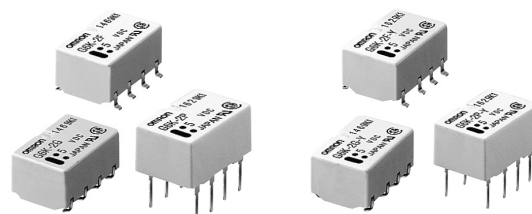


# Low Signal Relay G6K

- Fourth generation design.
- Design based on worldwide communications, computer peripheral and office automation relay requirements.
- Offers excellent board space savings.
- Meets 2.5 kV Bellcore surge requirements.
- Terminal design based on Omron's successful G6S relay.
- Available in PCB through-hole, SMT gullwing and SMT "inside-L" terminals.
- Ambient temperature range of -40 to +85°C.
- Complies with UL1950 Basic Insulation at 125 V.
- Available in 2.54 and 3.2 mm coil-contact terminal spacing versions.
- Available in single coil latching.
- RoHS Compliant.



## Ordering Information

To Order: Select the part number and add the desired coil voltage rating (e.g., G6K-2F-DC5).

Terminal	Contact form	Model		
		Non-latching 2.54 mm spacing	Non-latching 3.2 mm coil-contact terminal spacing	Single coil latching 3.2 mm coil-contact terminal spacing
Gullwing	DPDT	G6K-2F	G6K-2F-Y	G6KU-2F-Y
Inside "L"	DPDT	G6K-2G	G6K-2G-Y	G6KU-2G-Y
PCB through-hole	DPDT	G6K-2P	G6K-2P-Y	G6KU-2P-Y

## Specifications

### Contact Data

Load	Resistive load (cosφ=1)
Rated load	0.3 A at 125 VAC
	1 A at 30 VDC
Contact material	Ag (Au clad)
Max. carry current	1 A
Max. operating voltage	125 VAC, 60 VDC
Max. operating current	1 A
Max. switching capacity	37.5 VA, 30W
Min. permissible load	10 μA at 10 mVDC

**G6K- 2.5 mm coil-contact terminal spacing, standard, non-latching (G6K-2F, G6K-2G, G6K-2P)**

**G6K- 3.2 mm coil-contact terminal spacing, non-latching (G6K-2F-Y, G6K-2G-Y, G6K-2P-Y)**

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (mW)
			% of rated value			
3	33.0	91	80% max.	10% min.	150% max. (at 85°C)	100 (approx.)
4.5	23.2	194				
5	21.1	237				
6	17.6	341				
9	11.3	795				
12	9.1	1,315				
24	4.6	5,220				

**G6KU- 3.2 mm spacing, single coil latching (G6KU-2F-Y, G6KU-2G-Y, G6KU-2P-Y)**

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Set-up voltage	Reset voltage	Maximum voltage	Power consumption (mW)
			% of rated value			
3	33.0	91	80% max.	80% min.	150% max. (at 85°C)	100 (approx.)
4.5	23.2	194				
5	21.1	237				
6	17.6	341				
9	11.3	795				
12	9.1	1,315				
24	4.6	5,220				

- 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) unless otherwise specified.
  3. Pick-up voltage is measured with no carry current across the contacts.
  4. Pick-up voltage will vary with temperature.
  5. Specifications subject to change without notice.

## ■ Characteristics

<b>Contact resistance (initial)</b>		100 mΩ max.
<b>Operate time (set time)</b>		3 ms max.
<b>Release time (reset time)</b>		3 ms max.
<b>Bounce time</b>		3 ms max.
<b>Insulation resistance</b>		1,000 MΩ min. (at 500 VDC)
<b>Dielectric strength</b>		1,500 VAC for 1 minute between coil contacts 1,000 VAC for 1 minute between contacts of different poles 750 VAC for 1 minute between contacts of the same pole
<b>Surge withstand voltage</b>		2,500 V, 2x10 μs (conforms to Bellcore specifications) between coil and contacts 1,500 V, 10x160 μs (conforms to FCC Part 68) between contacts of different poles 1,500 V, 10x160 μs (conforms to FCC Part 68) between contacts of the same pole
<b>Vibration</b>	<b>Mechanical durability</b>	10 to 55 Hz; 5.0 mm double amplitude
	<b>Malfunction durability</b>	10 to 55 Hz; 3.3 mm double amplitude
<b>Shock</b>	<b>Mechanical durability</b>	1,000 m/s <sup>2</sup> , approx. 100G
	<b>Malfunction durability</b>	750 m/s <sup>2</sup> , approx. 75G
<b>Ambient temperature</b>		-40° C to 85° C (-40° F to 185° F)
<b>Humidity</b>		35 to 85% RH
<b>Service life</b>	<b>Mechanical</b>	50,000,000 operations min. (at 36,000 operations per hour)
	<b>Electrical</b>	100,000 operations min. at rated load (at 1,800 operations per hour)

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

## ■ Approvals

UL (File No. E41515) / CSA (File No. LR24825)

Type	Contact form	Coil rating	Contact ratings
G6K-2F G6K-2G G6K-2P1 G6K-2F-Y G6K-2G-Y G6K-2P-Y G6KU-2F-Y G6KU-2G-Y G6KU-2P-Y	DPDT	3 to 24 VDC	0.3 A, 125 VAC 0.5 A, 60 VDC 1 A, 30 VDC

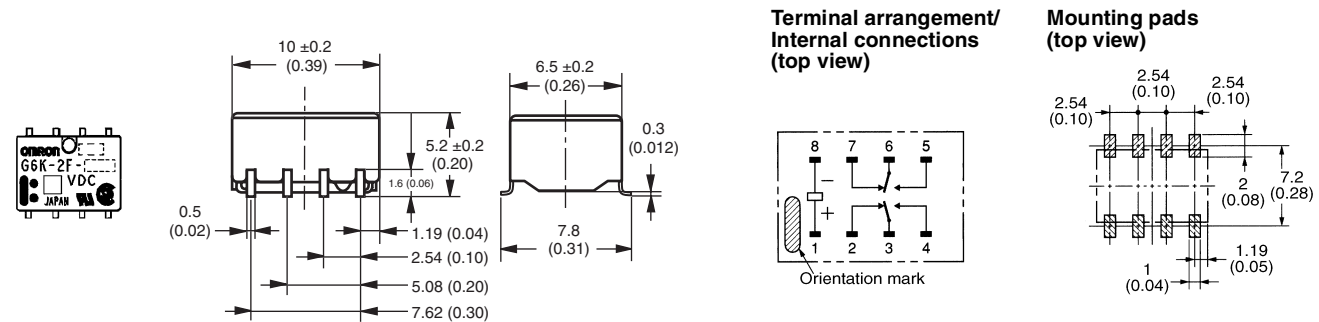
**Note:** Complies with UL1950 Basic Insulation at 125 V (pollution degree 1 for internal spacings, pollution degree 2 for external spacings).

## Dimensions

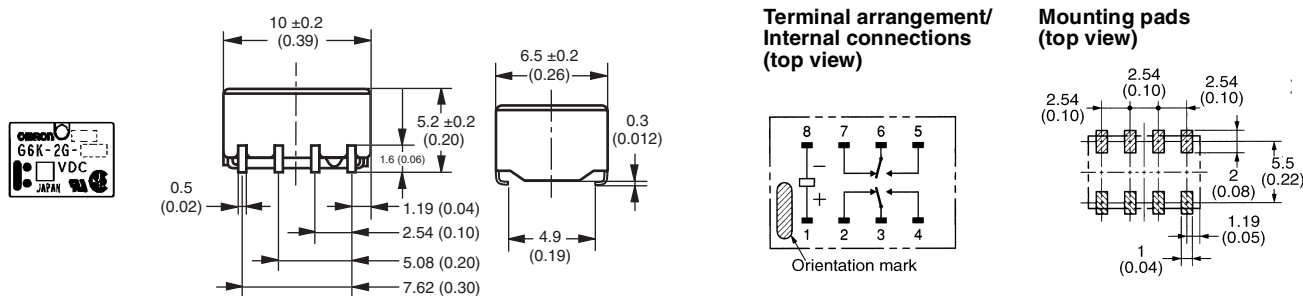
Unit: mm (inch)

### ■ Relays

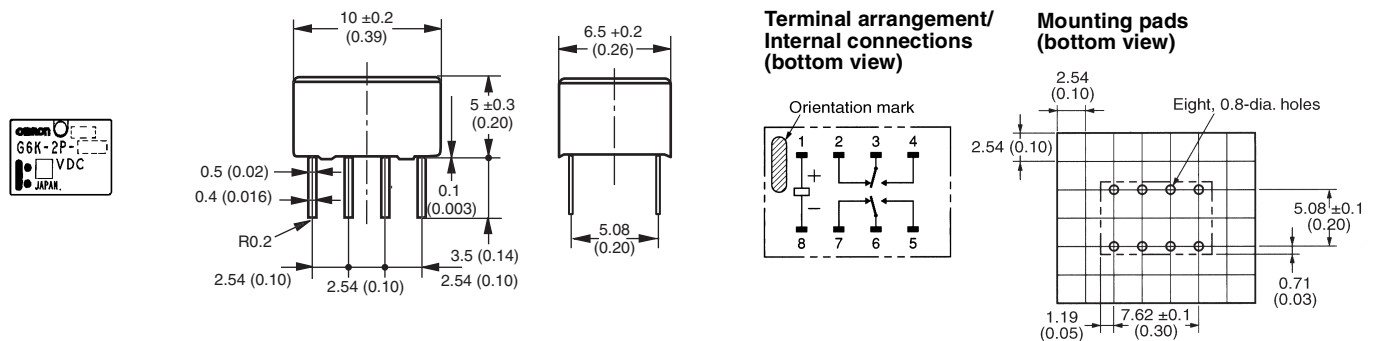
#### G6K-2F



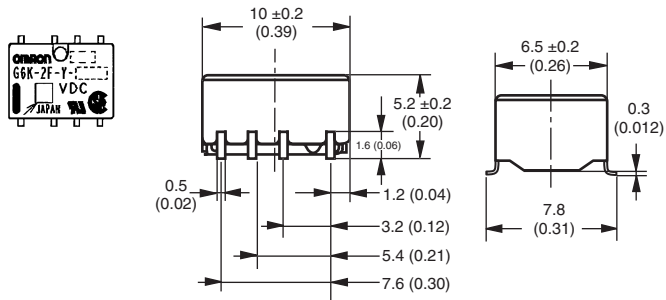
#### G6K-2G



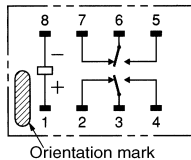
#### G6K-2P



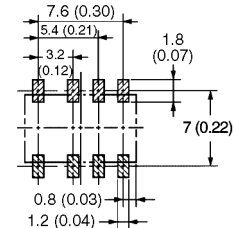
G6K-2F-Y



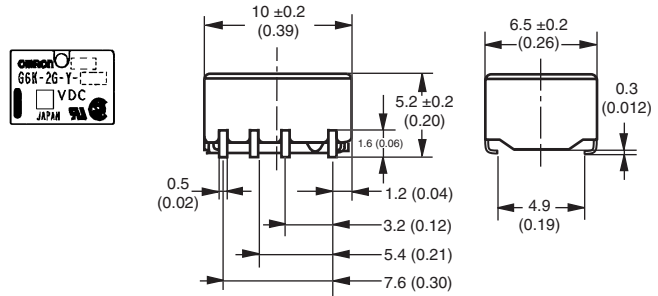
Terminal arrangement/  
Internal connections  
(top view)



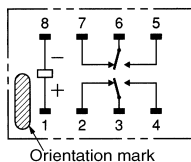
Mounting pads  
(top view)



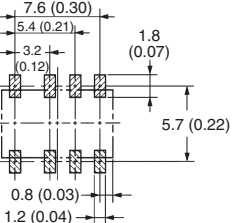
G6K-2G-Y



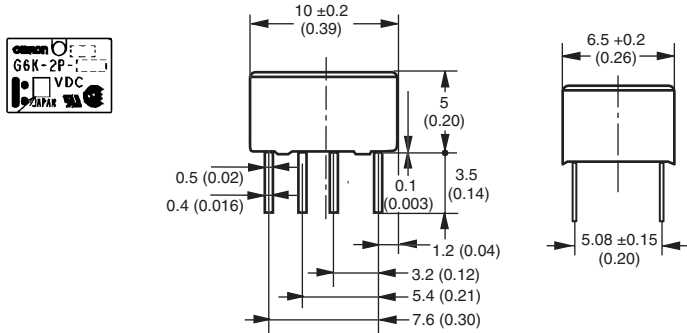
Terminal arrangement/  
Internal connections  
(top view)



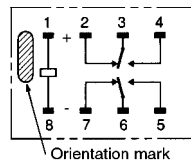
Mounting pads  
(top view)



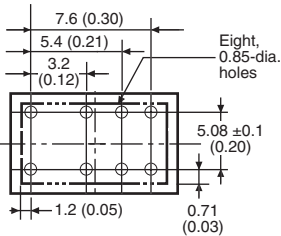
G6K-2P-Y



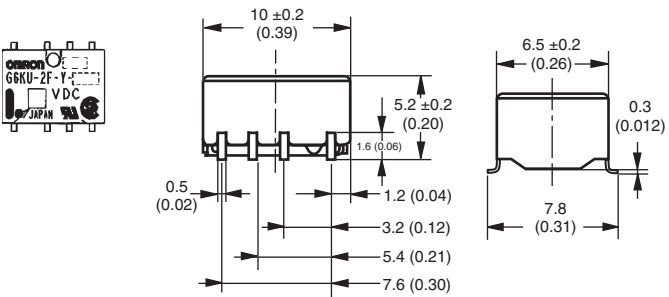
Terminal arrangement/  
Internal connections  
(bottom view)



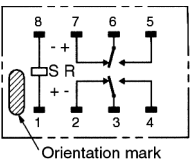
Mounting pads  
(bottom view)



G6KU-2F-Y



Terminal arrangement/  
Internal connections  
(top view)



Mounting pads  
(top view)

