

### Double-pole Relays Ideal for Audio Speaker Protection and Power Switching

- Slim DPST-NO relay: 24.5 × 13 × 25 mm (L × W × H).
- Standard models meet UL TV-4 and have a high capacity for switching (1,250 VA).
- Single-crossbar contact models available for high reliability.
- Double-insulation construction ensures high insulation performance. (Clearance and creepage of 6.0 mm min. and 10-kV impulse withstand voltage between coil and contacts.)
- Conforms to UL508, CSA 22.2, EN60065 (SEMKO approval), and EN60255 (TÜV approval).



RCSE

### Ordering Information

Classification	Contact form	Enclosure ratings	Model
Standard	DPST-NO	Flux protection	G5PA-2
Single-crossbar contact			G5PA-28

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

Example: G5PA-2 12 VDC  
\_\_\_\_\_ Rated coil voltage

### Model Number Legend

G5PA-jjj VDC  
1 2 3

- Number of Poles**  
2: 2 poles (DPST-NO)
- Classification**  
None: Standard  
8: Single-crossbar contact
- Rated Coil Voltage**  
12, 24 VDC

### Specifications

#### ■ Coil Ratings

Rated voltage	12 VDC	24 VDC
Rated current	44.2 mA	22.1 mA
Coil resistance	272 Ω	1,087 Ω
Must operate voltage	70% of rated voltage max.	
Must release voltage	5% of rated voltage min.	
Max. permissible voltage	110% of rated voltage	
Power consumption	Approx. 530 mW	

## ■ Contact Ratings

Item	G5PA-2	G5PA-28
Rated load	5 A at 250 VAC; 5 A at 24 VDC, resistive load ( $\cos\phi = 1$ )	5 A at 50 VAC; 3 A at 24 VDC, resistive load ( $\cos\phi = 1$ )
Rated carry current	5 A	
Max. switching voltage	250 VAC, 24 VDC	50 VAC, 24 VDC
Max. switching current	5 A	
Max. switching power	1,250 VA, 120 W	250 VA, 72 W

Note: P level:  $\lambda_{60}=0.1 \times 10^{-6}$  operations (with an operating frequency of 120 operations/min)

## ■ Characteristics

Item	G5PA-2	G5PA-28
Contact resistance	100 m $\Omega$ max.	50 m $\Omega$ max.
Operate time	15 ms max.	
Release time	5 ms max.	
Insulation resistance	1,000 M $\Omega$ 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 2,000 VAC 50/60 Hz for 1 min between contacts of different polarity	
Impulse withstand voltage	10,000 V (1.2 x 50 $\mu$ s) 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 <sup>2</sup> Malfunction: 100 m/s <sup>2</sup>	
Life expectancy	Mechanical: 500,000 operations min. Electrical: 100,000 operations min.	50,000 operations min.
Ambient temperature	Operating: -25°C to 70°C (with no icing)	
Ambient humidity	Operating: 35% to 85%	
Weight	Approx. 15 g	

## ■ Approved Standards

UL508 (File No. 41515)/CSA 22.2 No. 14 (File No. LR31928)

Model	Coil ratings	Contact ratings
G5PA-2	5, 6, 12, 24 VDC	5 A, 250 VAC (resistive load) 5 A, 120 VAC (resistive load) 5 A, 24 VDC (resistive load) TV-4
G5PA-28		5 A, 50 VAC (resistive load) 3 A, 24 VDC (resistive load) 500 W, 120 VAC Tungsten

SEMKO (File No. 9737033/9851138)

Model	Coil ratings	Contact ratings
G5PA-2	5 to 24 VDC	5 A/40 A, 250 VAC
G5PA-28		5 A, 50 VAC

TÜV EN60255 (File No. R9750961)

Model	Coil ratings	Contact ratings
G5PA-2	5, 6, 12, 24 VDC	5 A, 120 VAC ( $\cos\phi = 1$ ) 5 A, 24 VDC (L/R = 0 ms)
G5PA-28		5 A, 50 VAC ( $\cos\phi = 1$ ) 3 A, 24 VDC (L/R = 0 ms)

# Reference Data

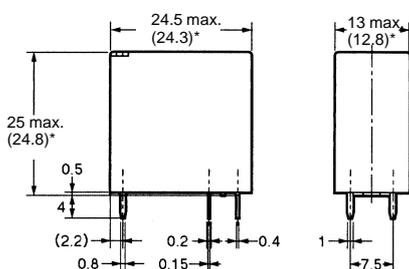
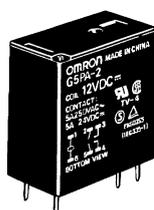
Simulative load of power supply		
G5PA-2	Electrical life expectancy:	25,000 operations
	Rated load:	3 A at 50 VAC
	Inrush current:	40 A (O-P) with 4,700- $\mu$ s capacitor
	Operating frequency:	1,800 operations/hour

Breaking ability for DC voltage	
G5PA-28	Combination of voltage and resistance to break 20 operations
	• 4 $\Omega$ at 45 VDC
	• 6 $\Omega$ or 8 $\Omega$ at 50 VDC
	• 8 $\Omega$ at 55 VDC

# Dimensions

Note: All units are in millimeters unless otherwise indicated.

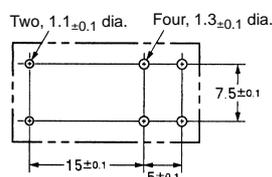
## G5PA-2



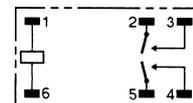
\* Average value

### Mounting Holes (Bottom View)

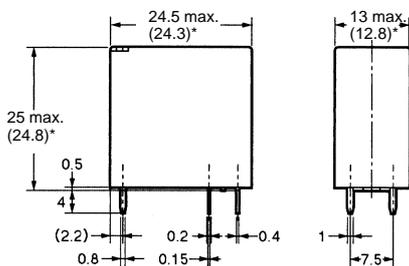
Tolerances:  $\pm 0.1$  mm.



### Terminal Arrangement/ Internal Connections (Bottom View)



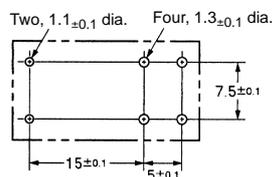
## G5PA-28



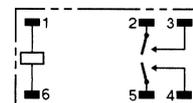
\* Average value

### Mounting Holes (Bottom View)

Tolerances:  $\pm 0.1$  mm.



### Terminal Arrangement/ Internal Connections (Bottom View)



**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**  
 To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

# Mouser Electronics

Authorized Distributor

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Omron:

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