CTUS VDE

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- $\frac{\square}{1}$ $\frac{\square}{2}$ $\frac{\square}{3}$ - $\frac{\square}{4}$ - $\frac{\square}{5}$ - $\frac{\square}{6}$

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. Special Function

SR: Shock resistance of 25G

5. Contact material

None: Standard (Ag-alloy, Cd free)

ASI: AgSnIn

6. Special Functions

PL: P1 load

■Application Examples

•Boilers

•PLCs

•I/O ports

•Timers

•Temperature controllers

■Ordering Information

Classification	Terminal Shape	Contact form	Enclosure rating	Model	Rated coil voltage	Minimum packing unit
Standard	Standard PCB terminals P1 Load Shock resistance	SPST-NO (1a)	Flux protection	G6RL-1A		100 pcs/tray
- Ciarraara				G6RL-1A-ASI	0.1/D0	
P1 Load				G6RL-1A-ASI-PL	3 VDC 5 VDC 6 VDC 12 VDC 24 VDC	
			Fully sealed	G6RL-1A4-ASI		
Standard		SPDT (1c)	Flux protection G6RL-1-ASI G6RL-1-ASI-PL G6RL-1-SR-ASI	G6RL-1		
P1 Load				(48 VDC)		
Shock resistance				G6RL-1-SR-ASI	(): Except -SR	
Standard			Fully sealed	G6RL-14-ASI		
Shock resistance				G6RL-14-SR-ASI		

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

Example: G6RL-1A 3 VDC

— Rated coil voltage

■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)
(VDC)	(IIIA)	(52)	% of rated voltage			(11144)
3	73.3	40				
5	44	113				
6	36.7	163	70% max.	10% min.	150%	Approx. 220
12	18.3	654	70% IIIax.	10 % 111111.	(at 23°C)	
24	9.2	2618				
48	5	9600				Approx. 240

Rated Voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Must operate voltage (V)	Must release voltage (V) % of rated voltage	Max. voltage (V)	Power consumption (mW)
				76 Of Taleu Vollage		
3	101	30				
5	60.2	83			4500/	
6	50.1	120	80% max.	10% min.	150% (at 23°C)	Approx. 300
12	25.2	476			(41 20 0)	
24	12.6	1912				

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 m Ω max.		
Operate time		10 ms max. (SR Models: 15 ms max.)		
		5 ms max.		
Insulation resistance *2		1,000 Ω min. (at 500 VDC)		
Dielectric strength	Between coil and contacts	5,000 VAC, 50/60 Hz for 1 min		
Dielectric strength	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)		
	Destruction	10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)		
Vibration resistance	Malfunction	10 to 55 to 10 Hz, 0.825 mm single amplitude (1.65 mm double amplitude) when energized		
	Manufiction	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		
SHOCK resistance	Malfunction	NO: 200 m/s ² , NC: 50 m/s ²		
	Mechanical	10,000,000 operations min. (at 18,000 operations/h)		
Endurance	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)-(SR)-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. (NO) at 250 VAC, 8A (resistive load) 50,000 operations min. at 24 VDC, 5A (resistive load) (at 1,800 operations/h) G6RL-14-SR-ASI 50,000 operations min. (NO) at 250 VAC, 8A (resistive load) 100,000 operations min. (NO) at 250 VAC, 8A (resistive load) 50,000 operations min. (NO) at 250 VAC, 8A (resistive load) 50,000 operations min. (NO) at 250 VAC, 8A (resistive load) 30,000 operations min. (NO) at 24 VDC, 5A (resistive load) 30,000 operations min. (NO) 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 tempera		-40°C to 85°C (with no icing or condensation)		
Ambient operating humidity	7	5% to 85%		
Weight		Approx. 7.8 g		
Note. The given values are ini	etal al a			

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.

■Other data

Enclosure rating F		Flux protection	Fully sealed			
Insulation material group		Illa	Illa			
Rated Insulation Voltag	je	250 V	250 V			
Pollution degree		3	2			
Rated voltage system		250 V	400 V			
Overvoltage category						
Creepage distance		10 mm				
Clearance distance		10 mm				
RoHS		Compliant				
Tracking Index of relay base		PTI 250				
Flammability class according to UL94		V-0				
Flammability-flame	GWFI (IEC 60695-2-12)	850°C				
riaiiiiiabiiity-iiaiile	GWIT (IEC 60695-2-13)	750°C				
Ball pressure test (IEC 60695-10-2)		170°C				