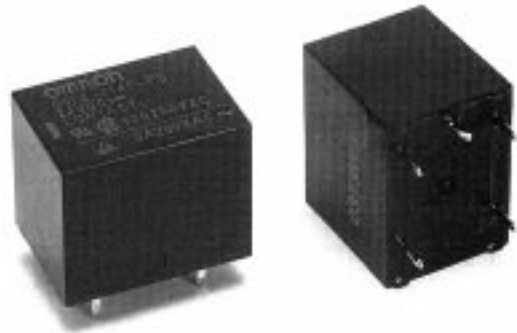


A Cubic, Single-pole 10-A Power Relay

- 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.
- Reverse terminal configuration with NO and NC contact forms are available.
- UL class-B insulation certified.



Ordering Information

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

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

Example: G5LE-1 12 VDC

Rated coil voltage

Model Number Legend:

G5LE - - - -

1 2 3 4 5 6

1. Number of Poles

1: 1 pole

2. Contact Form

None: SPDT

A: SPST-NO

3. Sealing

None: Flux-protection

4: Plastic-sealed

4. Pre-soldered Terminal Configuration

None: Standard PCB terminal

R: Reverse PCB terminal

5. Contact Material

None: AgSnO₂

ACD: AgCdO

ASI: AgSnIn

6. Approved Standards

None: UL, CSA, TÜV

UL Class B Insulation

Specifications

■ Coil Ratings

Rated voltage	3 VDC	5 VDC	6 VDC	9 VDC	12 VDC	24 VDC	48 VDC
Rated current	133.3 mA	79.4 mA	66.7 mA	45 mA	33.3 mA	16.7 mA	8.33 mA
Coil resistance	22.5 Ω	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	130% of rated voltage at 70°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%.

■ Contact Ratings

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 (30 VDC when UL/CSA standard is applied)
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 m Ω 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 M Ω 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 18,000 operations/hr) Electrical: 100,000 operations min. (at 1,800 operations/hr)
Ambient temperature	Operating: -25°C to 85°C
Ambient humidity	Operating: 35% to 85%
Weight	Approx. 12 g

■ Approved Standards

UL114, UL478, UL325, UL508, UL1409, UL1950 (File No. E41643)

Model	Coil rating	Contact rating
G5LE	3 to 48 VDC	5 A, 250 VAC (general use) 5 A, 30 VDC (resistive load) 125 VA, 120 VAC (P.D 100,000 cycles) 5 A, 125 VAC (G.P), 30K, 70°C NO: 1/8 hp, 120 VAC (50,000 cycles) 4 FLA, 4 LRA, 120 VAC (100,000 cycles) 1/2 s, ON:OFF Ambient temperature: 105°C 5 FLA, 30 LRA, 120 VAC Mechanical life: 100,000 cycles TV-3, 120 VAC NC: 1/10 hp, 120 VAC (50,000 cycles) 2 FLA, 4 LRA, 120 VAC (100,000 cycles) 1/2 s, ON:OFF Ambient temperature: 105°C
		10 A, 250 VAC (general use) 8 A, 30 VDC (resistive load) NO: 1/6 hp, 120 VAC (50,000 cycles) 1/3 hp, 125 VAC, 70°C 30K with Class 130B system 65°C 30K with Class 105 Coil insulation system NC: 1/8 hp, 120 VAC (50,000 cycles)

Note: Only model numbers with the suffix "ASI" are TV-5 approved.

CSA C22.2 NO. 14 (File No. LR34815)

Model	Coil rating	Contact rating
G5LE	3 to 48 VDC	5 A, 250 VAC (general use) 5 A, 30 VDC (resistive load) 125 VA, 120 VAC (P.D 100,000 cycles) 5 A, 125 VAC (G.P), 30K, 70°C NO: 1/8 hp, 120 VAC (50,000 cycles) TV-3 NC: 1/10 hp, 120 VAC (50,000 cycles)
		10 A, 250 VAC (general use) 8 A, 30 VDC (resistive load) 6 A, 277 VAC (general use), 100K NO: 1/6 hp, 120 VAC (50,000 cycles) 1/3 hp, 125 VAC, 70°C 30K NC: 1/10 hp, 120 VAC (50,000 cycles)

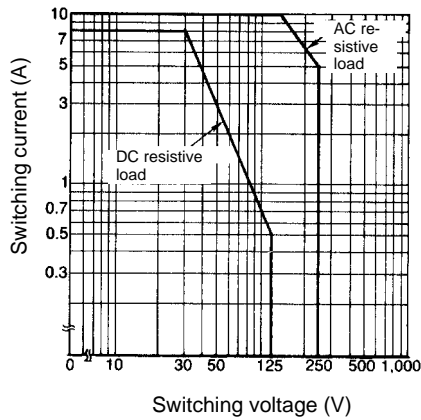
Note: Only model numbers with the suffix "ASI" are TV-5 approved.

TÜV (VDE File No. R9151267)

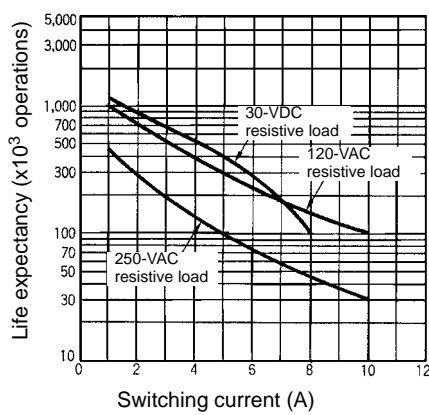
Model	Coil rating	Contact rating
G5LE	3, 5, 6, 9, 12, 24 VDC	1.2 A, 250 VAC (cosφ = 0.4) 2.5 A, 250 VAC (resistive load) 5 A, 30 VDC (resistive load)
		2.5 A, 250 VAC (cosφ = 0.4) 5 A, 250 VAC (resistive load) 8 A, 30 VDC (resistive load)

Engineering Data

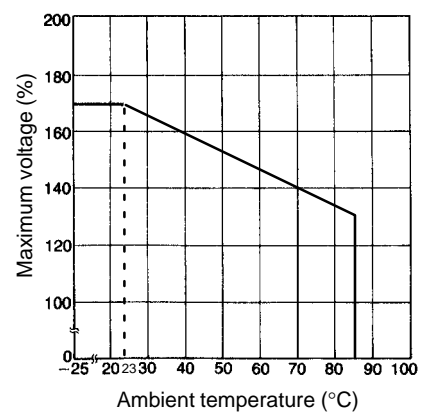
Max. Switching Capacity
G5LE



Life Expectancy
G5LE





Ambient Temperature vs. Maximum Voltage

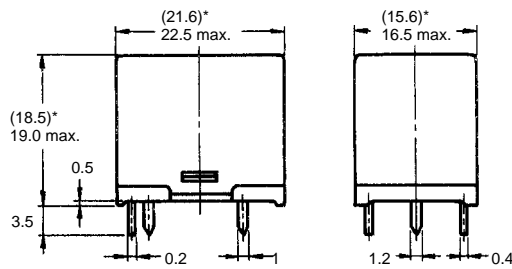
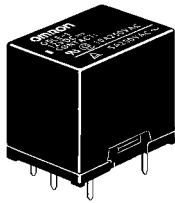


Dimensions

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

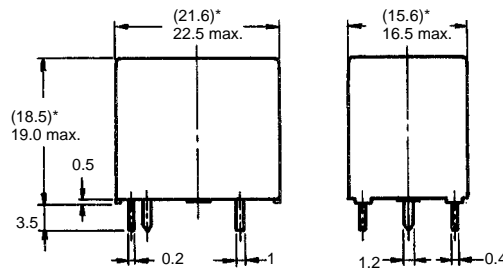
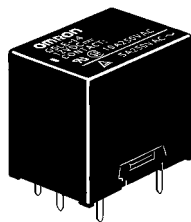
2. Orientation marks are indicated as follows:  

G5LE-1



*Average value

G5LE-14



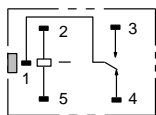
*Average value

STANDARD

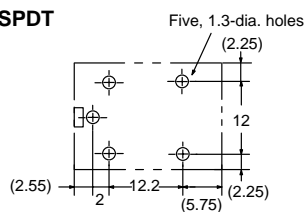
Terminal Arrangement/Internal Connections (Bottom View)

Mounting Holes (Bottom View)
Tolerance: ± 0.1 mm

SPDT



SPDT

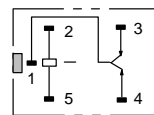


REVERSE

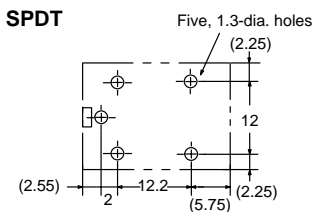
Terminal Arrangement/Internal Connections (Bottom View)

Mounting Holes (Bottom View)
Tolerance: ± 0.1 mm

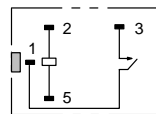
SPDT



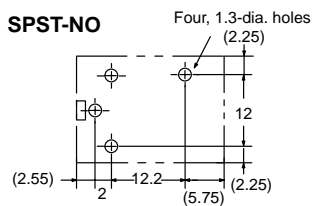
SPDT



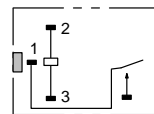
SPST-NO



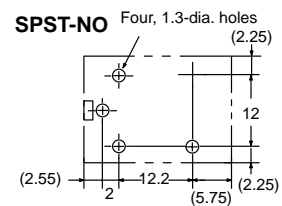
SPST-NO



SPST-NO



SPST-NO



Cat. No. C-G5LE-001 In the interest of product improvement, specifications are subject to change without notice.



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