

### Features:

- Small size (20.5x7x15.1 mm) for high density PCB mounting.
- 5A contact switching capability.
- High breakdown voltage: 4000V (between coil and contact).
- IEC60335-1 compliant product is available.
- IEC60079-15 compliant product is available.

### Typical applications:

- Telecommunication equipment.
- Safety equipment.
- Office equipment.
- Home appliances such as air conditioner, microwave oven.

### Approvals

UL, c-UL (File No.): E190598

CQC (File No.): CQC07001019820, CQC11002064517, CQC21002306490

VDE (File No.): 40033402

TUV (File No.): R50138320

### Contact Data

Contact arrangement	1 Form A( NO)
Rated voltage	250VAC/277VAC
Max. switching voltage	277VAC
Rated current	5A
Min. recommended contact load	1A, 6VDC
Breaking capacity max.	1385VA
Contact material	AgNi, AgSnO <sub>2</sub>
Frequency of operation	360 ops./h
Operate/release time max.	10ms/5ms
Electrical endurance	See electrical endurance graph

### Contact ratings

Type	Contact	Load	Cycles
<b>IEC61810</b>			
SRB	A(NO)	3A/5A,250VAC/277VAC,105°C	1X10 <sup>5</sup>
<b>UL 60947-4-1</b>			
SRB	A(NO)	3A/5A,250VAC/277VAC,cos φ=1,105°C	1X10 <sup>5</sup>
SRB	A(NO)	1/6 hp, 240 VAC,105°C	3X10 <sup>4</sup>
SRB	A(NO)	TV-3, 250 VAC,85°C	2.5X10 <sup>4</sup>
<b>GB/T 21711.1-2023</b>			
SRB	A(NO)	3A/5A,250VAC/277VAC,85°C	1X10 <sup>5</sup>
SRB	A(NO)	3A/5A,250VAC/277VAC,105°C	1X10 <sup>5</sup>
<b>EN 60730-1</b>			
SRB	A(NO)	3A/5A,250VAC/277VAC,105°C	1X10 <sup>5</sup>
SRB	A(NO)	5A,415VAC,105°C	1X10 <sup>5</sup>
Mechanical endurance			≥1x10 <sup>7</sup> operations

### Coil Data

Coil voltage range:	5 to 24VDC
Operative range, IEC 61810	2
Coil insulation system according UL	Class F



### Coil Data(continued)

Coil versions, DC coil

Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω (1±10%)	Rated coil powers mW
5	≤3.75	≥0.25	125	200
6	≤4.5	≥0.3	180	200
9	≤6.75	≥0.45	405	200
12	≤9	≥0.6	720	200
18	≤13.5	≥0.9	1620	200
24	≤18	≥1.2	2880	200
5	≤3.75	≥0.25	69	360
6	≤4.5	≥0.3	100	360
9	≤6.75	≥0.45	225	360
12	≤9	≥0.6	400	360
18	≤13.5	≥0.9	900	360
24	≤18	≥1.2	1600	360

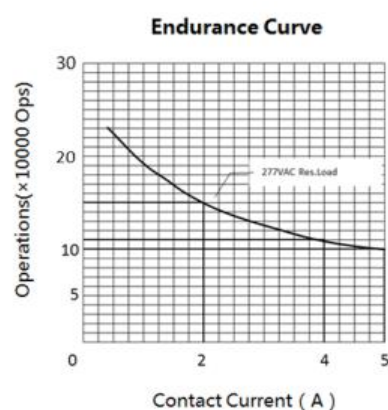
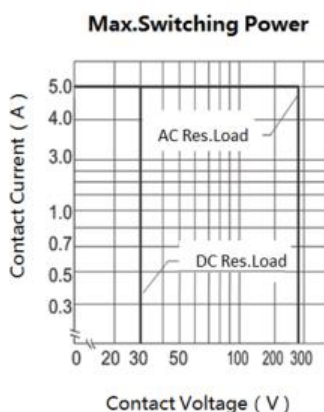
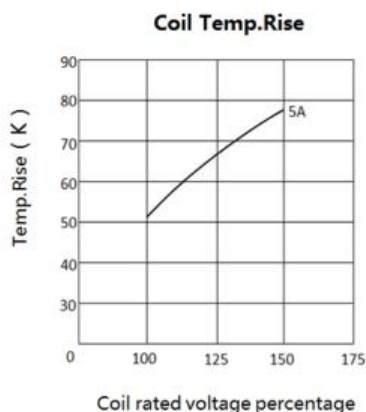
All figures are given for coil without pre-energization, at ambient temperature 20°C

### Insulation Data

Initial dielectric strength	
between open contacts	750VAC
between contact and coil	4000VAC
Clearance/Creepage	
between contact and coil (Clearance)	≥5.0mm(actual)
between contact and coil (Creepage)	≥5.0mm(actual)
Material group of insulation parts	IIIa
Tracking index of relay	PTI 175V/PTI 250V

### Other Data

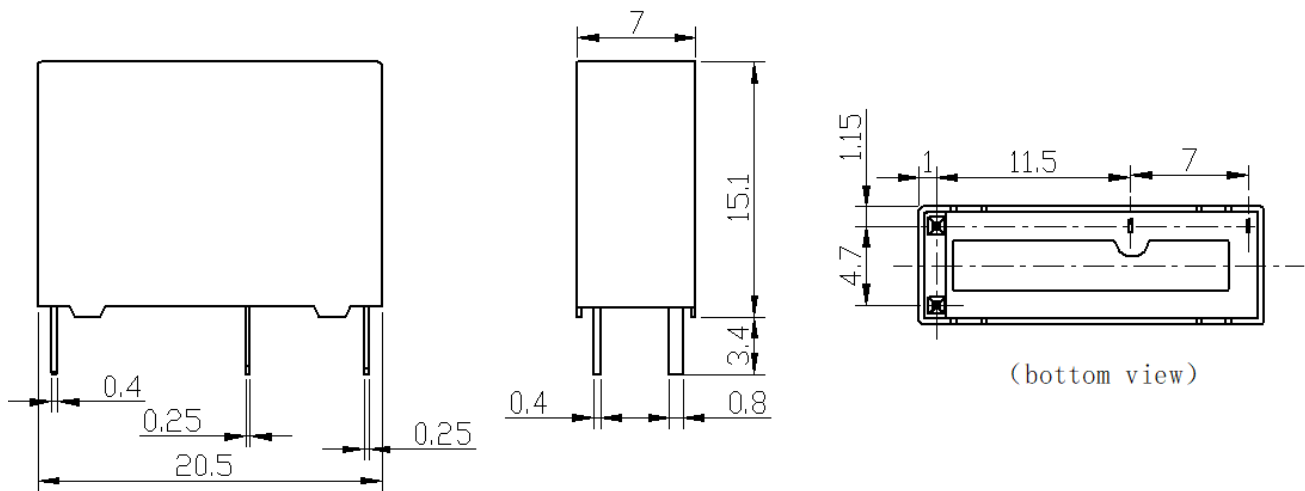
Material compliance: EU RoHS/ELV, China RoHS, REACH	
Ambient temperature	-40°C to +85°C, -40°C to +105°C
Category of environmental protection	
IEC 61810	RTII - flux proof
	RTIII - Sealed type washable
Weight	Approx. 3.9g
Resistance to soldering heat THT (IEC 60068-2-20)	260°C/5s
Packaging/unit	tube, tray



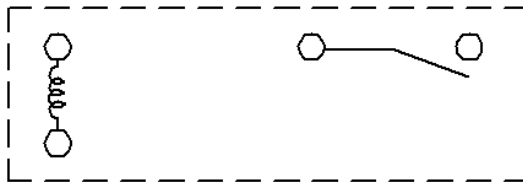
(1) Test conditions: room temperature, flux-proof product, resistive load, 1s on, 9s off.

(2) The above curves are for reference only, and the final result is subject to the experiment.

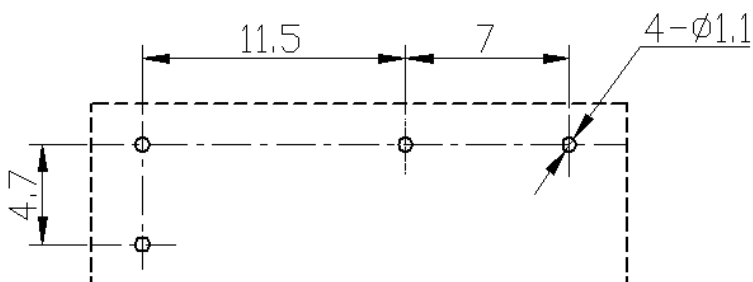
**Dimensions**



**Wiring Diagrams (bottom view)**



**PCB Layouts (bottom view)**



In case of no tolerance shown on outline dimension

If dimension < 1 mm, tolerance:  $\pm 0.2\text{mm}$

If dimension 1~5mm, tolerance:  $\pm 0.3\text{mm}$

If dimension > 5mm, tolerance:  $\pm 0.4\text{mm}$

Notes:

1.The dimension of pin is the size before tinning

2.Tolerance of PCB layout:  $\pm 0.1\text{ mm}$ .

**Product Code Structure**

SRB	-S	-1	12	D	M	2	-F	-XX	
									Special Parameter:
									Nil - Standard type
									10 - 3A product
									Letter or number - Special requirement
									Insulation System :
									Nil - Standard
									B - Class B
									F - Class F
									Contact Material :
									2 - AgNi
									3 - AgSnO <sub>2</sub>
									Contact Arrangement:
									M-Form A
									Coil Power:
									D - 0.2W
									H - 0.36W
									Rated Coil Voltage(VDC):
									05, 06, 09, 12, 18, 24
									Number of Poles:
									1-1Pole
									Protective Construction
									S - Flux-proof      SH- Sealed type washable
									Type: SRB

- (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) Special requirements of customers (XX) shall be evaluated by our company and marked by characteristic symbols.
- (4) C1 suffix stands for product in accordance to IEC60335-1(GWT) & CTI250V.
- (5) Ex suffix stands for product compliant with IEC60079-15.

**Examples of Ordering Codes**

SRB-S-112DM2      relay SRB , Flux-proof , rated DC voltage 12V ,coil power 0.2W ,1NO,and contact material AgNi.

SRB-S-112HM3      relay SRB , Flux-proof , rated DC voltage 12V ,coil power 0.36W ,1NO,and contact material AgSnO<sub>2</sub>.

**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.