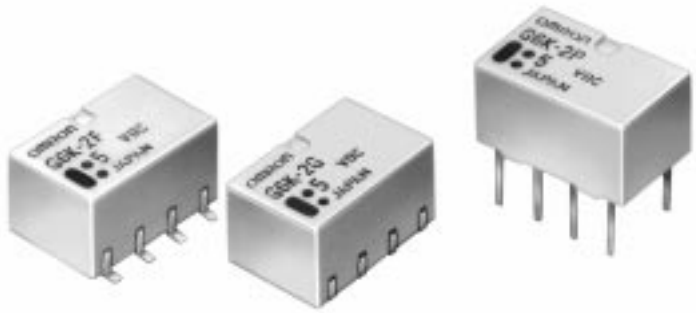
OMRON

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 2.5kV Bellcore surge requirements
- Terminal design based on Omron's successful G6S relay
- Available in PCB through-hole, SMT gullwing and SMT “inside-L” terminals
- 85°C high ambient versions coming soon!



Ordering Information

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

Type	Contact form	**Part number** (non-latching, fully sealed)		
		SMT gullwing	SMT “inside-L”	PCB through-hole
Standard	DPDT	**G6K-2F**	**G6K-2G**	**G6K-2P**
High-Ambient	DPDT	To be announced		

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

Standard DPDT (G6K-2F, G6K-2G, G6K-2P)

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (mW)
			% of rated voltage			
3	33.0	91	80% max.	10% min.	200% max.	100 (approx.)
4.5	23.2	194				
5	21.1	237				
6	17.6	341				
9	11.3	795				
12	8.5	1,407				
24	4.6	5,220				

High-ambient DPDT (To be released)

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (mW)
			% of rated voltage			
3	46.7	64	75% max.	10% min.	200% max.	140 (approx.)
4.5	31.1	145				
5	28.0	179				
6	23.3	257				
9	15.6	579				
12	11.7	1,029				
24	5.8	4,114				

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

Contact resistance (initial)		80 mΩ max.
Operate time		3 ms max.
Release time		3 ms max.
Bounce time		3 ms max.
Insulation resistance		1,000 MΩ min. (at 500 VDC)
Dielectric strength		1,500 VAC for 1 min. between coil and contacts 1,000 VAC for 1 minute between contacts of different poles 750 VAC for 1 minute between contacts of the same pole
Surge withstand voltage		2,500 V, 2x10μs (conforms to Bellcore specifications) between coil and contacts 1,500 V, 10x160μs (conforms to FCC Part 68) between contacts of different poles 1,500 V, 10x160μs (conforms to FCC Part 68) between contacts of the same pole
Vibration	Mechanical durability	10 to 55 Hz; 5.0 mm double amplitude
	Malfunction durability	10 to 55 Hz; 3.3 mm double amplitude
Shock	Mechanical durability	1,000 m/s^2; approx. 100G
	Malfunction durability	750 m/s^2; approx. 75G
Ambient temperature		Standard versions: -40°C to 70°C (-40°F to 158°F) High ambient versions: -40°C to 85°C (-40°F to 185°F)
Humidity		35 to 85% RH
Service life	Mechanical	100,000,000 operations min. (at 36,000 operations per hour)
	Electrical	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) pending

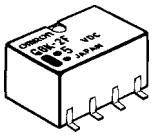
Type	Contact form	Coil rating	Contact ratings
G6K-2F	DPDT	3 to 24 VDC	0.3A, 125VAC
G6K-2G			0.5A, 60VDC
G6K-2P			1A, 30VDC

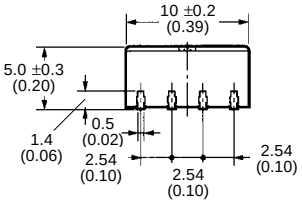
Dimensions

Unit: mm (inch)

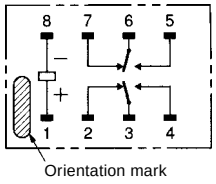
■ RELAYS

G6K-2F

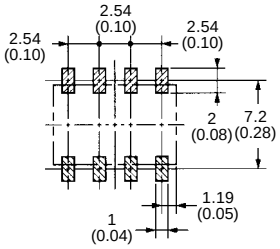




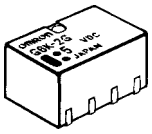
Terminal arrangement/ Internal connections (top view)

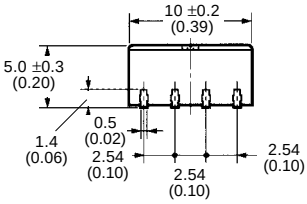


Mounting pads (top view)

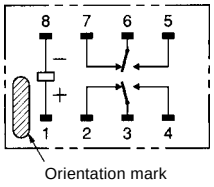


G6K-2G





Terminal arrangement/ Internal connections (top view)



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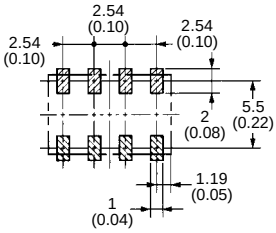
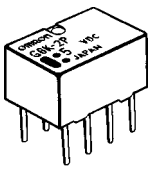
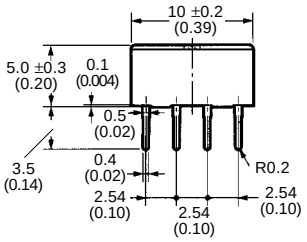
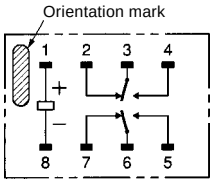


G6K-2P

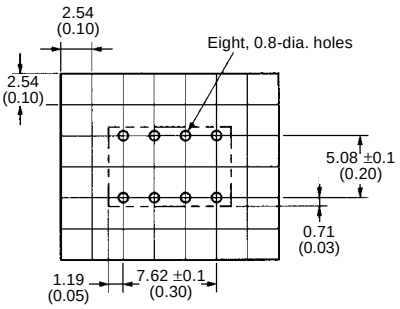




Terminal arrangement/ Internal connections (bottom view)



Mounting holes (bottom view)



■ ACCESSORIES

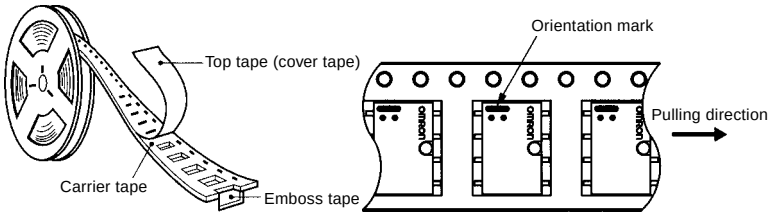
Relays in tube packing are arranged so that the orientation mark of each Relay is on the left side. Be sure to reference Relay orientation when mounting the Relay to the PCB.

Tube packing	Standard nomenclature	50 pcs per anti-static tube
Tape packing	When ordering, add "TR" before the rated coil voltage (e.g., G6K-2G-*TR*-DC5) Note: TR is not part of the relay model number and will not be marked on the relay	

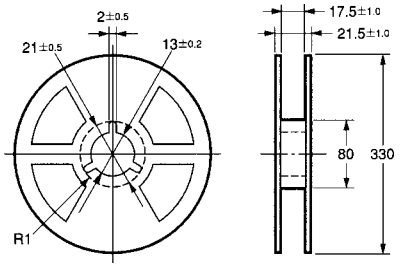
■ TAPE AND REEL DIMENSIONS

- Tape type: ETX7200 (EIAJ - Electronic Industrial Association of Japan)
- 16mm tape meets EIA Standards
  5.6mm pocket depth
  12mm pitch
  4mm sproket pitch
- Reel type: RPM-16D (EIAJ), 330mm
- Relays per reel: 900

1. Direction of Relay Insertion

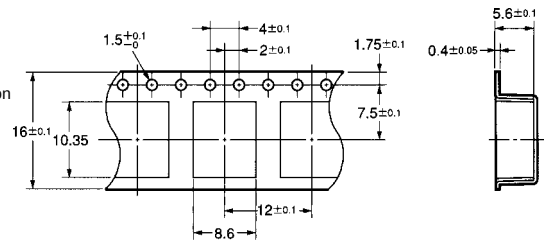


2. Reel Dimensions

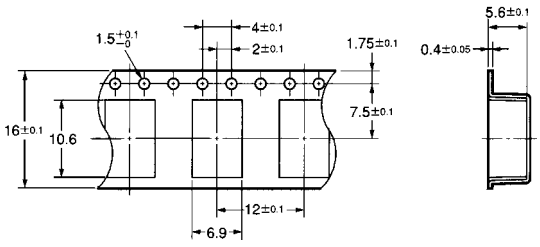


3. Carrier Tape Dimensions

G6K-2F



G6K-2G



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