

### Ideal for Microwave Oven Magnetrons and Heater Switching

- Conforms to IEC 255 (TÜV approval), UL508, CSA22.2.
- Slim relay with high switching power: 16 A.
- Dual #187 tab/PCB terminals.
- High impulse withstand voltage: 10 kV.



RCE

### Ordering Information

| Enclosure ratings | Contact form | Standard Relays |
|-------------------|--------------|-----------------|
| Flux protection   | SPST-NO      | G5G-1A          |

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

Example: G5G-1A 12 VDC Rated coil voltage

### Model Number Legend

G5G- 1 A 12 VDC  
1 2 3

#### 1. Number of Poles

1: 1 pole

#### 2. Contact Form

A: SPST-NO

#### 3. Rated Coil Voltage

12, 18, 24 VDC

### Specifications

#### ■ Coil Ratings

|                      |                           |         |         |
|----------------------|---------------------------|---------|---------|
| Rated voltage        | 12 VDC                    | 18 VDC  | 24 VDC  |
| Rated current        | 41.7 mA                   | 27.8 mA | 20.8 mA |
| Coil resistance      | 288 Ω                     | 648 Ω   | 1,152 Ω |
| Must operate voltage | 70% max. of rated voltage |         |         |
| Must release voltage | 5% min. of rated voltage  |         |         |
| Max. voltage         | 110% of rated voltage     |         |         |
| Power consumption    | Approx. 500 mW            |         |         |

#### ■ Contact Ratings

|                      |                 |
|----------------------|-----------------|
| Rated load           | 16 A at 250 VAC |
| Rated carry current  | 16 A            |
| Max. switching power | 4,000 VA        |

## ■ Characteristics

|                           |                                                                                                                            |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Contact resistance        | 100 mΩ max.                                                                                                                |
| Operate time              | 20 ms max.                                                                                                                 |
| Release time              | 5 ms max.                                                                                                                  |
| Insulation resistance     | 1,000 MΩ min. (at 500 VDC)                                                                                                 |
| Dielectric strength       | 5,000 VAC between coil and contacts (1 min.)<br>1,000 VAC between contacts of same polarity (1 min.)                       |
| Impulse withstand voltage | 10,000 V ( $1.2 \times 50 \mu\text{s}$ ) between coil and contacts                                                         |
| Vibration resistance      | Destruction: 10 to 55 Hz, 1.5-mm double amplitude<br>Malfunction: 10 to 55 Hz, 1.5-mm double amplitude                     |
| Shock resistance          | Destruction: 1,000 m/s <sup>2</sup><br>Malfunction: 150 m/s <sup>2</sup>                                                   |
| Life expectancy           | Mechanical: 2,000,000 operations min. (18,000 operations/hr)<br>Electrical: 100,000 operations min. (18,000 operations/hr) |
| Ambient temperature       | Operating: -40°C to 70°C (with no icing)<br>Storage: -40°C to 70°C (with no icing)                                         |
| Ambient humidity          | 35% to 85%                                                                                                                 |
| Weight                    | Approx. 16 g                                                                                                               |

## ■ Approved Standards

### UL508 (File No. E41515)

| Model  | Coil ratings               | Contact ratings | Number of test operations |
|--------|----------------------------|-----------------|---------------------------|
| G5G-1A | 12 VDC<br>18 VDC<br>24 VDC | 16 A, 250 VAC   | 6,000                     |

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

| Model  | Coil ratings               | Contact ratings | Number of test operations |
|--------|----------------------------|-----------------|---------------------------|
| G5G-1A | 12 VDC<br>18 VDC<br>24 VDC | 16 A, 250 VAC   | 6,000                     |

### TÜV (IEC 255, File No. R9650783)

| Model  | Coil ratings               | Contact ratings | Number of test operations |
|--------|----------------------------|-----------------|---------------------------|
| G5G-1A | 12 VDC<br>18 VDC<br>24 VDC | 16 A, 250 VAC   | 100,000                   |

## Reference Data

### Heater Load

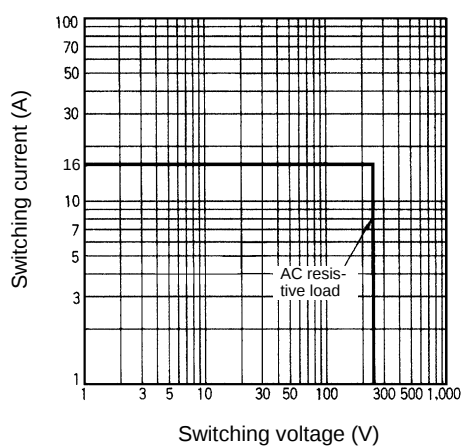
| Load                       | Condition                 | Operations |
|----------------------------|---------------------------|------------|
| 250 VAC, 16 A (Rated Load) | 1 s ON/OFF, at room temp. | 100,000    |
| 220 VAC, 1.7 kW            | 3 s ON/OFF, at 80°C       | 380,000    |
| 120 VAC, 1.42 kW           | 3 s ON/OFF, at 80°C       | 500,000    |
| 121 VAC, 10.4 A            | 1.5 s ON/OFF, at 80°C     | 580,000    |
| 100 VAC, 12 A              | 1.5 s ON/OFF, at 80°C     | 200,000    |
| 100 VAC, 1.3 kW            | 3 s ON/OFF, at 80°C       | 290,000    |

### Simulative Load

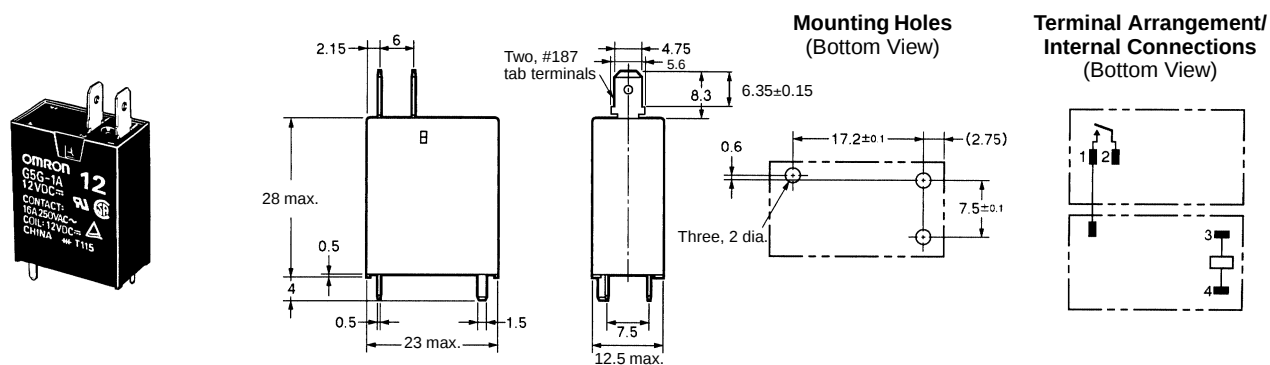
| Load                                                   | Condition                                                  | Operations |
|--------------------------------------------------------|------------------------------------------------------------|------------|
| 125 VAC, Inrush current 16.5 A<br>Steady current 5.5 A | 2 s ON (Inrush: 0.5 s / Steady: 1.5 s)<br>3 s OFF, at 45°C | 250,000    |

# Engineering Data

## Maximum Switching Power



## Dimensions



**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

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