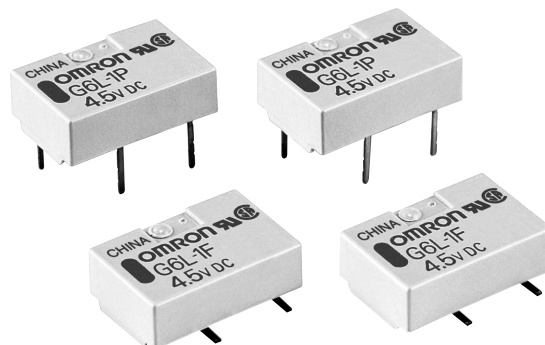


Ultra-thin Low Signal Relay G6L

Extremely Thin SPST-NO Flat Relay, One of the Thinnest Relays in the World

- For high-density mounting and slim finished packaging, G6L uses 20% less mounting area and 67% less volume in comparison with the G5V-1 relay.
- Measures just 7.0 (W) x 10.6 (L) x 4.5 (H) mm for surface-mount or 4.1 (H) for through-hole.*
- High dielectric strength: 1,000 VAC between coil and contacts and 750 VAC between contacts of the same polarity.
- Conforms to FCC Part 68 impulse withstand voltage rating of 1.5kV for 10 x 160 μs.
- Conforms to UL60950 (File No. E41515) / CSA C22.2 No. 60950 (File No. LR31928).
- Use of lead completely eliminated.
- RoHS Compliant.



Ordering Information

Contact form	Construction	Mounting type	Model
SPST-NO	Fully sealed	Through-hole terminal	G6L-1P
		Surface-mount terminal	G6L-1F

Note: 1. When ordering, add the rated coil voltage to the model number.

Example: G6L-1P 12 VDC

└── Rated coil voltage

2. When ordering tape packing, add “-TR” to the model number.

Example: G6L-1F-TR 12 VDC

└── Tape packing

Be sure since “-TR” is not part of the relay model number, it is not marked on the relay case.

Model Number Legend:

G6L□-1□-□DC□

└──
└──
└──
└──
└──

1
2
3
4
5

1. Relay function

None: Non-latching

2. Contact form

1: SPST-NO

3. Terminal shape

P: PCB terminals

F: Surface-mount terminals

4. Packaging

None: Tube packaging

TR: Tape and reel packaging

5. Rated Coil Voltage

3, 4.5, 5, 12, 24

Application Examples

- Peripherals of MODEM/PC
- Telephones
- Office automation machines
- Audio-visual products
- Communications equipment
- Measurement devices
- Amusement equipment
- Security equipment

*This dimension effective, April 2005.

Specifications

■ Contact Ratings

Item	Resistive load
Contact mechanism	Single crossbar
Rated load	0.3 A at 125 VAC, 1 A at 24 VDC
Carry current	1 A
Max. operating voltage	125 VAC, 60 VDC
Max. operating current	1 A

■ Coil Ratings

Item	Voltage Rating				
	3 VDC	4.5 VDC	5 VDC	12 VDC	24 VDC
Rated voltage	3 VDC	4.5 VDC	5 VDC	12 VDC	24 VDC
Rated current	60.0 mA	40.0 mA	36.0 mA	15.0 mA	9.6 mA
Coil resistance	50.0 Ω	112.5 Ω	139.0 Ω	800.0 Ω	2,504.0 Ω
Pick-up voltage	75% max. of rated voltage				
Dropout voltage	10% min. of rated voltage				
Maximum voltage	150% of rated voltage				130% of rated voltage
Power consumption	Approx. 180 mW				Approx. 230 mW

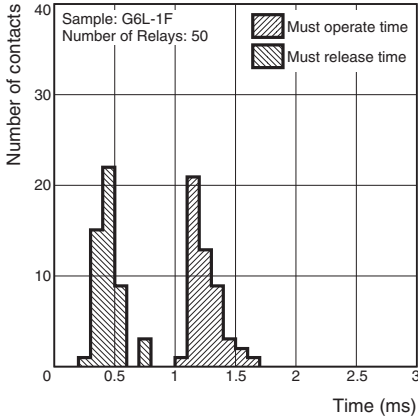
- Note:**
- The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of ±10%.
 - The operating characteristics are measured at a coil temperature of 23°C.
 - The maximum voltage is the highest voltage that can be imposed on the relay coil.

■ Characteristics

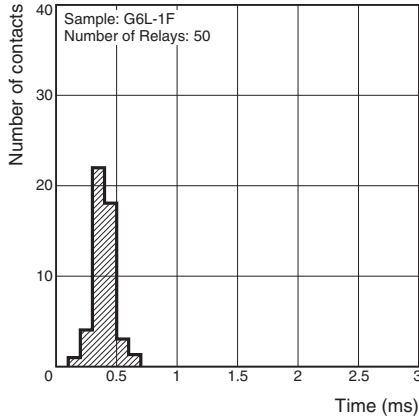
Item	Non-latching Relays	
	G6L-1P, G6L-1F	
Contact resistance (See Note 1)	100 mΩ max.	
Operate time (See Note 2)	5 ms max. (approx. 1.1 ms)	
Release time (See Note 2)	5 ms max. (approx. 0.4 ms)	
Insulation resistance (See Note 3)	1,000 MΩ min. (at 500 VDC)	
Dielectric strength	Coil and contacts	1,000 VAC, 50/60 Hz for 1 min
	Contacts of same poles	750 VAC, 50/60 Hz for 1 min
Surge withstand voltage	Coil and contacts	1,500 VAC, 10 × 160 μs
Vibration	Mechanical durability	10 to 55 Hz, 1.65-mm single amplitude (3.3-mm double amplitude)
	Malfunction durability	10 to 55 Hz, 1.65-mm single amplitude (3.3-mm double amplitude)
Shock	Mechanical durability	1,000 m/s ²
	Malfunction durability	100 m/s ²
Service life	Mechanical	5,000,000 operations min. (at 36,000 operations/hour)
	Electrical	100,000 operations min. (with a rated load at 1,800 operations/hour)
Failure rate (P level) (See Note 4)	1 mA at 5 VDC	
Ambient temperature	Operating: -40°C to 70°C (with no icing or condensation)	
Humidity	Operating: 5% to 85% RH	
Weight	Approx. 0.6 g	

- Note:**
- The contact resistance was measured with 10 mA at 1 VDC with a fall-of-potential method.
 - Values in parentheses are actual values.
 - The insulation resistance was measured with a 500-VDC Megger Tester applied to the same parts as those used for checking the dielectric strength.
 - This value was measured at a switching frequency of 120 operations/min. This value may vary, depending on switching frequency, operating conditions, expected reliability level of the relay, etc. It is always recommended to double-check relay suitability under actual load conditions.
 - The above values are initial values.

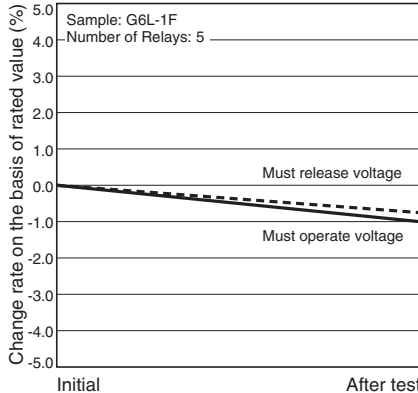
Must Operate and Must Release Time Distribution (See Note)



Distribution of Bounce Time (See Note)



Vibration Resistance

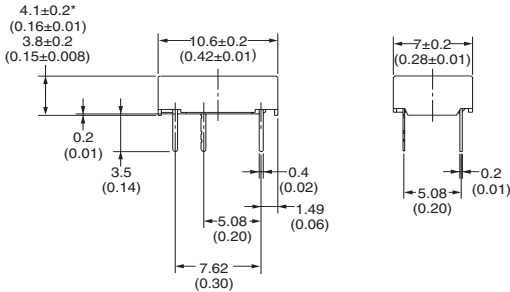
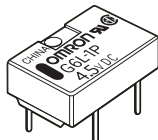


Note: The tests were conducted at an ambient temperature of 23°C.

Dimensions

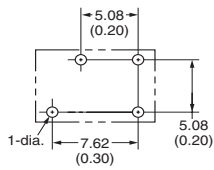
Unit: mm (inch)

G6L-1P

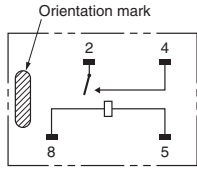


Note: Each value has a tolerance of ±0.3 mm.
*This dimension effective April, 2005.

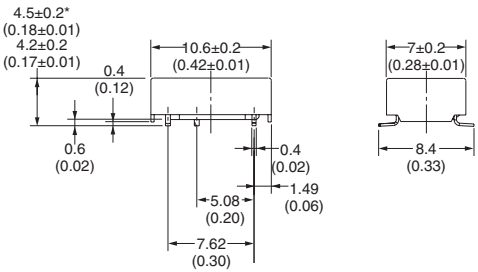
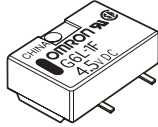
PCB Mounting Holes (Bottom View)
Tolerance: ±0.1 mm



Terminal Arrangement/ Internal Connections (Bottom View)

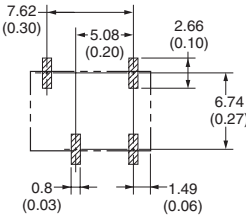


G6L-1F



Note: Each value has a tolerance of ±0.3 mm.
*This dimension effective April, 2005.

PCB Mounting Holes (Top View)
Tolerance: ±0.1 mm



Terminal Arrangement/ Internal Connections (Top View)

