

**Features:**

- Low coil power consumption.
- Micro-miniature relay, standard PCB terminals.
- IEC60335-1 compliant product is available.
- IEC60079-15 compliant product is available.

**Typical applications:**

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

**Approvals**

UL, c-UL (File No.): E190598  
 CQC (File No.): CQC04001009429  
 VDE (File No.): 40035912

**Contact Data**

Contact arrangement	1form C( CO)or 1form A( NO)
Contact resistance	100mΩ Max.(at 1A 6VDC)
Rated voltage	277VAC
Max.switching voltage	277VAC
Rated current	10A
Min. recommended contact load	1A, 6VDC
Breaking capacity max.	2770VA
Contact material	AgNi, AgSn02
Frequency of operation	360 ops./h
Operate/release time max.	10ms/4ms
Electrical endurance	See electrical endurance graph

**Contact ratings**

Type	Contact	Load	Cycles
<b>IEC 61810</b>			
SJE...-1...(M)H-	A/C(NO)	10A,277VAC,cos φ=1,105℃	6X10 <sup>4</sup>
<b>IEC 61810, EN 60730-1</b>			
SJE...-1...(M)H2-	A/C(NO)	10A,277VAC,cos φ=1,105℃	1X10 <sup>5</sup>
SJE...-1...H(3;4) -	C(NO)	10A,277VAC,cos φ=1,105℃	3X10 <sup>4</sup>
<b>UL 60947-4-1</b>			
SJE	A/C(NO)	10A,277VAC, 85℃	1X10 <sup>5</sup>
SJE	A/C(NO)	1/6 hp, 277 VAC, 85℃	1X10 <sup>5</sup>
SJE	A/C(NO)	TV-3, 120 VAC, 40℃	2.5X10 <sup>4</sup>
<b>GB/T 21711.1-2023</b>			
SJE	A/C(NO)	10A,277VAC,105℃	2X10 <sup>4</sup>
Mechanical endurance			≥1x10 <sup>7</sup>

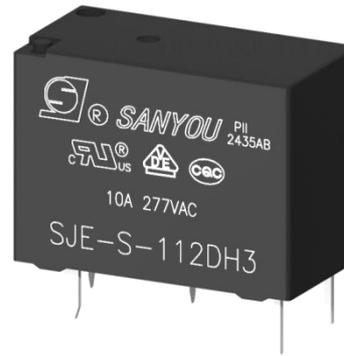
**Coil Data**

Coil voltage range:	5 to 48VDC
Operative range, IEC 61810	2
Coil insulation system according UL	Class F

**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	55	450
6	≤4.5	≥0.3	80	450
9	≤6.75	≥0.45	180	450
12	≤9	≥0.6	320	450
18	≤13.5	≥0.9	720	450
24	≤18	≥1.2	1280	450
48	≤36	≥2.4	5120	450

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


**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	62.5	400
6	≤4.5	≥0.3	90	400
9	≤6.75	≥0.45	202.5	400
12	≤9	≥0.6	360	400
18	≤13.5	≥0.9	810	400
24	≤18	≥1.2	1440	400
48	≤36	≥2.4	5760	400
5	≤3.75(4with CO)	≥0.25	125	200
6	≤4.5(4.8with CO)	≥0.3	180	200
9	≤6.75(7.2with CO)	≥0.45	405	200
12	≤9(9.6with CO)	≥0.6	720	200
18	≤13.5(14.4with CO)	≥0.9	1620	200
24	≤18(19.2with CO)	≥1.2	2880	200
48	≤36(38.4with CO)	≥2.4	11520	200

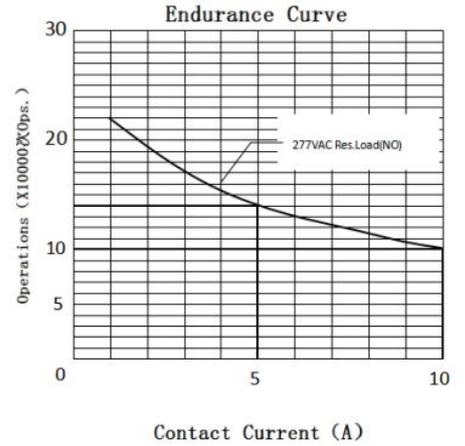
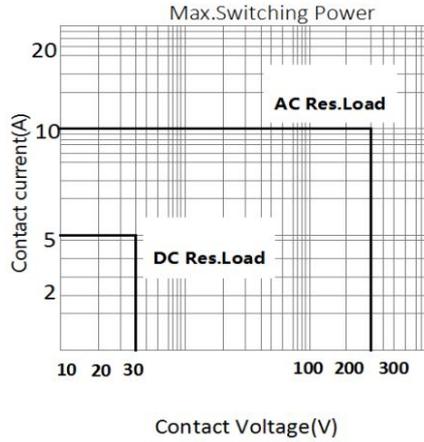
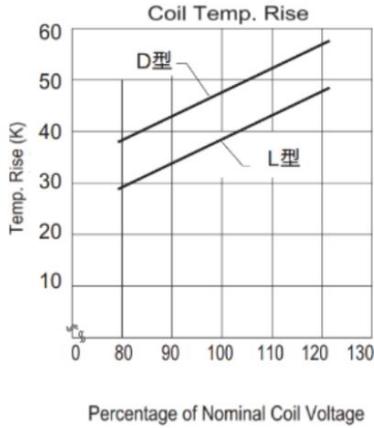
All figures are given for coil without pre-energization, at ambient temperature 20℃

**Insulation Data**

Initial dielectric strength		
between open contacts		1000VAC
between contact and coil		4000VAC
Clearance/Creepage		
between contact and coil ( Clearance )		≥3.0mm(actual)
between contact and coil ( Creepage )		≥4.5mm(actual)
Material group of insulation parts		IIIa
Tracking index of relay		PTI 175V/PTI 250V

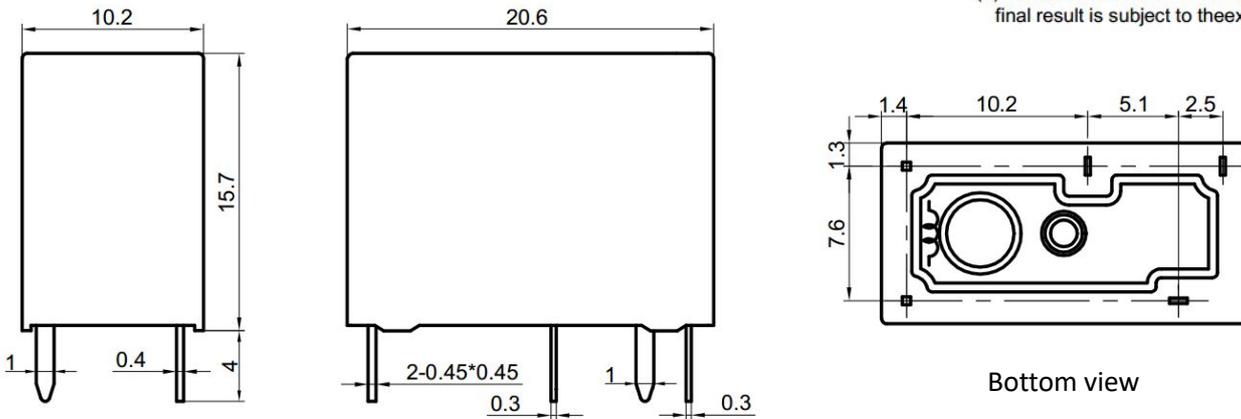
**Other Data**

Material compliance: EU RoHS/ELV, China RoHS, REACH	
Ambient temperature	-40℃to +105℃(No condensation)
Category of environmental protection	
IEC 61810	RTII - flux proof RTIII - Sealed type washable
Weight	Approx. 6.5g
Resistance to soldering heat THT (IEC 60068-2-20)	260℃/5s
Packaging/unit	tube, tray



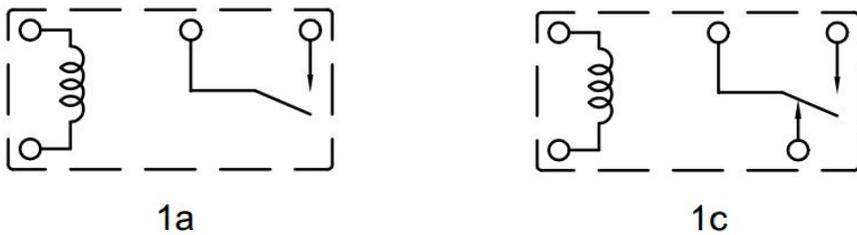
Note:  
 (1) Test conditions: room temperature, flux-proof product, resistive load, 1s on, 9s off.  
 (2) The above curves are for reference only, and the final result is subject to the experiment.

**Dimensions**

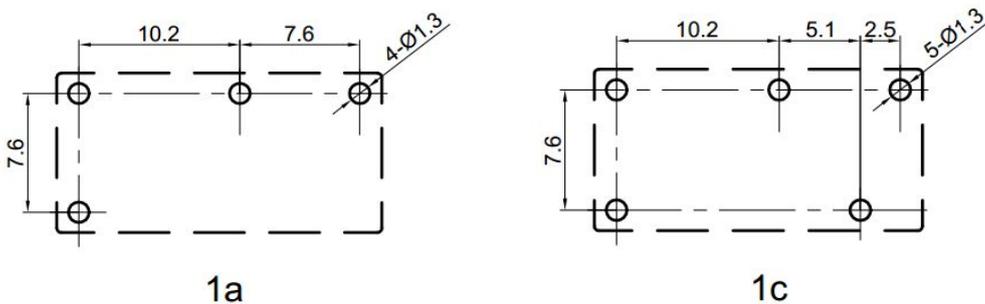


Bottom view

**Wiring Diagrams**



**PCB Layouts (bottom view)**



In case of no tolerance shown on outline dimension  
 If dimension < 1 mm, tolerance:  $\pm 0.2$ mm  
 If dimension 1~5mm, tolerance:  $\pm 0.3$ mm  
 If dimension > 5mm, tolerance:  $\pm 0.4$ mm

Notes:  
 1. The dimension of pin is the size before tinning  
 2. Tolerance of PCB layout:  $\pm 0.1$  mm.

**Product Code Structure**

SJE	-S	-1	12	D	M	H	2	-F	-XX	
										Special Parameter: Nil-Standard type , Letter or number-Special requirement
										Insulation System : Nil-Standard, B - Class B, F - Class F
										Contact Material : Nil & 3 - AgSnO <sub>2</sub> , 2 & 4-AgNi
										Load Capacity: H-10A
										Contact Arrangement: Nil-Form C, B-Form B, M-Form A
										Coil Power: D-0.45W, E-0.4W, L-0.2W
										Rated Coil Voltage(VDC): 05, 06, 09, 12, 18, 24, 48
										Number of Poles: 1-1Pole
										Protective Construction: S - Flux-proof, SH- Sealed type washable
										Type: SJE

- (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.
- (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**

- SJE-S-112DMH relay SJE, Flux-proof, rated DC voltage 12V, coil power 0.45W, 1NO, contact current 10A and contact material AgSnO<sub>2</sub>.
- SJE-S-112DH4 relay SJE, Flux-proof, rated DC voltage 12V, coil power 0.45W, 1CO, contact current 10A and contact material AgNi.

**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.