# A Cubic, Single-pole 10A Power Relay

- Small size and light weight
- 19.6 x 15.6 x 15.6 mm, 7.5g
- High Insulation
- Dielectric strength 2,000V
- Withstand impulse voltage 4,500V
- High heat resistance and tracking performance
  - UL class-F available (-CF model)
  - IEC60335 GWT compliant
  - Tracking resistance CTI>250
- Environmental friendly
- ROHS compliant.









# Ordering Information

Contact form	Switching capacity	Model number	
		Flux protection	Fully sealed
SPDT	Standard	G5LA-1	G5LA-14
		G5LA-1-CF	G5LA-14-CF
	High capacity (NC side)	G5LA-1-E	G5LA-14-E
		G5LA-1-E-CF	G5LA-14-E-CF
SPST-NO		G5LA-1A	G5LA-1A4
		G5LA-1A-CF	G5LA-1A4-CF

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

Examples : G5LA-1 12VDC

---- Rated Coil Voltage

#### Model Number Legend

G5LA  $\square$   $\square$   $\square$   $\square$   $\square$  -  $\square$  -  $\square$   $\square$  VDC

1. Number of Poles

1: 1 pole

4. Contact Type

None: Standard

E: High capacity (NC side)

2. Contact Form/Contact Construction

None: SPDT

SPST-NO

5. UL Insulation System None: Standard

3. Sealing/Protective Construction

None: Flux protection 4: Fully sealed CF: Class F

6. Rated Coil Voltage

## PCB Relay - G5LA

# Specifications -

#### **■ Coil Ratings**

Rated voltage	5 VDC	9 VDC	12 VDC	24 VDC	48 VDC
Rated current	72 mA	40 mA	30 mA	15 mA	10 mA
Coil resistance	69.4 Ω	225 Ω	400 Ω	1600 Ω	4800 Ω Ω
Must operate voltage	75% max. of rated voltage				
Must release voltage	10% min. of rated voltage				
Max. voltage	130% of rated voltage at 85°C, 170% of rated voltage at 23°C				
Power consumption	360 mW 480mW			480mW	

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

#### **■** Contact Ratings

Item		Standard model	High capacity (-E) model		
Contact material		AgSnO <sub>2</sub>			
Load	Load		Resistive load (cosφ=1)		
Rated load	NO	10A at 250VAC 10A at 24VDC			
	NO/NC	5A/5A at 125VAC 5A/5A at 250VAC	5A/5A at 24VDC 5A/5A at 24VDC		
Rated carry current		10A(NO), 5A(NC)	10A		
Max. switching voltage		250VAC, 24VDC			
Max. switching current		10A(NO), 5A(NC)	10A		
Max. switching power	NO	AC2,500VA, DC240W			
	NO/NC	AC625VA, DC120W	AC1,250VAC, DC120W		
Failure rate (reference value)		100 mA at 5 VDC			

Note: P level:  $\lambda 60 = 0.1 \times 10^{-6}$ /operation

#### **■** Characteristics

Contact resistance	100 mΩ max.	
Operate time	10 ms max.	
Release time	5 ms max.	
Max. switching frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr (under rated load)	
Insulation resistance	1,000MΩ min. (at 500 VDC)	
Dielectric strength	2,000 VAC. 1mA 50/60Hz for 1 min between coil and contacts 750 VAC 1mA 50/60Hz for 1 min between contacts of same polarity	
Vibration resistance	Destruction: 10 to 55Hz, 1.5mm double amplitude Malfunction: 10 to 55Hz, 1.5mm double amplitude	
Shock resistance	Destruction: 1,000 m/s² (approx. 100G) Malfunction: 100 m/s² (approx. 10G)	
Endurance	Mechanical: 10,000,000 operations min. Electrical: 100,000 operations typical	
Ambient temperature	Operating: -40° to 85° (with no icing) Storage: -40° to 85° (with no icing)	
Ambient humidity	Operating: 35% to 85% Storage: 35% to 85%	
Weight	Approx. 7.5g	

Note: Values in the above table are the initial values.

# ■ Approved Standards UL508 (UL File No. E41643)

Model	Coil ratings	Contact ratings
G5LA	5 to 48 VDC	NO: 10A, 277VAC, general use, 100,000 cycles 10A, 277VAC, general use, 85°C, 50,000 cycles (-CF model) 15A, 125VAC, general use, 50,000 cycles 1/2Hp, 125VAC 1/2Hp, 250VAC 200W tungsten, 125VAC, 100,000 cycles NC: 10A, 125VAC, resistive 10A, 277VAC, general use, 100,000 cycles (-E model)

#### EN61810-1 (VDE Reg. No. B652)

Model	Coil ratings	Contact ratings
G5LA	5,6,9,12,18,24,48 VDC	NO: 10A, 250VAC, cosφ=1, 85°C, 1 sec - flux protection: 50,000 cycles - fully sealed: 10,000 cycles 10A, 250VAC, cosφ=1, 85°C, 5 sec 12A, 125VAC, cosφ=1, 85°C, 10,000 NC: 10A, 250VAC, cosφ=1, 85°C, 25,000 NO/NC: 5A, 250VAC, cosφ=1, 85°C - flux protection: 50,000 cycles - fully sealed: 10,000 cycles

#### GB15092.1 (CQC File No. CQC06001015477)

Model	Coil ratings	Contact ratings
G5LA	5,9,12,24,48 VDC	NO: 10A, 250VAC, resistive, 10,000 cycles 12A, 120VAC, resistive, 10,000 cycles NO/NC: 10A, 250VAC, resistive, 10,000 cycles (-E model) 12A, 250VAC, resistive, 10,000 cycles (-E model)

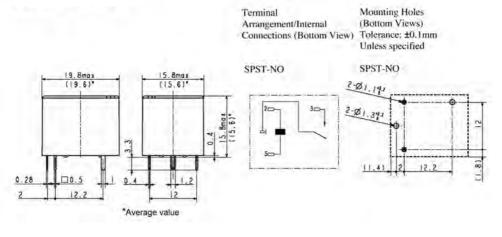
## Dimensions

Note: All units are in millimeters unless otherwise indicated.

\*Average value

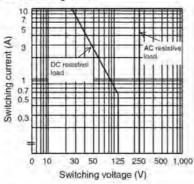
# Terminal Arrangement/Internal Connections (Bottom Views) Tolerance: ±0. Imm Unless specified SPDT S

#### **■ SPST-NO Models**



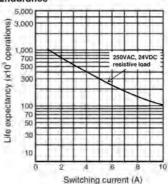
## Engineering Data -

#### Max. Switching Power



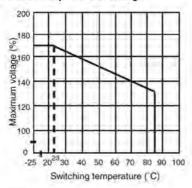
Note: NO contact

#### Endurance



Note: NO contact, Typical value

#### Ambient Temp. Vs Max. Voltage



Note: The maximum coil voltage is the maximum value in a varying range of operating power voltages not a continuous voltage

ALL DIMENSIONS SHOWN ARE IN MILLIMETRES.

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

CAT. No. K901-E2-01