

## Miniature Power Relay

## SLI

### Features

- Miniature relay with high switching capability: 30A
- Copper terminal products are available.
- Special type with 4000VAC dielectric strength and 6000VAC surge voltage (1.2/50uS) between coil and contact is available.
- IEC60335-1 compliant product is available.
- IEC60079-15 compliant product is available.

### Safety certificate

UL、cUL (File No.): E190598

TUV (File No.) : R50143450

CQC (File No.):

CQC02001002109、CQC10002050461、CQC21002306488

VDE (File No.): 40036707

## Contact Data

Type	SLI-DM	SLI-DB	SLI-D
Rated load (Resistive load)	30A 250VAC	15A 250VAC	20A/10A 250VAC
Max. switching current	30A	20A	20A
Max. switching voltage	250VAC	250VAC	250VAC
Max. switching power	7,500VA	5,000VA	5,000VA

## Characteristics

Contact material	Silver alloy	
Contact resistance	100mΩ Max. (1A 6VDC)	
Operate time (at rated coil voltage)	15ms Max. (No diode)	
Release time	10ms Max. (No diode)	
Insulation resistance	Min. 1,000MΩ (at 500VDC)	
Dielectric strength	Between open contacts:	AC 1,500V, 50/60Hz for 1min.
	Between coil and contact:	AC 2,500V, 50/60Hz for 1min.(4KV available)
Vibration resistance (NO)	Destructive	10 ~ 55Hz, at double amplitude of 1.5mm.
	Functional	0 ~ 55Hz, at double amplitude of 1.5mm.
Shock resistance (NO)	Destructive	100G Min.
	Functional	10G Min.
Endurance	Mechanical endurance (at 10,800 ops./h)	10,000,000 cycles(at room temperature)
	Electrical endurance (at 360 ops./h)	100,000 cycles(at room temperature)
Ambient temperature	-40°C ~ +85°C (No condensation)	
Weight	Approx.28.0g	

**Coil Data (at 20°C)**

Nominal voltage (VDC)	Nominal operating current $\pm 10\%$ (mA)	Coil resistance $\pm 10\%$ ( $\Omega$ )	Max. allowable voltage	Operate voltage (Max.)	Release voltage (Min.)	Nominal operating power
5	180.00	27	130% of nominal voltage	75% of nominal voltage	5% of nominal voltage	0.9W
6	150.00	40				
9	100.00	90				
12	75.00	160				
15	60.00	250				
18	50.00	360				
24	37.50	640				
48	18.75	2,560				
110	8.20	13,400				

The data shown above are initial values. Do not apply maximum allowable voltage on coil for more than 10 minutes to avoid overheating of the coil.

**Safety Certificate Ratings (More details of approved ratings, please refer to the safety certificates)**

Certificates	CQC	TUV	UL/CUL	VDE
File No	CQC02001002109 CQC10002050461 CQC21002306488	R50143450	E190598	40036707
Approved ratings	Form A: 30A 250VAC  Form B: 15A 250VAC  Form C: 20A/10A 250VAC	Form A: 30A 250VAC Marking: 80A250VAC(300ms) Breaking: 20A 250VAC  Form B: 15A 250VAC  Form C: 20A/10A 250VAC	Form A: 40A 277VAC, Resistive 30A 240VAC, Resistive 15A 240VAC 1-1/2HP 240VAC 3/4 HP 120VAC TV-8 120VAC 30A 240VAC, General Use Pilot duty: 470 VA, 240VAC Electronic Ballast: 10A 277VAC /120VAC  Form B: 30A 120VAC, General Use 10A 240VAC, Resistive 10A 240VAC, General Use Pilot duty: 275VA, 240VAC Electronic Ballast:5A, 277VAC/120VAC  Form C: N.O. 20A 240VAC Resistive 10A 240VAC, Resistive 1-1/2HP 240VAC 3/4HP 125VAC TV-8 120VAC 20A 240VAC,General Use Pilot Duty: 470VA 240VAC Electronic Ballast: 10A 277VAC/120VAC  N.C.  10A 240VAC, Resistive 1/2HP 240VAC 1/4HP 125VAC TV-3 120VAC 10A 240VAC,General Use Pilot Duty: 275VA 240VAC Electronic Ballast: 5A 277VAC/120VAC	30A 250VAC,NO 20A 250VAC,CO(test NO) 10A 250VAC,CO(test NC)

(1) All values unspecified are acquired at room temperature.

(2) Only typical ratings are listed above and the endurance differ in each load. Other specific load information are available upon request.

(3) For sealed type testing, please open the ventilation hole in the case before test.

## Ordering Information

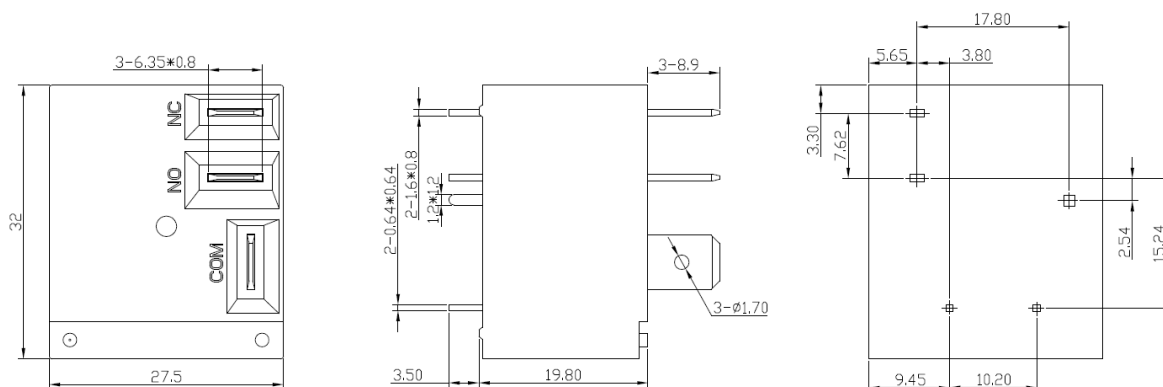
### Nomenclature

SLI	-S	-1	12	D	M	K	2	-G	-P	-F	-XX	Special Parameter: Nil-Standard type, Letter or number-Special requirement
												Insulation System: Nil-Standard , B-Class B, F-Class F
												COM Flat quick-connect terminals: Nil-Yoke, flat quick-connect terminal integration P- Rivet yoke with quick-connect terminal (only for SLI-K)
												Parameter sign: Nil-Standard, G-High contact load(40A)
												Contact material: Nil-AgSnO <sub>2</sub> , 2-AgNi+AgSnO <sub>2</sub>
												Terminal position: Nil-COM terminal and NC/NO terminal on the same side K-COM terminal and NC/NO terminal on the opposite side
												Contact Form: Nil - Form C, B - Form B, M - Form A
												Coil power: D-0.9W
												Rated coil voltage(VDC): 05, 06, 09, 12, 15, 18, 24, 48, 110
												Number of poles: 1-1 Pole
												Protective construction: S-Flux proofed, SH-Sealed type washable
												Type : SLI

- (1) Flux-proof relays can not be used in the environment with pollutants like H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust, etc.
- (2) Water cleaning or surface process is not suggested after the flux-proof relays are assembled on PCB.
- (3) Customized special suffix is available after being evaluated by Sanyou.

## Outline dimension, wiring diagram, PCB layout (Unit: mm)

### SLI



In case of no tolerance shown on outline dimension

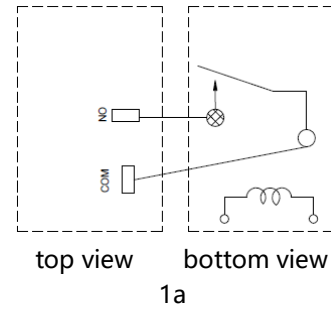
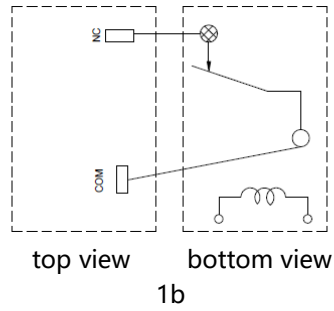
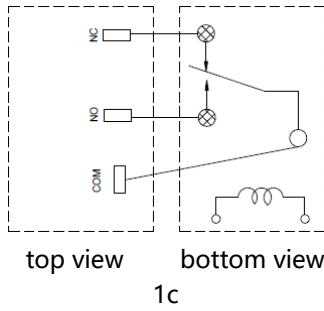
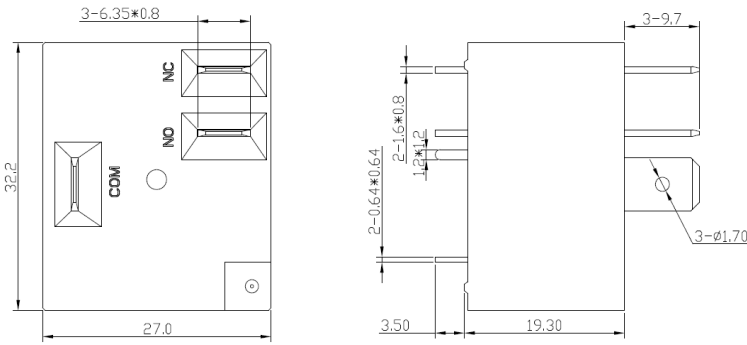
If dimension < 1 mm, tolerance: ±0.2mm

If dimension 1~5mm, tolerance: ±0.3mm

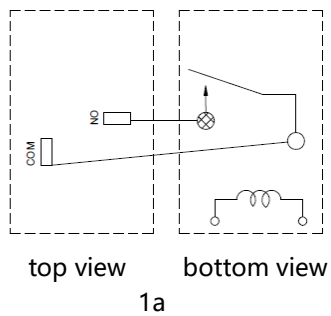
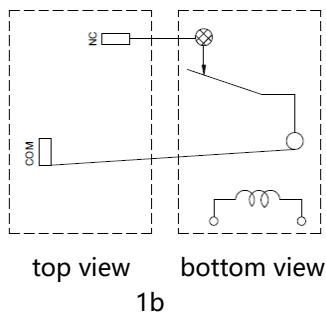
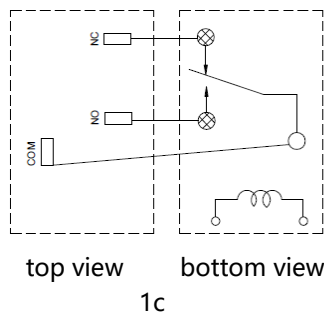
If dimension > 5mm, tolerance: ±0.4mm

Note: 1. The dimension of pin is the size before tinning. 2.Tolerance of PCB layout: ±0.1 mm.

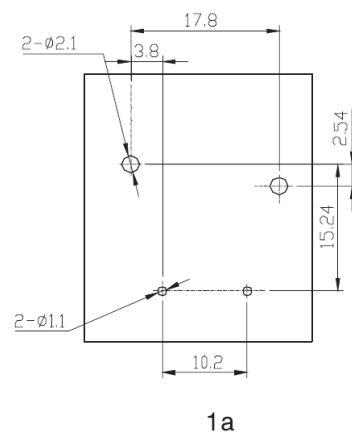
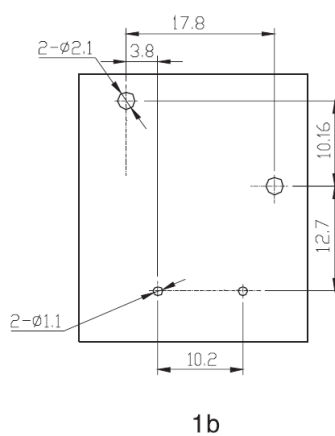
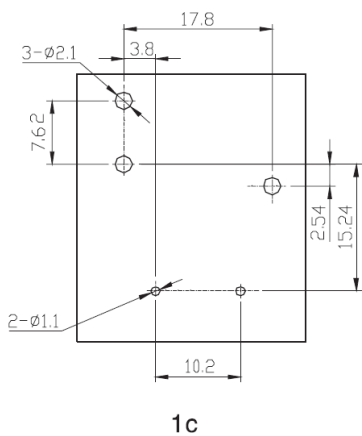
### SLI-K



SLI Wiring Diagram



SLI-K Wiring Diagram



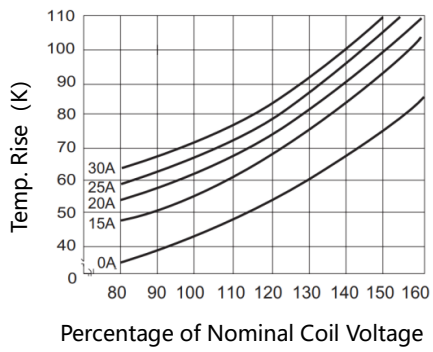
PC.B Layout (bottom view)

## Typical Applications

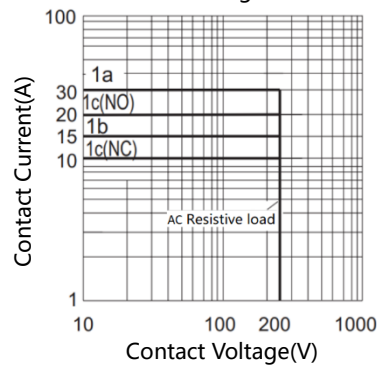
- Car
- Heater and ventilation equipment
- Air conditioner
- Home appliance

## Characteristic Curves

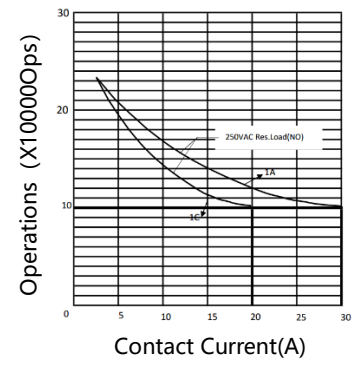
### Coil Temp.Rise



### Max. Switching Power



### Endurance Curve



Note:

- (1) Test conditions: room temperature, flux-proof product, resistive load, 1s on, 9s off.
- (2) The above curves are for reference only, and the final result is subject to the experiment.