

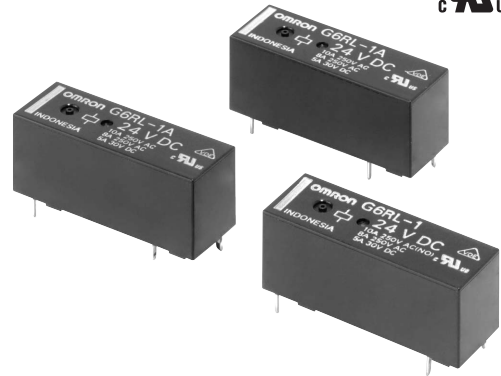
G6RL

PCB Power Relay



Low-profile 12.3 mm height power relay with maximum switching of 10A

- Low profile: 12.3 mm in height
- Max. switching capacity: 2,500 VA (NO)
- Dielectric strength: 5 kV
- Clearance and creepage distance: 10 mm.
- Models with high shock resistance (250 m/s²) are available.
- Models for P1 load (2 x 200 W lamps parallel to ignition transformer) are available.



RoHS Compliant

Model Number Legend

G6RL- - -

1 2 3 4 5

1. Number of Poles

1: 1-pole

2. Contact Form

None: SPDT (1c)
A: SPST-NO (1a)

3. Enclosure rating

None: Flux protection
4: Fully sealed

4. Contact material

None: Standard (Ag-alloy, Cd free)
ASI: AgSnIn

5. Special Functions

PL: P1 load

Application Examples

- Boilers
- PLCs
- I/O ports
- Timers
- Temperature controllers

G6RL

Ordering Information

Classification	Terminal Shape	Contact form	Enclosure rating	Model	Rated coil voltage	Minimum packing unit
Standard	PCB terminals	SPST-NO (1a)	Flux protection	G6RL-1A G6RL-1A-ASI G6RL-1A-ASI-PL	3 VDC 5 VDC 6 VDC 12 VDC 24 VDC 48 VDC	100 pcs/tray
P1 Load			Fully sealed	G6RL-1A4-ASI		
Standard		SPDT (1c)	Flux protection	G6RL-1 G6RL-1-ASI G6RL-1-ASI-PL		
P1 Load			Fully sealed	G6RL-14-ASI		
Standard						

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

Example: G6RL-1A DC3

Rated coil voltage

However, the notation of the coil voltage on the product case as well as on the packing will be marked as □□VDC.

Ratings

Coil

Standard, P1 Load (-PL type)

Rated Voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Must operate voltage (V)	Must release voltage (V)	Max. voltage (V)	Power consumption (mW)
			% of rated voltage			
3	73.3	40	70% max.	10% min.	150% (at 23°C)	Approx. 220
5	44	113				
6	36.7	163				
12	18.3	654				
24	9.2	2618				
48	5	9600				Approx. 240

Note 1. The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of ±10%.

Note 2. The operating characteristics are measured at a coil temperature of 23°C.

Note 3. The "Max. voltage" is the maximum voltage that can be applied to the relay coil.

●Contacts

Load	Resistive load
Contacts type	Single
Contacts material	Ag-alloy (Cd free)
Rated load *	10 A at 250 VAC, (NO) resistive load 8 A at 250 VAC, resistive load 5 A at 30 VDC, resistive load
Rated carry current	10 A
Max. switching current	NO: 10 A, NC: 8 A

* G6RL-1(A), G6RL-1(A)4-ASI: 8 A 250 VAC, resistive load; 5 A 24 VDC resistive load.

■Characteristics

Contact resistance *1		100 mΩ max.
Operate time		10 ms max.
Release time		5 ms max.
Insulation resistance *2		1,000 Ω min.
Dielectric strength	Between coil and contacts	5,000 VAC, 50/60 Hz for 1 min
	Between contacts of the same polarity	1,000 VAC, 50/60 Hz for 1 min
Impulse withstand voltage	Between coil and contacts	10kV (1.2×50μs)
Insulation distance	Between coil and contacts	Clearance: 10 mm, Creepage: 10 mm
Vibration resistance	Destruction	10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)
	Malfunction	10 to 55 to 10 Hz, 0.825 mm single amplitude (1.65 mm double amplitude) when energized 10 to 55 to 10 Hz, 0.4 mm single amplitude (0.8 mm double amplitude) when de-energized.
Shock resistance	Destruction	1,000 m/s ²
	Malfunction	NO: 200 m/s ² , NC: 50 m/s ²
Endurance	Mechanical	10,000,000 operations min. (at 18,000 operations/h)
	Electrical	G6RL-1(A) 50,000 operations min. (NO) at 250 VAC, 8A (resistive load) 50,000 operations min. (NC) at 250 VAC, 8A (resistive load) 50,000 operations min. at 24 VDC, 5A (resistive load) (at 600 operations/h) G6RL-1(A)-ASI-(PL) 100,000 operations min. (NO) at 250 VAC, 10A (resistive load) 100,000 operations min. at 250 VAC, 8A (resistive load) 50,000 operations min. at 30 VDC, 5A (resistive load) (at 1,800 operations/h) G6RL-1(A)4-ASI 50,000 operations min. (NO) at 250 VAC, 8A (resistive load) 50,000 operations min. (NC) at 250 VAC, 8A (resistive load) 50,000 operations min. at 24 VDC, 5A (resistive load) (at 1,800 operations/h)
Failure rate (P level) (reference value) *3		10 mA at 5 VDC
Ambient operating temperature		-40°C to 85°C (with no icing or condensation)
Ambient operating humidity		5% to 85%
Weight		Approx. 7.8 g

Note. The given values are initial values.

*1. Measurement conditions: 5 VDC, 1 A, voltage drop method.

*2. Measurement conditions: The insulation resistance was measured with a 500 VDC megohmmeter at the same locations as the dielectric strength was measured.

*3. This value was measured at a switching frequency of 120 operations/min.