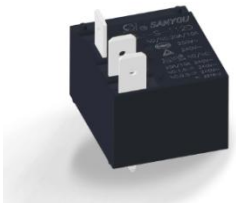
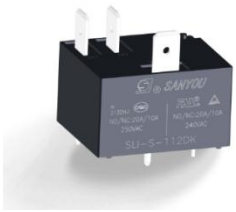
三友继电器 SANYOU RELAYS

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	Destructive	10～55Hz, at double amplitude of 1.5mm.
	Functional	0～55Hz, at double amplitude of 1.5mm.
Shock resistance	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℃～+85℃（No condensation）	
Weight	Approx.28.0g	

Coil Data (at 20℃)

Nominal voltage (VDC)	Nominal operating current ±10%(mA)	Coil resistance ±10%(Ω)	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. / N.C. 20A 240VAC Resistive 10A 240VAC, Resistive / 10A 240VAC, Resistive 1-1/2HP 240VAC / 1/2HP 240VAC 3/4HP 125VAC / 1/4HP 125VAC TV-8 120VAC / TV-3 120VAC 20A 240VAC,General Use / 10A 240VAC,General Use Pilot Duty: 470VA 240VAC / Pilot Duty: 275VA 240VAC Electronic Ballast: / Electronic Ballast: 10A 277VAC/120VAC / 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

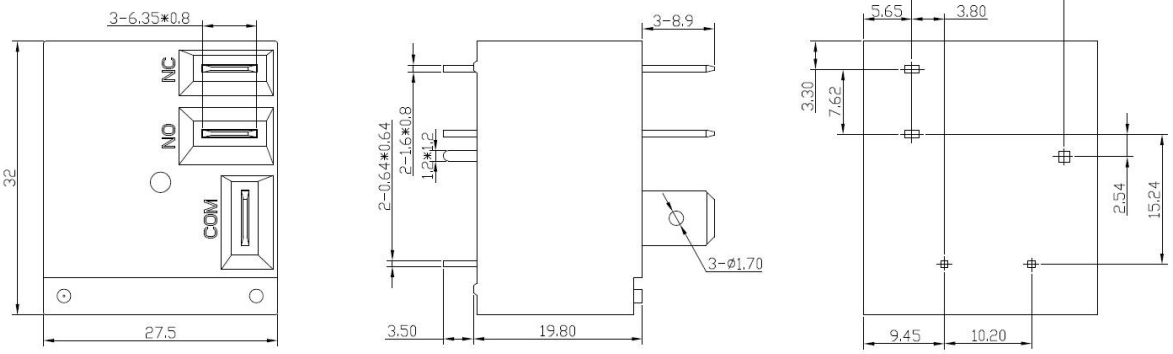
Nomenclature

SLI	-S	-1	12	D	M	K	2	-G	-P	-F	-XX pecial 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-AgSnO2，2-AgNi+AgSnO2
											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_2S, SO_2,NO_2, 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.

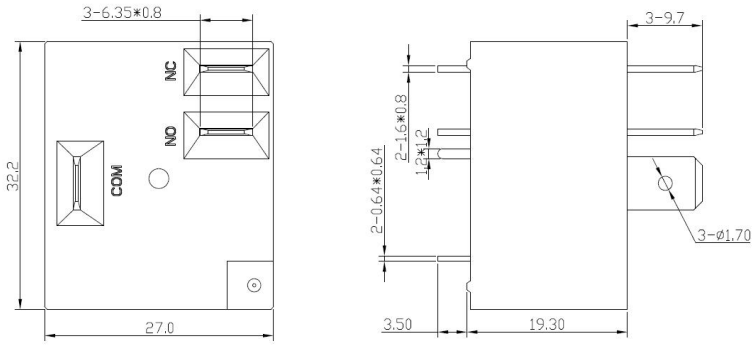
Outline dimension, wiring diagram, PCB layout (Unit: mm)

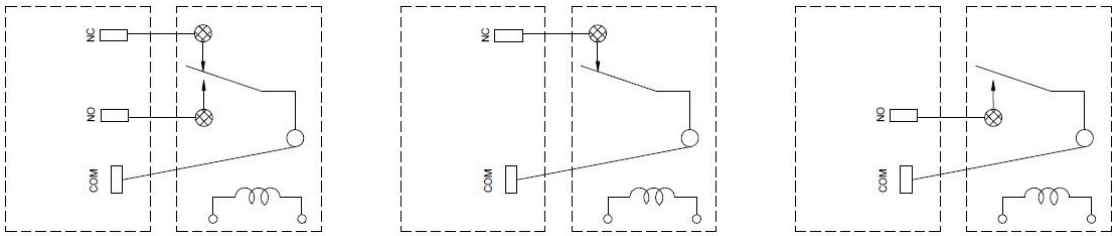
SLI



SLI-K

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.

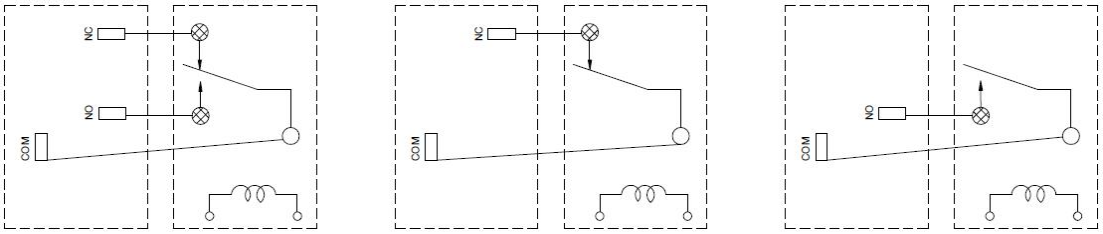




top view bottom view top view bottom view top view bottom view

1c 1b 1a

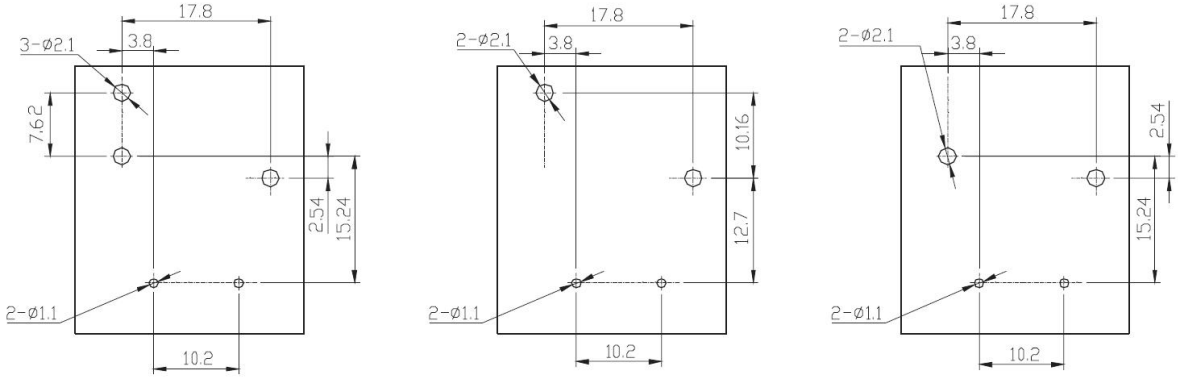
SLI Wiring Diagram



top view bottom view top view bottom view top view bottom view

1c 1b 1a

SLI-K Wiring Diagram



1c 1b 1a

P.C.B Layout (bottom view)

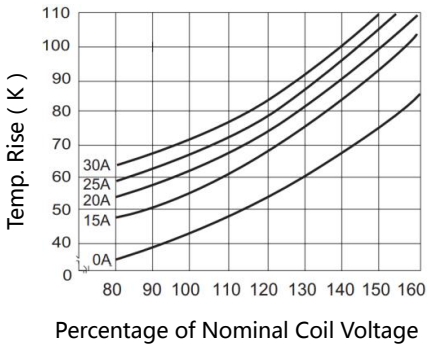
Typical Applications

●Car ●Heater and ventilation equipment

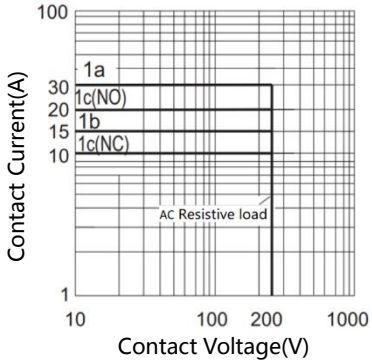
●Air conditioner ●Home appliance

Characteristic Curves

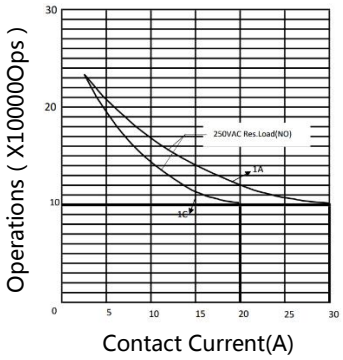
Coil Temp.Rise



Max. Switching Power



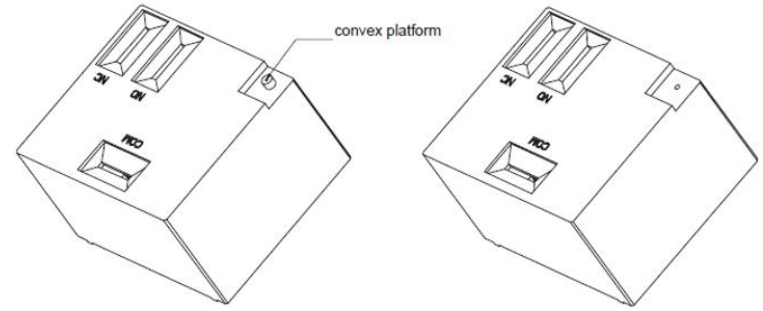
Endurance Curve



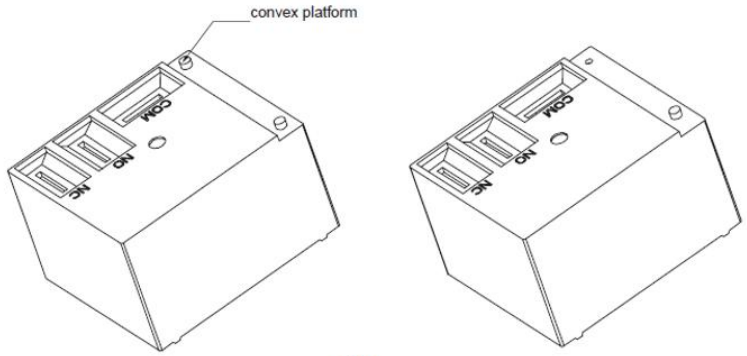
Note：
(1) Test conditions: room temperature, flux-proof product, resistive load, 1s on, 9s off.
(2)The above curves are for reference only, and the final result is subject to the experiment.

Note：

If you choose the sealed type, please remove the convex platform at the top of the case before using to ensure normal performance of the relay after the completion of PCB processes. The guidance of the removal of the convex platform is shown as below：



SLI-K



SLI

With convex platform　　Without convex platform

Disclaimer：

The specification is for reference only. Specifications are subject to change without prior notice.
We could not evaluate all the performance and all the parameters for every possible applications. Thus the users should in a right position to choose suitable product for their own application. For sealed relays, after installation and cleaning, please open the ventilation hole in the case before use. If there is any query, please contact Sanyou for technical services. However it is the user's responsibility to determine which product should be used.