

PCB Relay G5LE

A Cubic, Single-pole 10-A Power Relay

- Subminiature “sugar cube” relay.
- Contact ratings of 10 A.
- Withstands impulses of up to 4,500 V.
- Two types of seal available: flux protection and plastic-sealed.
- UL class-B insulation certified, UL class-F available.
- Manufacturing facility in compliance with QS9000 automotive quality system standards.
- Ideal for applications in security equipment, household electrical appliances, garage door openers, and audio equipment.
- RoHS Compliant.



Ordering Information

To Order: Select the part number and add the desired coil voltage rating (e.g., G5LE-DC12).

Seal	Contact form	Model	
		Contact Material	
		AgSnO ₂	AgSnIn
Flux protection	SPDT	G5LE-1	G5LE-1-ASI
	SPST-NO	G5LE-1A	G5LE-1A-ASI
Plastic-sealed	SPDT	G5LE-14	G5LE-14-ASI
	SPST-NO	G5LE-1A4	G5LE-1A4-ASI

Model Number Legend

G5LE-□ □ □-□-□
1 2 3 4 5

1. Number of Poles

1: 1 pole

2. Contact Form

None: SPDT

A: SPST-NO

3. Sealing

None: Flux-protection

4: Plastic-sealed

4. Contact Material

None: AgSnO₂

ASI: AgSnIn

5. Insulation Class

None: Class B insulation

CF: Class F insulation

Specifications

■ Coil Data

Rated voltage	3 VDC	5 VDC	6 VDC	9 VDC	12 VDC	24 VDC	48 VDC
Rated current	136.4 mA	79.4 mA	66.7 mA	45 mA	33.3 mA	16.7 mA	8.33 mA
Coil resistance	22.5Ω	63 Ω	90 Ω	200 Ω	360 Ω	1,440 Ω	5,760 Ω
Must operate voltage	75% of rated voltage (max.)						
Must release voltage	10% of rated voltage (min.)						
Max. voltage	133% of rated voltage at 70°C (158°F), 170% of rated voltage at 23°C (73°F)						
Power consumption	Approx. 400 mW						

- Note:**
1. The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of ±10%.
 2. 360 mW coil is available. Contact Omron for details.
 3. VDE approved model available. Contact Omron for details.

■ Contact Data

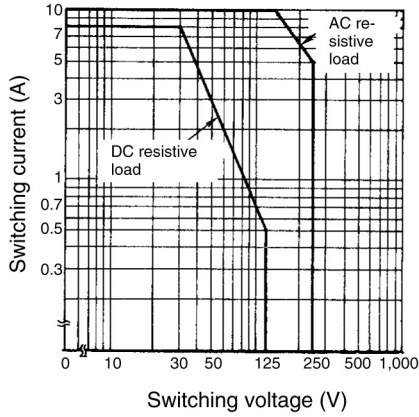
Load	Resistive load ($\cos\phi = 1$)	
Rated load	10 A at 120 VAC; 8 A at 30 VDC	
Rated carry current	10 A	
Max. switching voltage	250 VAC, 125 VDC	
Max. switching current	AC	10 A
	DC	8 A
Max. switching capacity	1,200 VA, 240 W	
Min. permissible load	100 mA at 5 VDC	

■ Characteristics

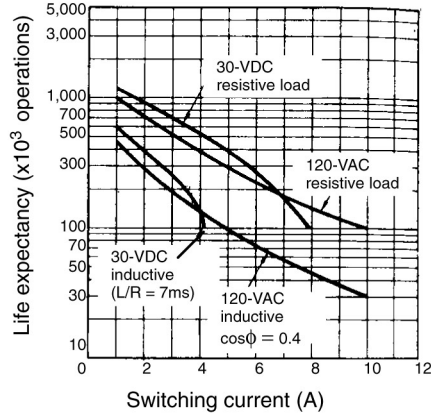
Contact resistance	100 mΩ max.	
Operate time	10 ms max.	
Release time	5 ms max.	
Bounce time	Operate	Approx. 0.6 ms
	Release	Approx. 7.2 ms
Max. switching frequency	Mechanical	18,000 operations/hr
	Electrical	1,800 operations/hr (under rated load)
Insulation resistance	100 MΩ min. (at 500 VDC)	
Dielectric strength	750 VAC, 50/60 Hz for 1 min between contacts of same polarity 2,000 VAC, 50/60 Hz for 1 min between coil and contacts	
Impulse withstand voltage	4,500 V 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 (approx. 100G)
	Malfunction	100 m/s ² (approx. 10G)
Life expectancy	Mechanical	10,000,000 operations min. (at 1,800 operations/hr)
	Electrical	100,000 operations min. (at 1,800 operations/hr)
Ambient temperature	Operating	-40°C to 85°C (-13°F to 185°F)
Ambient humidity		35% to 85%
Weight	Approx. 12 g (0.42 oz)	

Characteristic Data

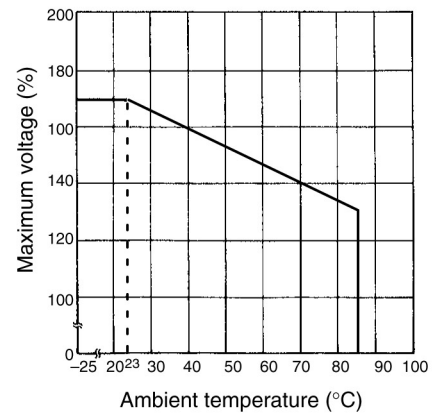
Max. Switching Capacity G5LE



Life Expectancy G5LE



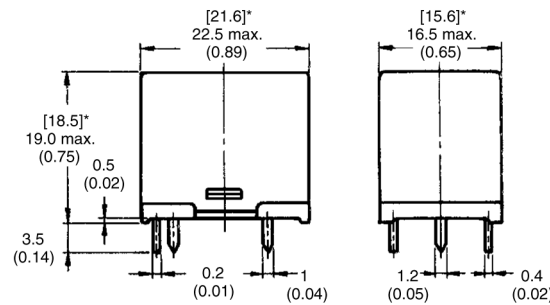
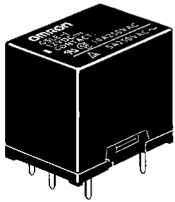
Ambient Temperature vs. Maximum Voltage



Dimensions

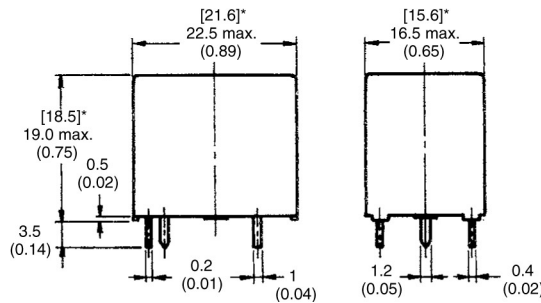
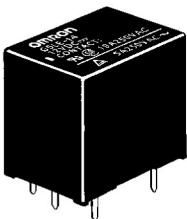
Unit: mm (inch)

G5LE-1(A)



*Average value

G5LE-1(A)4

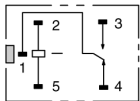


*Average value

Standard

Terminal Arrangement/
Internal Connections
(Bottom View)

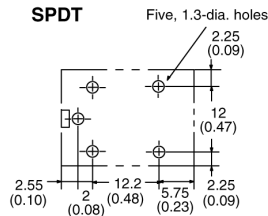
SPDT



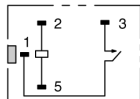
Mounting Holes
(Bottom View)

Tolerance: ±0.1 mm

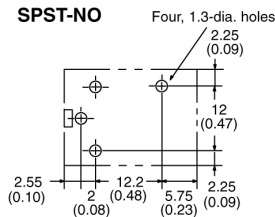
SPDT



SPST-NO



SPST-NO



Note: Orientation marks are indicated as follows:

UL325, UL508, UL60950 (File No. E41643) / CSA C22.2 No. 14 (File No. LR34815)

Model	Coil Rating	Contact ratings for AgSnO2
G5LE	3 to 48 VDC	<p>N.O. Contacts</p> <p>10 A, 250 VAC, general use 8 A, 30 VDC, resistive load 1/6 hp, 120 VAC, 50,000 cycles 6 A, 277 VAC, general use, 100,000 cycles 10 A, 125 VAC, general use, 100,000 cycles 12 A, 120 VAC, resistive load, 30,000 cycles 6 FLA, 6 LRA, 120 VAC, 100,000 cycles, 85°C ambient 4 FLA, 4 LRA, 120 VAC, 100,000 cycles, 105°C ambient 125 VA, 120 VAC, pilot duty, 100,000 cycles 5 FLA, 30 LRA, 120 VAC TV - 3, 120 VAC 5 A, 125 VAC, general use, 30,000 cycles, 70°C ambient 1/2 hp, 125 VAC, 100,000 cycles 200W-T (1.6 A), 125 VAC, Tungsten, 100,000 cycles 125 VA, 125 VAC, pilot duty, 100,000 cycles, 105°C 13 A, 120 VAC, resistive, 100,000 cycles, 87°C 2.5 FLS, 15.0 LRA, 120 VAC, 100,000 cycles at 80°C with 75,000 cycles at 5 Sec. ON / 5 Sec. OFF and 25,000 cycles at 30 Sec. ON / 30 Sec. OFF</p> <p>N.C. Contacts</p> <p>10 A, 250 VAC, general use 8 A, 30 VDC, resistive load 1/8 hp, 120 VAC, 50,000 cycles 6 A, 277 VAC, general use, 50,000 cycles 10 A, 125 VAC, general use, 100,000 cycles 12 A, 120 VAC, resistive load, 30,000 cycles 6 FLA, 6 LRA, 120 VAC, 100,000 cycles, 85°C ambient 2 FLA, 4 LRA, 120 VAC, 100,000 cycles, 105°C ambient 125 VA, 120 VAC, pilot duty, 100,000 cycles 1/10 hp, 120 VAC, 50,000 cycles 5 A, 125 VAC, general use, 30,000 cycles, 70°C ambient 125 VA, 125 VAC, pilot duty, 100,000 cycles, 105°C</p>

UL325, UL508, UL60950 (File No. E41643) / CSA C22.2 No. 14 (File No. LR34815)

Model	Coil Rating	Contact ratings for AgSnIn
G5LE	3 to 48 VDC	<p>N.O. Contacts</p> <p>10 A, 250 VAC, general use 8 A, resistive, 30 VDC 1/3 hp, 120 VAC TV - 5, 120 VAC 1/2 hp, 125 VAC, 100,000 cycles 200W-T (1.6 A), 125 VAC, Tungsten, 100,000 cycles 125 VA, 125 VAC, pilot duty, 100,000 cycles, 105°C 13 A, 120 VAC, resistive, 100,000 cycles, 87°C</p> <p>N.C. Contacts</p> <p>10 A, 250 VAC, general use 8 A, resistive, 30 VDC 1/8 hp, 120 VAC 12 A, 120 VAC, resistive load, 30,000 cycles 125 VA, 125 VAC, pilot duty, 100,000 cycles, 105°C</p>

TÜV (VDE File No. R9151267)

Model	Coil Rating	Contact rating
G5LE	3, 5, 6, 9, 12, 24 VDC	1.2 A, 250 VAC ($\cos\phi = 0.4$) 2.5 A, 250 VAC (resistive load) 5 A, 30 VDC (resistive load)
		2.5 A, 250 VAC ($\cos\phi = 0.4$) 5 A, 250 VAC (resistive load) 8 A, 30 VDC (resistive load)