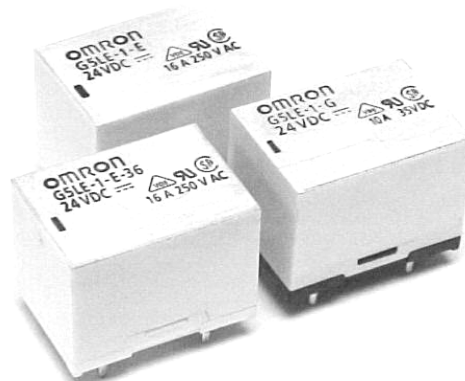


## Single-pole 10A35VDC 0.8mm Contact Gap Power Relay : G5LE-G

## Single-pole 16A250VAC Power Relay : G5LE-E

- Sub-miniature 'sugar cube' relay with universal terminal footprint.
- UL class-F coil insulation system.
- Tracking resistance: CTI>250.
- Withstands impulse of up to 4,500 V.
- RoHS compliant.



## Ordering Information

Enclosure Rating	Contact Form	Rated load	
		10A 35VDC	16A 250VAC
Flux protection	SPDT	G5LE-1-G	G5LE-1-E
	SPST-NO	G5LE-1A-G	G5LE-1A-E

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

Examples : G5LE-1-E 12 VDC  
└───┬─── Rated coil voltage

### Model Number Legend

G5LE -    -    -    -    -    -    -    VDC  
1    2    3    4    5    6    7    8

#### 1. Number of Poles

1 : 1 pole

#### 2. Contact Form

None : SPDT  
A : SPST-NO

#### 3. Enclosure ratings

None : Flux protection

#### 4. Insulation System

None : Class F (155°C)

#### 8 Rated Coil Voltage

5, 12 & 24 (for suffix-E)  
9, 12, 20 & 24 (for suffix-G)

#### 5. Classification

G : 0.8mm contact gap type  
E : High capacity type

#### 6. Coil Power Consumption / Coil Characteristics

None : Approx. 400mW (applicable to suffix -E only)  
None : Approx. 700mW (applicable to suffix -G only)  
36 : Approx. 360mW (applicable to suffix -E only)

#### 7. Packaging

None : Standards Polystyrene tray  
SP : Anti-static Tube packing

# Specifications

## ■ Coil Ratings

### 700-mW Type (G5LE-G)

Rated voltage	9 VDC	12 VDC	20 VDC	24 VDC
Rated current	77.8 mA	58.3 mA	35.0 mA	29.2 mA
Coil resistance	115.7 $\Omega$	205.7 $\Omega$	571.4 $\Omega$	822.9 $\Omega$
Must operate voltage	75% of rated voltage (max.)			
Must release voltage	10% of rated voltage (min.)			
Max. voltage	120% of rated voltage at 85°C, 150% of rated voltage at 23°C			
Power consumption	Approx. 700 mW			

Note: The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of  $\pm 10\%$ .

### 400-mW Type (G5LE-E)

Rated voltage	5 VDC	12 VDC	24 VDC
Rated current	80.0 mA	33.3 mA	16.7 mA
Coil resistance	62.5 $\Omega$	360.0 $\Omega$	1440.0 $\Omega$
Must operate voltage	75% of rated voltage (max.)		
Must release voltage	10% of rated voltage (min.)		
Max. voltage	130% of rated voltage at 85°C, 170% of rated voltage at 23°C		
Power consumption	Approx. 400 mW		

Note: The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of  $\pm 10\%$ .

### 360-mW Type (G5LE-E-36)

Rated voltage	5 VDC	12 VDC	24 VDC
Rated current	72.0 mA	30.0 mA	15.0 mA
Coil resistance	69.4 $\Omega$	400.0 $\Omega$	1600.0 $\Omega$
Must operate voltage	75% of rated voltage (max.)		
Must release voltage	10% of rated voltage (min.)		
Max. voltage	130% of rated voltage at 85°C, 170% of rated voltage at 23°C		
Power consumption	Approx. 360 mW		

Note: The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of  $\pm 10\%$ .

## ■ Contact Ratings

Item	G5LE-G	G5LE-E/-E-36
Load	Resistive load (cos $\phi=1$ )	Resistive load (cos $\phi=1$ )
Rated load	10A at 35VDC	16A at 250VAC
Rated carry current	10A	16A
Max. switching voltage	35VDC	250VAC
Max. switching current	DC : 10A	AC : 16A
Max. switching capacity	350W	4000VA
Min. permissible load	100mA at 5VDC	100mA at 5VDC

## ■ Characteristics

<b>Contact resistance</b>	100mΩ max.
<b>Operate time</b>	10ms max.
<b>Release time</b>	5ms max.
<b>Bounce time</b>	Operate : Approx. 0.6 ms Release : Approx. 7.2 ms
<b>Max. switching frequency</b>	Mechanical : 18,000 operations/hr Electrical : *1,800 operations/hr
<b>Insulation resistance</b>	100MΩ min. (at 500VDC)
<b>Dielectric strength</b>	750VAC (for suffix -E), 50/60 Hz for 1 min. between contacts of same polarity 1500VAC (for suffix -G), 50/60 Hz for 1 min. between contacts of same polarity 2,000VAC, 50/60 Hz for 1 min. between coil and contacts
<b>Impulse withstand voltage</b>	4,500V between coil and contacts, 1.2 X 50 μsec
<b>Vibration resistance</b>	Destruction : 10 to 55Hz, 1.5mm double amplitude Malfunction : 10 to 55Hz, 1.5mm double amplitude
<b>Shock resistance</b>	Destruction : 1,000m/s <sup>2</sup> (approx. 100G) Malfunction : 100m/s <sup>2</sup> (approx. 10G)
<b>Life expectancy</b>	Mechanical : 10,000,000 operations min. (at 18,000 operations/hr) Electrical : *100,000 operations min. (at 1,800 operations/hr, 12A 250VAC)
<b>Ambient temperature</b>	Operating : -40°C to 85°C
<b>Ambient humidity</b>	Operating : 35% to 85%
<b>Weight</b>	Approx. : 12g

Note : \* Applicable for G5LE-1-E normally open contact only.

## ■ Approved Standards

**UL508, UL114, UL478, UL325, UL873, UL1409 (File No. E41643)/CSA  
C22.2 No. 14, No. 1 (File No. LR31928)**

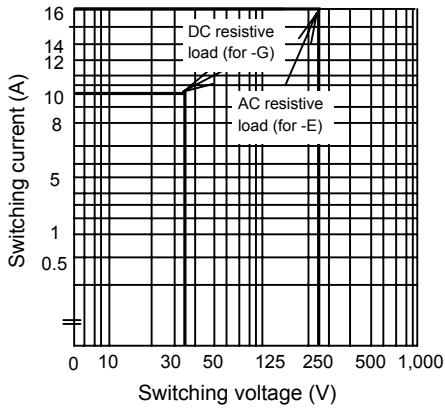
Model	Coil ratings	Contact ratings
G5LE-E/-E-36	5 to 24 VDC	16 A, 250 VAC (general use, normally open contact, 50,000 cycles) 12 A, 250 VAC (general use, normally open contact, 105°C, 100,000 cycles) 12 A, 250 VAC (general use, normally close contact, 30,000 cycles)
G5LE-G	9 to 24 VDC	10 A, 35 VDC (resistive, normally open contact, 100,000 cycles) 10 A, 35 VDC (resistive, normally close contact, 50,000 cycles)

## EN61810-1 (2nd Ed) / EN60255-25 (VDE Reg. No. 6850)

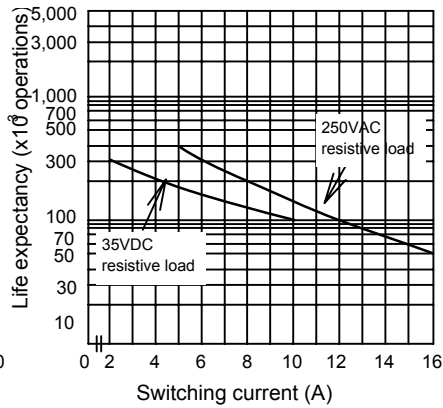
Model	Coil Rating	Contact rating
G5LE-E/-E-36	5 to 24 VDC	16 A, 250 VAC (resistive, normally open contact, 85°C 50,000 cycles) 12 A, 250 VAC (resistive, normally open contact, 105°C, 75,000 cycles)
G5LE-G	9 to 24 VDC	10 A, 35 VDC (resistive, normally open contact, 100,000 cycles) 10 A, 35 VDC (resistive, normally close contact, 50,000 cycles)

# Engineering Data

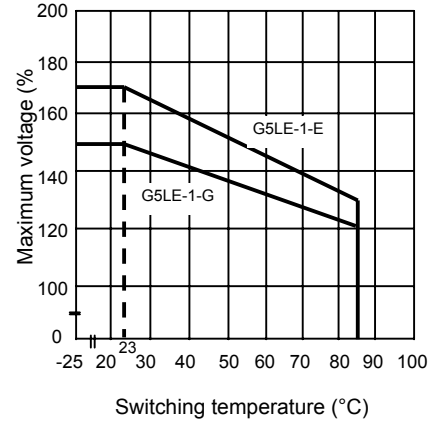
**Max. Switching Capacity**



**Life Expectancy**



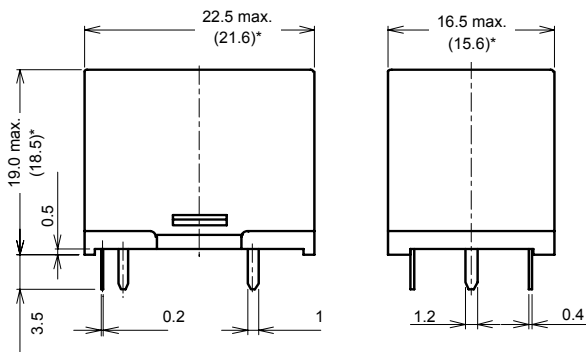
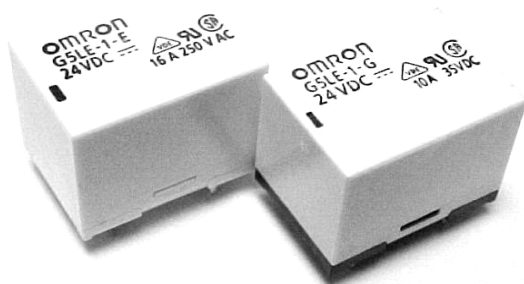
**Ambient Temp. Vs Max. Voltage**



**Note:** The maximum coil voltage refers to the maximum value in a varyin range of operating power voltage not a continuous voltage

# Dimensions

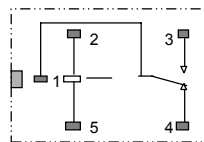
- Note: 1. All units are in millimeters unless otherwise indicated.  
 2. Orientation marks are indicated as follows :



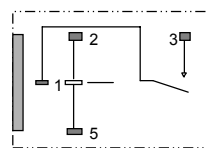
\*Average value

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

**SPDT**

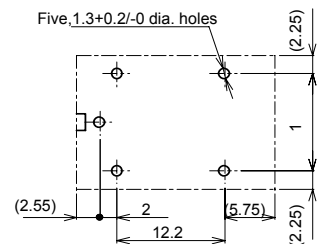


**SPST-NO**

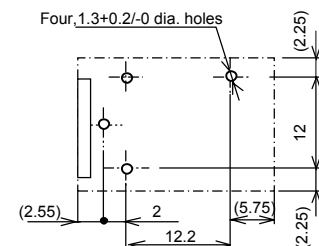


**Mounting Holes (Bottom View)**  
Tolerance: ±0.1 mm unless specified

**SPDT**



**SPST-NO**



# Packaging

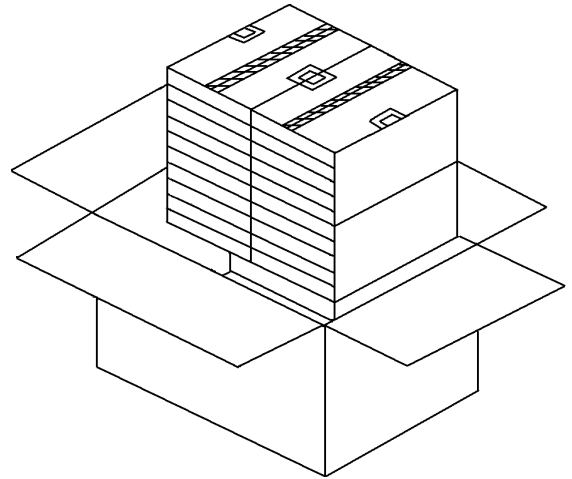
**Note :** 1. All units are millimeters unless otherwise indicated.

## ■ Polystyrene Trays Packing

1 Polystyrene	=	100	pcs relay
1 Sleeve Packing	=	5	polystyrene tray
1 Carton	=	4	sleeve packing
	=	<b>2000</b>	<b>pcs relay</b>
Weight	=	Approx. 24 Kg per carton	

- Size of polystyrene tray: Approx. 311 x 196 x 35mm (L x W xH)

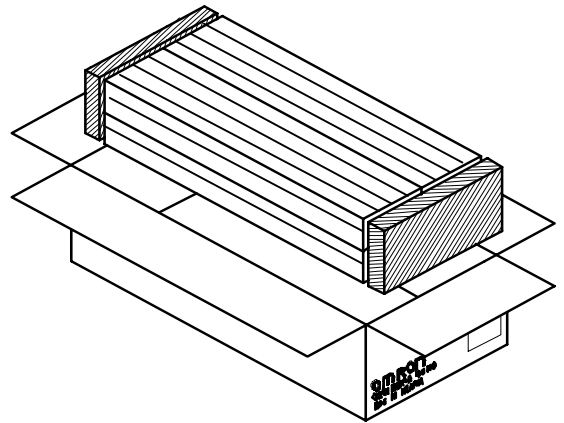
- Size of Carton: Approx. 450 x 316 x 320 mm (L x W xH)



## ■ Tube Packing

1 Tube	=	25	relays
1 Carton	=	40	tubes
	=	1,000	relays
Weight	=	Approx. 12 Kg per carton	

- Size of Carton: Approx. 512 x 252 x 105 mm (L x W xH)



## ■ Ordering Information - Packaging

G5LE-1-E-□DC12	by OMB	<u>KEY</u>	<u>DESCRIPTION</u>
		None	: Standards Polystyrene tray
		SP	: Anti-static Tube packing

G5LE-1-G-□DC20	by OMB	<u>KEY</u>	<u>DESCRIPTION</u>
		None	: Standards Polystyrene tray
		SP	: Anti-static Tube packing

**ALL DIMENSION SHOWN ARE IN MILLIMETERS**

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