三友繼電器 SANYOU RELAYS

Miniature Power Relay SRD(I)-L

Features

- High contact capability：12A switching capability
- Low coil power consumption
- Micro-miniature relay, standard PCB terminals
- Compliance EU RoHS and the requirement of white home appliances
- Impulse withstand voltage ≥6000V product is available
- Compliance with IEC60335-1 GWIF 850℃/ GWIT 775℃ and CTI > = 250V is available
- IEC60079-15 compliant product is available

Safety certificate

UL、c-UL (File No.)：E190598
CQC(File No.)：CQC02001002126、CQC10002050459、CQC21002306489
VDE(File No.)：40034479

Contact Data

Type	SRD(I)-L
Rated load (resistive load)	12A 277VAC
Max. switching current	12A
Max. switching voltage	277VAC
Max. switching power	3324VA
Min. switching load	6V 1A

Characteristic

Contact material	Silver alloy		
Contact resistance	100mΩ Max. (at 1A 6VDC)		
Operate time (at rated coil voltage)	8ms Max. (No diode)		
Release time	5ms Max. (No diode)		
Insulation resistance	Min. 1,000MΩ (at 500VDC)		
Dielectric strength	Between open contacts： 750VAC, 50/60Hz for 1min.		
	SRD-L	Between coil and contact(standard product)：1,500VAC, 50/60Hz for 1min.	
	SRDI-L	Between coil and contact(standard product)： 2,500VAC ,50/60Hz for 1min. product with suffix"-6"：3,000 VAC ,50/60Hz for 1min.	
Impulse withstand voltage	SRDI-L	Between coil and contact(standard product)：≥4,800V 1.2/50 us product with suffix"-6"： ≥6,000V 1.2/50 us	
Vibration resistance	Destructive		10～55Hz, at double amplitude of 1.5mm
	Functional		10～55Hz, at double amplitude of 1.5mm
Shock resistance	Destructive		100G Min.
	Functional		10G Min.
Endurance (operations)	Mechanical endurance (at 10,800ops./h at room temperature)		10,000,000

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	Electrical endurance (at 360ops./h at room temperature)	100,000 (Rated load)
Ambient temperature	-40℃ ~ +105℃ (No condensation)	
Weight	Approx. 8.0g	

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
3	120.00	25	130% of nominal voltage	75% of nominal voltage	10% of nominal voltage	0.36W
5	71.42	70				
6	60.00	100				
9	40.00	225				
12	30.00	400				
15	24.00	625				
18	20.00	900				
24	15.00	1,600				
48	7.50	6,400				
60	6.00	10,000				

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 (Note: More details of approved ratings, please refer to the safety certificates)

Certificates	CQC	VDE	UL/CUL
File No.	CQC02001002126 CQC10002050459 CQC21002306489	40034479	E190598
Approved Ratings	12A 250/277VAC	12A 125/250/277VAC	12A 125/250/277VAC, General use&Resistive, TV-8 120VAC.

(1) All values unspecified are 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.

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Ordering Information

Nomenclature

SRD	-S	-1	12	D	M	2	-F	-L	-XX	
										Special Parameter : Nil-Standard type 6-6000V impulse withstandard voltage, Letter or number-Special requirement
										L-Low temperature rised type
										Insulation System : Nil - Standard B - Class B F - Class F
										Contact Material : 2 - $AgSnO_2$ 4 - 3 Compounds $AgSnO_2$ (Form C) 6 - AgNi 7 - AgNi & $AgSnO_2$ 8 - 3 Compounds AgNi (Form C)
										Contact Form : Nil - Form C, M - Form A
										Coil power : D-0.36W
										Rated coil voltage(VDC) : 03 , 05 , 06 , 09 , 12 , 15 , 18 , 24 , 48 , 60
										Number of poles : 1-1Pole
										Protective construction : S- Flux-proof SH- Sealed type washable
										Type : SRD/SRDI

(1) Flux-proofed 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) The customer special requirement express as special code after evaluating by Sanyou.

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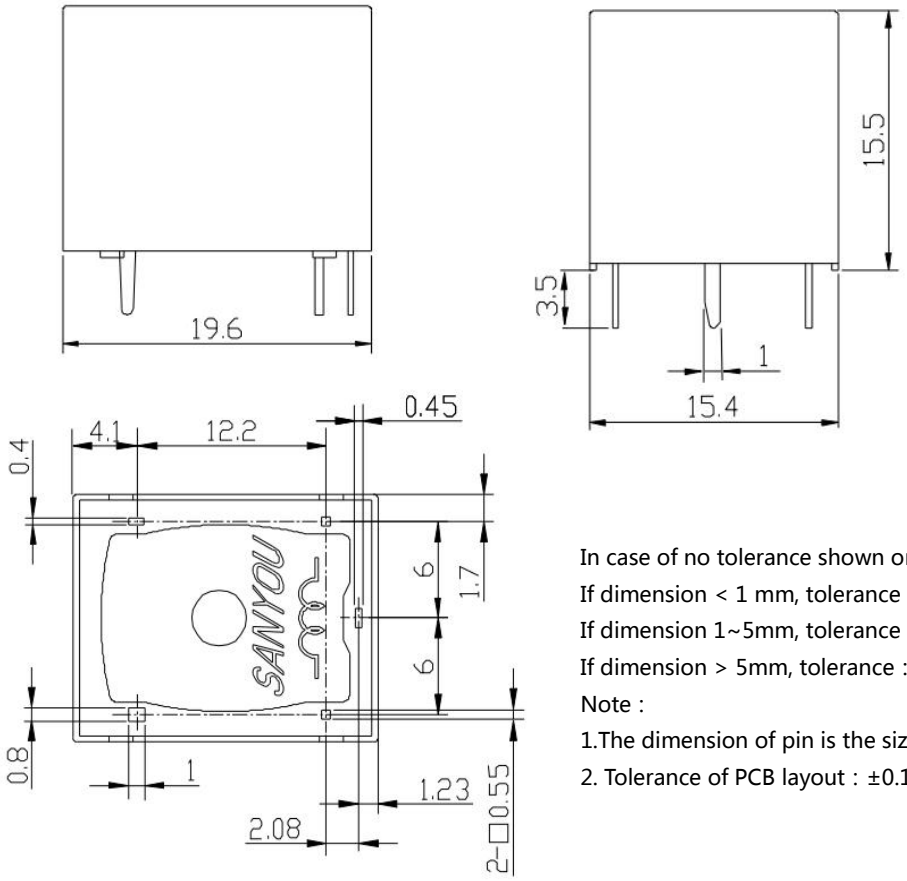
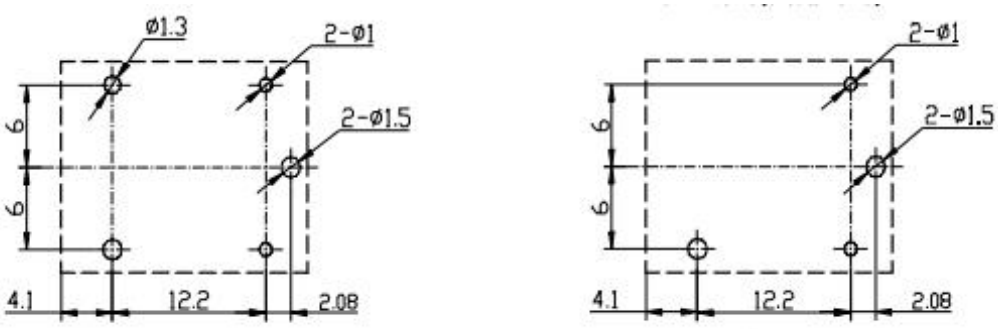
Outline dimension, wiring diagram, PCB layout (Unit: mm)



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.

1c Wiring Diagram (bottom view) 1a



1c 1a

P.C.B Layout (bottom view)

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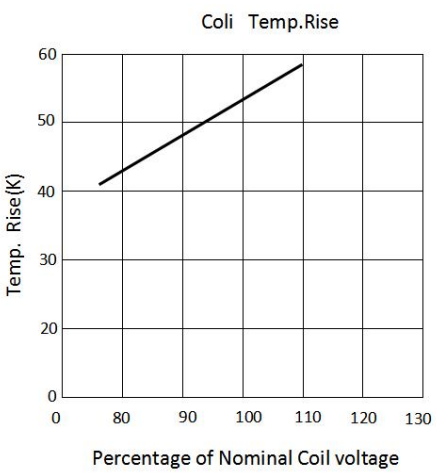
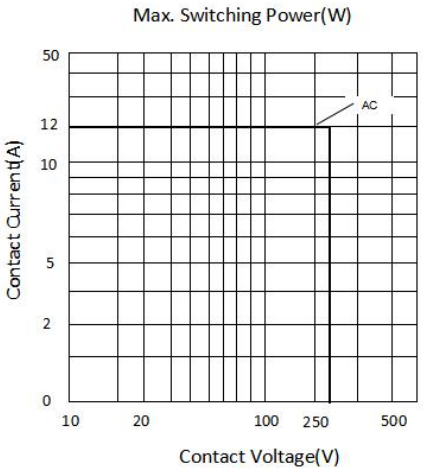
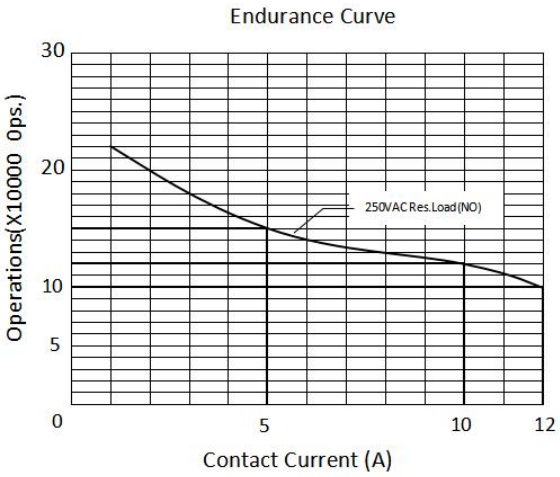
Typical Applications

- ●Home appliances such as air conditioner, heater, etc.
- ●Vending machine.
- ●Office equipment such as computer, fax machine, etc.
- ●Electric controlled window, car antenna, door lock, etc.

Characteristic Curves







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.

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.

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