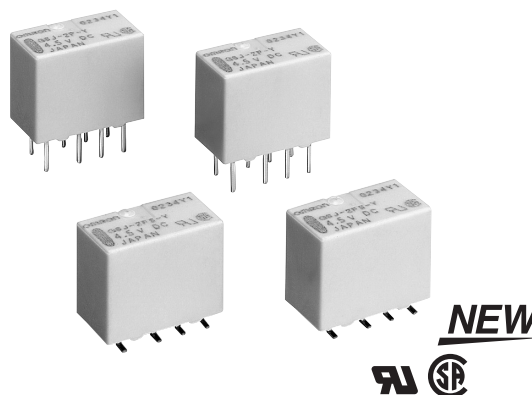


Surface-mounting Relay

G6J-Y

Ultra-compact and Slim DPDT Relay

- Dimensions of $5.7 \times 10.6 \times 9$ mm (W \times L \times H) represent a reduction of approximately 56% in mounting area compared with the OMRON G6S, for higher-density mounting.
- Dielectric strength of 1,500 VAC and an impulse withstand voltage of 2,500 V for $2 \times 10 \mu\text{s}$ (conforms to North American Telcordia specifications (formerly Bellcore)).
- Conforms to FCC Part 68 (i.e., impulse withstand voltage of 1,500 V for $10 \times 160 \mu\text{s}$ between coil and contacts and between contacts of the same polarity).
- Single-winding latching models to save energy.
- Conforms to UL60950 (File No. E41515)/CSA C22.2 No. 60950 (File No. LR31928).
- RoHS Compliant.



Ordering Information

Item		Model	
Terminal	Contact form	Non-latching	Single coil latching
PCB through-hole	DPDT	G6J-2P-Y	G6JU-2P-Y
SMT Gull-wing		G6J-2FL-Y	G6JU-2FL-Y
SMT Shortened leads		G6J-2FS-Y	G6JU-2FS-Y

Note: 1. When ordering, add the rated coil voltage to the model number.
Example: G6J-2P-Y DC12

Rated coil voltage

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

Example: G6J-2P-Y-TR DC12

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:

G6J -Y- DC

1 2 3 4 5

1. Relay function

None: Non-latching, standard

U: Single-coil latching relay

2. Contact form

2: DPDT

3. Terminal shape

P: PCB through-hole terminals

FL: SMT Gull-wing

FS: SMT shortened leads

4. Packaging

None: Tube packaging

TR: Tape and reel packaging

5. Rated Coil Voltage

3, 4.5, 5, 12, 24

Application Examples

Communications equipment, measurement devices, computer peripheral devices, office automation equipment, and audio-visual products.

Specifications

■ Contact Data

Rated load	0.3 A @ 125 VAC 1 A @ 30 VDC
Contact material	Ag (Au Clad)
Max. carry current	1 A
Max. operating voltage	125 VAC, 110 VDC
Max. operating current	1 A
Max. switching capacity	37.5 VA, 30 W
Min. permissible load (see note 1)	10m VDC, 10μA

Note: 1. This value was measured at a switching frequency of 120 operations/min and the criterion of contact resistance is 5% of the load impedance. This value may vary depending on the operating frequency, operating conditions, expected reliability level of the relay, etc. Always double-check relay suitability under actual load conditions.

■ Coil Data

G6J-Y Standard, Non-latching (G6J-2P-Y, G6J-2FS-Y, G6J-2FL-Y)

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Pick-up voltage	Drop-out voltage	Max. voltage	Power consumption (mW)
			% of rated voltage			
3	48.0	62.5	75% max.	10% min.	150% max.	140
4.5	32.6	137.9				
5	28.9	173.1				
12	12.3	976.8				
24	9.2	2,600.5				230

- Note: 1.** The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of ±10%.
2. The operating characteristics are measured at a coil temperature of 23°C.
3. The maximum voltage is the highest voltage that can be imposed on the Relay coil instantaneously.

G6JU-Y Single coil, Latching (G6JU-2P-Y, G6JU-2FL-Y, G6JU-2FS-Y)

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Set voltage	Reset voltage	Max. voltage	Power consumption (mW)
			% of rated voltage			
3	33.7	89.0	75% max.	75% max.	150% max.	100
4.5	22.0	204.3				
5	20.4	245.5				
12	9.0	1,329.2				

- Note: 1.** The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of ±10%.
2. The operating characteristics are measured at a coil temperature of 23°C.
3. The maximum voltage is the highest voltage that can be imposed on the Relay coil instantaneously.

■ Characteristics

Item		Standard non-latching relays	Single coil latching relays
		G6J-2P-Y, G6J-2FS-Y, G6J-2FL-Y	G6JU-2P-Y, G6JU-2FS-Y, G6JU-2FL-Y
Contact resistance (initial) (See note 1)		100 mΩ max.	
Operating (set) time (See note 2)		3 ms max. (approx. 1.6 ms)	3 ms max. (approx. 1.6 ms)
Release (reset) time (See note 2)		3 ms max. (approx. 1.0 ms)	3 ms max. (approx. 0.9 ms)
Minimum set/reset pulse width		---	10 ms min. (at 100% rated coil voltage)
Insulation resistance (See note 3)		1,000 MΩ min. (at 500 VDC)	
Dielectric strength		1,500 VAC, 50/60 Hz for 1 min. between coil and contacts	
		1,000 VAC, 50/60 Hz for 1 min. between contacts of different polarity	
		750 VAC, 50/60 Hz for 1 min. between contacts of the same polarity	
Surge withstand voltage		2,500 VAC, 2 x 10 μs between coil and contacts	
		1,500 VAC, 10 x 160 μs between contacts of the same and different polarity	
Vibration resistance	Mechanical durability	10 to 55 Hz 2.5-mm single amplitude (5-mm double amplitude)	
	Malfunction durability	10 to 55 Hz 1.65-mm single amplitude (3.3-mm double amplitude)	
Shock resistance	Mechanical durability	1,000 m/s ² (approx. 100G)	
	Malfunction durability	750 m/s ² (approx. 75G)	
Service life	Mechanical	50,000,000 operations min. (at 36,000 operations/hour)	
	Electrical	100,000 operations min. (with a rated load at 1,800 operations/hour)	
Ambient temperature		-40 to 85°C (-40 to 185°F) with no icing or condensation	
Humidity		5% to 85% RH	
Weight		Approx. 1.0 g	

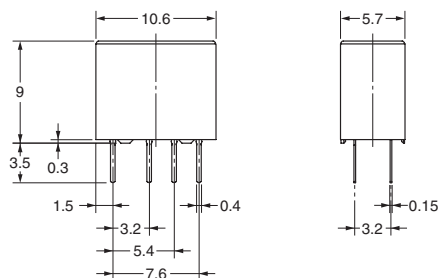
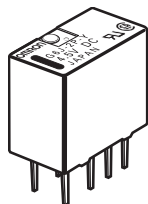
- Note:** 1. The contact resistance was measured with 10 mA at 1 VDC with a fall-of-potential method.
 2. Values in parentheses are typical values unless otherwise stated.
 3. The insulation resistance was measured with a 500-VDC Megger Tester applied to the same parts as those for checking the dielectric strength.
 4. The above values are initial values.

Dimensions

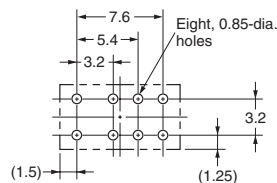
Unit: mm (inch)

Note: A tolerance of ± 0.3 (± 0.01) applies to every dimension in the following drawings unless otherwise stated.

G6J-2P-Y G6JU-2P-Y

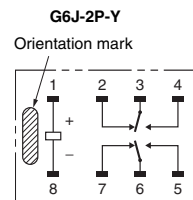


Mounting Dimensions (Bottom View)*

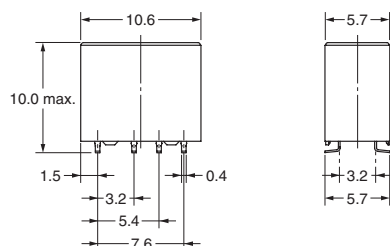
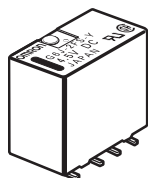


*Tolerance ± 0.1 mm

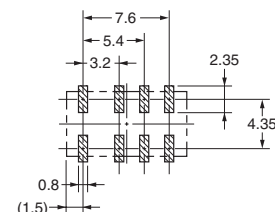
Terminal Arrangement/ Internal Connections (Bottom View)



G6J-2FS-Y G6JU-2FS-Y

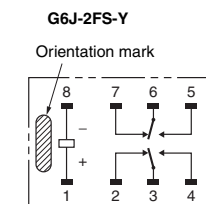


Mounting Dimensions (Top View)*

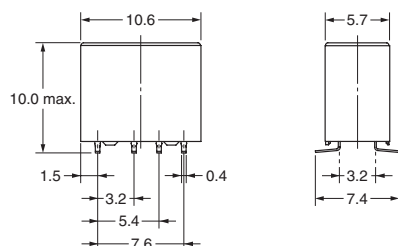
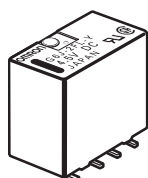


*Tolerance ± 0.1 mm

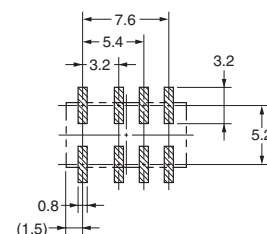
Terminal Arrangement/ Internal Connections (Top View)



G6J-2FL-Y G6JU-2FL-Y

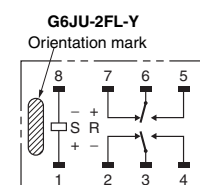
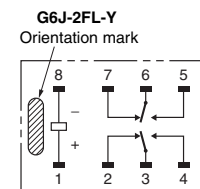


Mounting Dimensions (Top View)*



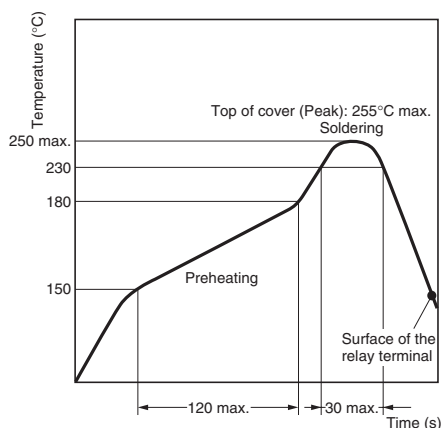
*Tolerance ± 0.1 mm

Terminal Arrangement/ Internal Connections (Top View)



Recommended Soldering Method

IRS Method (for Surface-mounting Terminal Relays)



Note: Temperatures are given for the surface of the terminal.

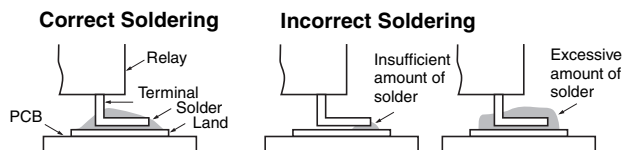
Approved Standards

UL approval:UL60950 (File No. E41515)

CSA approval:C22.2 No. 60950 (File No. LR31928)

Contact form	Coil rating	Contact rating
DPDT	G6J-2P-Y, 2FS-Y, 2FL-Y: 3 to 24 VDC	1 A at 30 VDC
	G6JU-2P-Y, 2FS-Y, 2FL-Y: 3 to 24 VDC	0.5 A at 60 VDC
		0.3 A at 125 VAC

- The thickness of cream solder to be applied should be between 150 and 200 μm on OMRON's recommended PCB pattern.
- In order to perform correct soldering, it is recommended that the correct soldering conditions be maintained as shown below on the left-hand side.



Visually check that the Relay is properly soldered.