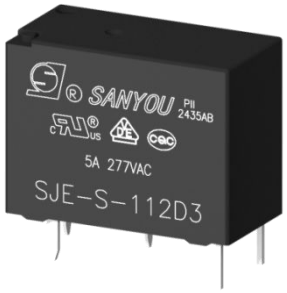
Features:

- 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
TUV (File No.)：R50143457
CQC (File No.)：CQC04001009429
VDE (File No.)：40035912

Contact Data

Contact arrangement	1form C(CO)or 1form A(NO)or 1formB(NC)
Contact resistance	100mΩ Max.(at 1A 6VDC)
Rated voltage	277VAC
Max.switching voltage	277VAC
Rated current	5A
Min. recommended contact load	1A, 6VDC
Breaking capacity max.	1385VA
Contact material	AgNi, $AgSnO_2$
Frequency of operation	360 ops./h
Operate/release time max.	10ms/4ms
Electrical endurance	See electrical endurance graph

Contact ratings

Type	Contact	Load	Cycles
IEC 61810			
SJE-..-1…(.;M)-.	A/C(NO)	5A,277VAC,cos ϕ=1,105℃	$8X10^4$
SJE	B(NC)	5A,277VAC,105℃	$1X10^5$
IEC 61810, EN 60730-1			
SJE-..-1…(2;M2,B2)-.	A/C(NO)/B	5A,277VAC,cos ϕ=1,105℃	$1X10^5$
SJE-..-1…(3;4)-.	C(NO)	5A,277VAC,cos ϕ=1,105℃	$3X10^4$
UL 60947-4-1			
SJE	A/C(NO)	5A,277VAC, 85℃	$1X10^5$
SJE	A/C(NO)	1/6 hp, 277 VAC, 85℃	$1X10^5$
SJE	A/C(NO)	TV-3, 120 VAC, 40℃	$2.5X10^4$
SJE	B(NC)	5A, 277 VAC, 105℃	$1X10^5$
GB/T 21711.1-2023			
SJE	A/C(NO)	5A,277VAC,105℃	$2X10^4$
SJE	B(NC)	5A,277VAC,105℃	$2X10^4$
Mechanical endurance			$≥1x10^7$

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°C

Coil Data(continued)

Coil versions, DC coil

Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω（1±10%）	mvv
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°C

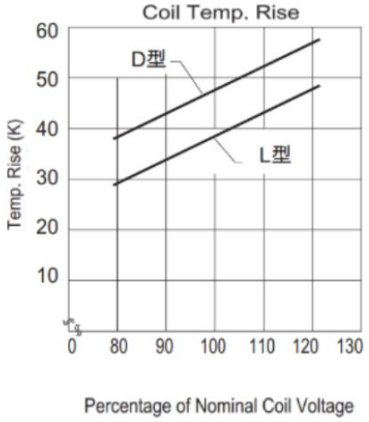
Insulation Data

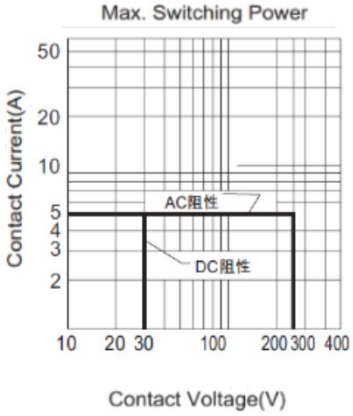
Initial dielectric strength	
between open contacts	1000VAC
between contact and coil	4000VAC
Clearance/Creepage	
between contact and coil（Clearance）	≥3.0mm(actual)
between contact and coil（Creepage）	≥4.5mm(actual)
Material group of insulation parts	IIIa
Tracking index of relay	PTI 175V/PTI 250V

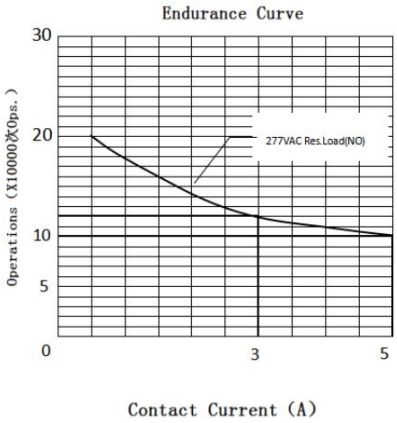
Other Data

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°C/5s
Packaging/unit	tube, tray

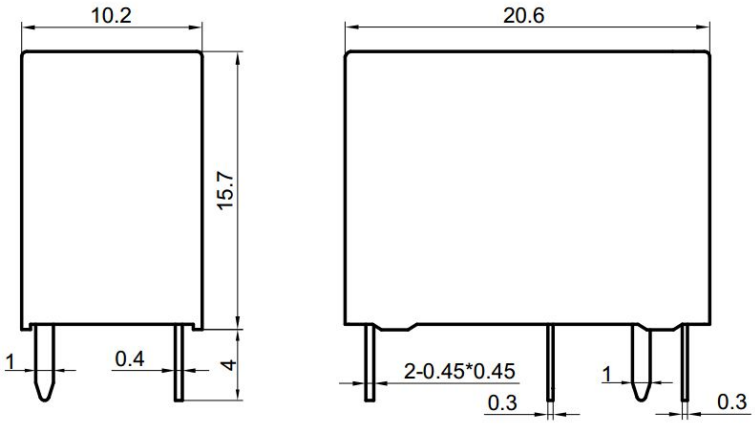


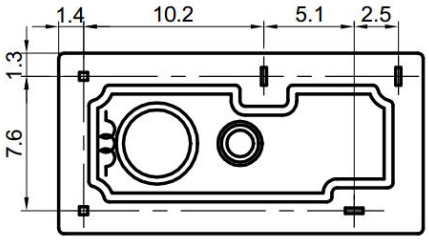




Note:
(1) Test conditions: room temperature, flux-proof product, resistive load, 1s on, 9s off.
(2)The above curves are for reference only, and the final result is subject to the experiment.

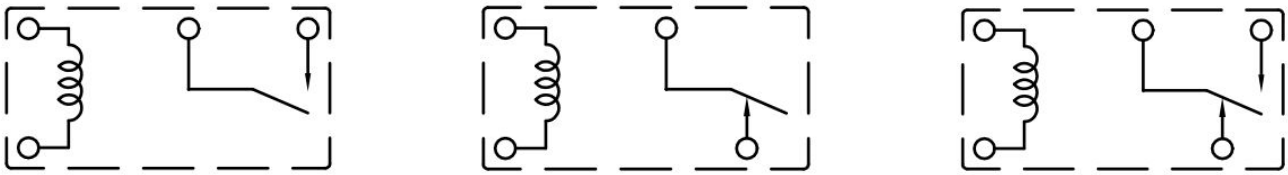
Dimensions





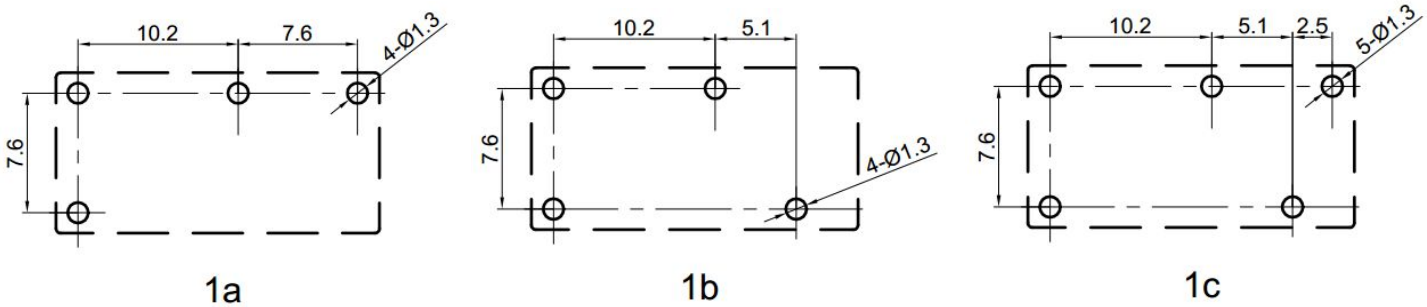
Bottom view

Wiring Diagrams



1a 1b 1c

PCB Layouts（bottom view）



1a 1b 1c

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

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

Product Code Structure

SJE	-S	-1	12	D	M		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- $AgSnO_2$, 2 & 4-AgNi

Load Capacity： Nil - Standard

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_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.

(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-112DM relay SJE, Flux-proof, rated DC voltage 12V, coil power 0.45W, 1NO, and contact material $AgSnO_2$.

SJE-S-112D4 relay SJE, Flux-proof, rated DC voltage 12V, coil power 0.45W, 1CO, 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.