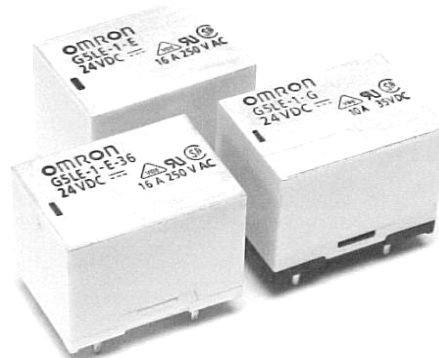# OMRON ®

PCB Relay | G5LE-E/-G

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.

VDE
REG.-Nr.6850

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 <u>12 VDC</u>
　　　　　　　　　　　└─ 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 Ω	205.7 Ω	571.4 Ω	822.9 Ω
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 ±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 Ω	360.0 Ω	1440.0 Ω
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 ±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 Ω	400.0 Ω	1600.0 Ω
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 ±10%.

■ Contact Ratings

Item	G5LE-G	G5LE-E/-E-36
Load	Resistive load (cos Ø=1)	Resistive load (cos Ø=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**

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

Note : * Applicable for G5LE-1-E normally open contact only.
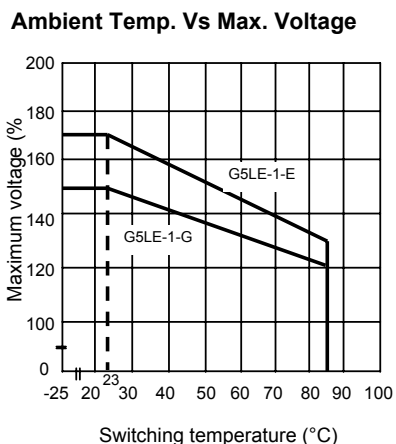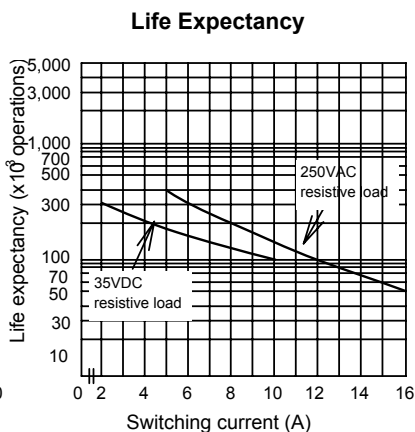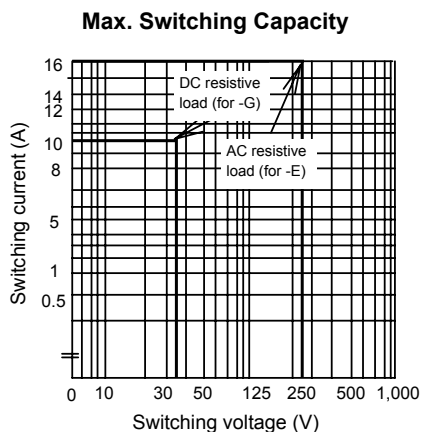
■ **Approved Standards**
UL508, UL114, UL478, UL325, UL873, UL1409 (File No. E41643)/CSA
C22.2 No. 14, No. 1 (File No. LR31928)

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)

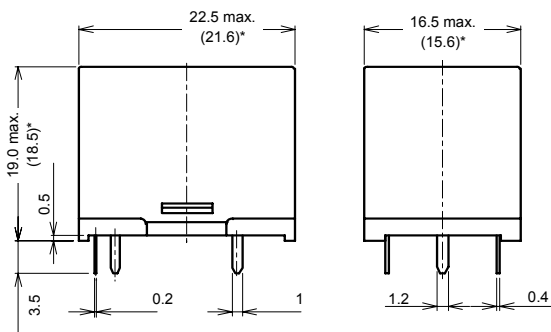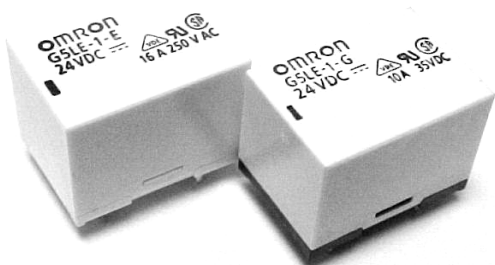| Model	Coil Rating	Contact rating
G5LE-E/-E-36	5 to 24 VDC	16 A, 250 VAC (resistive, normally open contact, 85°C 50,000 cycles) 12 A, 250 VAC (resistive, normally open contact, 105°C, 75,000 cycles)
G5LE-G	9 to 24 VDC	10 A, 35 VDC (resistive, normally open contact, 100,000 cycles) 10 A, 35 VDC (resistive,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

Engineering Data

Max. Switching Capacity

DC resistive load (for -G)

AC resistive load (for -E)

Switching current (A) / Switching voltage (V)

Life Expectancy

Life expectancy (x10³ operations) / Switching current (A)

250VAC resistive load

35VDC resistive load

Ambient Temp. Vs Max. Voltage

Maximum voltage (%) / Switching temperature (°C)

G5LE-1-E

G5LE-1-G

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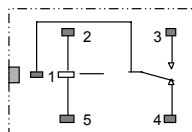
Dimensions

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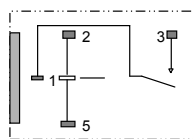
2. Orientation marks are indicated as follows :

G5LE-1-E 24VDC 16 A 250 V AC

G5LE-1-G 24VDC 10A 35VDC

22.5 max. (21.6)*

16.5 max. (15.6)*

19.0 max. (18.5)*

0.5

3.5 0.2 1 1.2 0.4

*Average value

Terminal Arrangenement/Internal Connections (Bottom View)

SPDT

2 3
1
5 4

SPST-NO

2 3
1
5

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

SPDT

Five,1.3+0.2/-0 dia. holes

(2.25)
1
(2.55) 2 (5.75) (2.25)
12.2

SPST-NO

Four,1.3+0.2/-0 dia. holes

(2.25)
12
(2.55) 2 (5.75) (2.25)
12.2
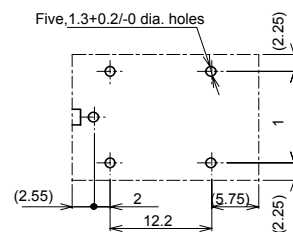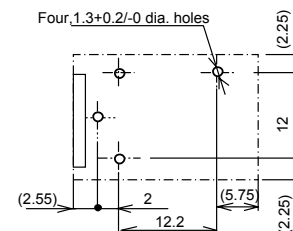
Packaging

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
	=	**2000**	**pcs relay**
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)
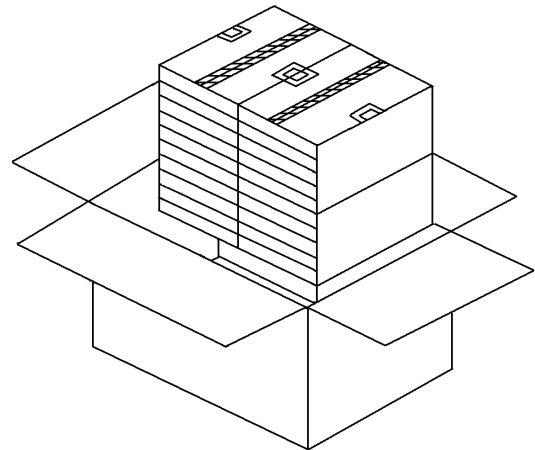
■ Tube Packing

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)
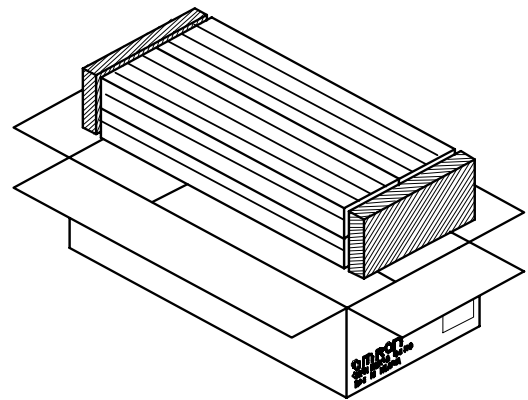
■ Ordering Information - Packaging

G5LE-1-E-☐DC12   by OMB   KEY   DESCRIPTION

None   :   Standards Polystyrene tray

SP   :   Anti-static Tube packing

G5LE-1-G-☐DC20   by OMB   KEY   DESCRIPTION

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