

Power Relay

G5PA-1

New G5P-series Power Relay is Ideal for Power Supplies of TV Sets and Audio Systems

- Switches an inrush current of 78 A and a constant current of 5 A, thus meeting TV-5 requirements for TV and audio system use.
- Highly sensitive with a coil power consumption of 250 mW.
- Ensures a long service life of 40,000 operations when switching an inrush current of 100 A.
- Incorporates environment-friendly contacts without cadmium.
- Equipped with a package of double-insulation construction ensuring high insulation performance.
- Models conforming to UL508, CSA C22.2, VDE0435/IEC255, and SEMKO are available.



RCSE

Ordering Information

Classification	Contact form	Enclosure ratings	Model
Standard	SPST-NO	Flux protection	G5PA-1-8

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

Example: G5PA-1-8 12 VDC

Rated coil voltage

Model Number Legend

G5PA-1-8 j VDC

1 2 3

1. Number of Poles

1: 1 pole (SPST-NO)

2. Coil Terminal Width

8: 0.8 mm

3. Rated Coil Voltage

12, 24 VDC

Specifications

■ Coil Ratings

Rated voltage	12 VDC	24 VDC
Rated current	20.8 mA	10.4 mA
Coil resistance	576 Ω	2,304 Ω
Must operate voltage	80% of rated voltage max.	
Must release voltage	10% of rated voltage min.	
Max. permissible voltage	110% of rated voltage	
Power consumption	Approx. 250 mW	

- Note:**
1. Each rated current or coil resistance value must allow a tolerance of $\pm 10\%$ at a coil temperature of 23°C.
 2. The operating characteristics are values at a coil temperature of 23°C.
 3. The maximum permissible voltage is the maximum voltage that is applicable to the relay coil for an instant.

■ Contact Ratings

Rated load (capacitive load)	125 VAC with inrush current of 100 A (0 to peak) and constant current of 3 A (rms)
Resistive load (reference value)	5 A, 250 VAC; 5 A, 30 VDC
Max. switching voltage	250 VAC, 30 VDC
Max. switching current	5 A

■ Characteristics

Contact resistance (see note 2)	100 mΩ max.
Operate time	15 ms max.
Release time	5 ms max.
Insulation resistance (see note 3)	1,000 MΩ min. (at 500 VDC)
Dielectric strength	4,000 VAC 50/60 Hz for 1 min between coil and contacts 1,000 VAC 50/60 Hz for 1 min between contacts of same polarity
Impulse withstand voltage	10,000 V (1.2 x 50 μs) between coil and contacts
Vibration resistance	Destruction: 10 to 55 Hz, 1.5-mm double amplitude Malfunction: 10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Destruction: 1,000 m/s ² Malfunction: 200 m/s ²
Life expectancy	Mechanical: 1,000,000 operations min. (at 18,000 operations an hour) Electrical: 40,000 operations min. with a rated load at a 1,800 operations an hour. 80,000 operations min. with a resistive load (reference value)
Ambient temperature	Operating: -40°C to 70°C (with no icing)
Ambient humidity	Operating: 35% to 85%
Weight	Approx. 10 g

- Note:**
1. The data shown above are initial values.
 2. The contact resistance is possible with 1 A applied at 5 VDC using a fall-of-potential method.
 3. The insulation resistance was measured at 500 VDC. There was no difference in measurement position between this item and the dielectric strength item.

■ Approved Standards

UL (File No. E41515, UL508)

CSA (File No. LR31928, C22.2 No. 14)

Model	Coil ratings	Contact ratings	Number of test operations
G5PA-1	5 to 24 VDC	5 A, 277 VAC	30,000
		5 A, 30 VDC	6,000
		TV-5 rating	25,000

TÜV (Certificate No. R9650435, IEC255/VDE0435)

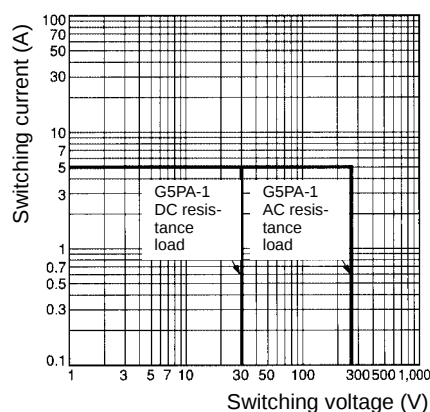
Model	Coil ratings	Contact ratings	Number of test operations
G5PA-1	5 to 24 VDC	5 A, 250 VAC (cosφ = 1) 5 A, 30 VDC (L/R : 0 ms)	100,000

SEMKO (Certificate No. 9732043; EN60065)

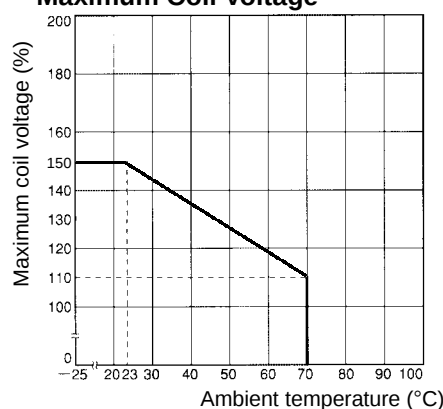
Model	Coil ratings	Contact ratings	Number of test operations
G5PA-1	5 to 28 VDC	5 A/40 A, 250 VAC 3 A/100 A, 250 VAC	10,000

Engineering Data

Maximum Switching Power



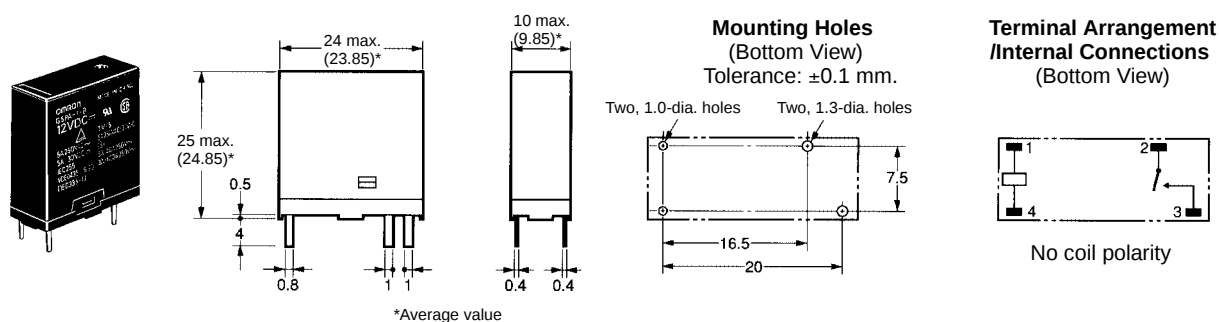
Ambient Temperatures vs. Maximum Coil Voltage



Note: The maximum coil voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

Dimensions

Note: All units are in millimeters unless otherwise indicated.



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.