OMRON

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: $AgSnO_2$
   ASI: AgSnIn
5. **Insulation Class**
   None: Class B insulation
   CF: Class F insulation

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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 (cosϕ = 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)

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we measure, we calibrate, we validate.
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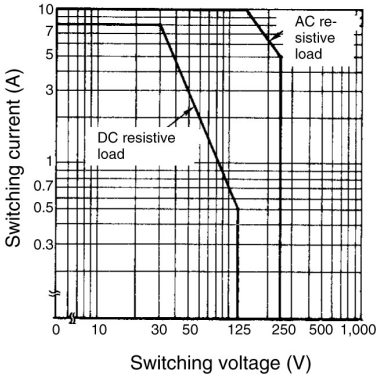
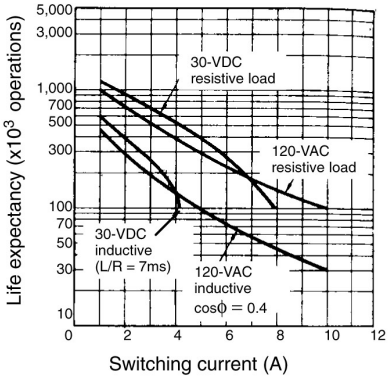
■ Characteristic Data

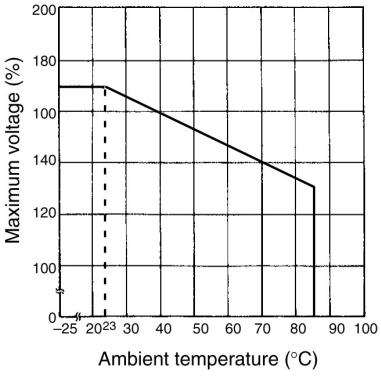
Max. Switching Capacity G5LE



Life Expectancy G5LE



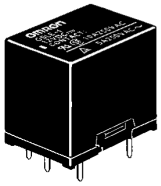
Ambient Temperature vs. Maximum Voltage

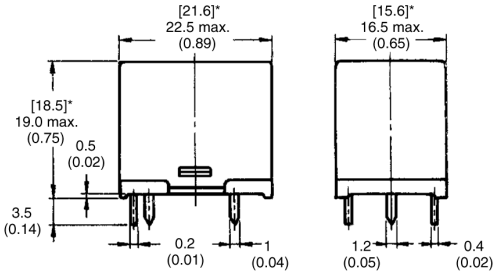


Dimensions

Unit: mm (inch)

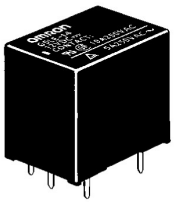
■ G5LE-1(A)

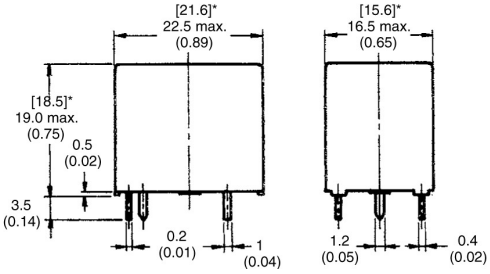




*Average value

■ G5LE-1(A)4





*Average value

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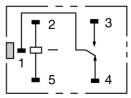
■ Standard

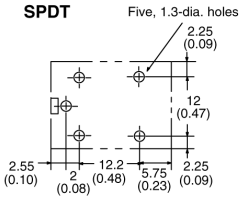
Terminal Arrangement/ Internal Connections (Bottom View)

SPDT

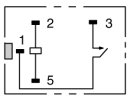


Mounting Holes (Bottom View)
Tolerance: ±0.1 mm

SPDT



SPST-NO



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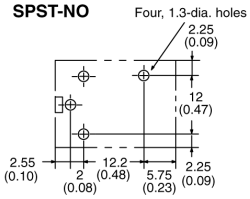

Note: Orientation marks are indicated as follows:

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	**N.O Contacts** 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 **N.C. Contacts** 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

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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	**N.O Contacts** 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 **N.C. Contacts** 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

TÜV (VDE File No. R9151267

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

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9. Force Majeure. Seller shall not be liable for any delay or failure in delivery resulting from causes beyond its control, including earthquakes, fires, floods, strikes or other labor disputes, shortage of labor or materials, accidents to machinery, acts of sabotage, riots, delay in or lack of transportation or the requirements of any government authority.
10. Shipping; Delivery. Unless otherwise expressly agreed in writing by Seller:
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    2. Such carrier shall act as the agent of Buyer and delivery to such carrier shall constitute delivery to Buyer;
    3. All sales and shipments of Products shall be FOB shipping point (unless otherwise stated in writing by Seller), at which point title to and all risk of loss of the Products shall pass from Seller to Buyer, provided that Seller shall retain a security interest in the Products until the full purchase price is paid by Buyer;
    4. Delivery and shipping dates are estimates only.
    5. Seller will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
11. Claims. Any claim by Buyer against Seller for shortage or damage to the Products occurring before delivery to the carrier must be presented in writing to Seller within 30 days of receipt of shipment and include the original transportation bill signed by the carrier noting that the carrier received the Products from Seller in the condition claimed.
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   (ii) Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
   (iii) Use in consumer products or any use in significant quantities.
   (iv) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this product.

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

OMRON

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