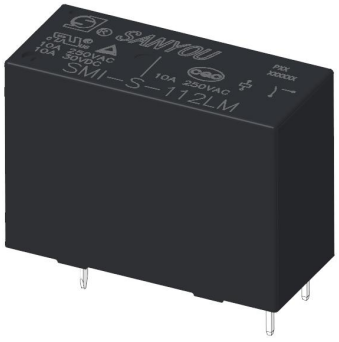
Features:

- 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.): R50143452
CQC (File No.): CQC07001018779, CQC22002367721
VDE (File No.): 40034054

Contact Data

Contact arrangement	1/2form C(CO)or 1/2form A(NO)
Rated voltage	250VAC
Max.switching voltage	277VAC
Rated current	10A/5A
Min. recommended contact load	1A, 6VDC
Breaking capacity max.	2700VA/ 1385VA
Contact material	$AgSn0_2$
Frequency of operation	360 ops./h
Operate/release time max.	15ms/5ms
Electrical endurance	See electrical endurance graph

Contact ratings

Type	Contact	Load	Cycles
IEC 61810			
SMI-1P(0.54W)	A/C(NO)	10A,277VAC,cos ϕ=1,105℃	$1X10^5$
SMI-2P(0.54W)	A/C(NO)	5A,277VAC,cos ϕ=1,105℃	$1X10^5$
SMI-1P(0.72W)	A/C(NO)	10A,277VAC,cos ϕ=1,95℃	$1X10^5$
SMI-2P(0.72W)	A/C(NO)	5A,277VAC,cos ϕ=1,95℃	$1X10^5$
UL 60947-4-1			
SMI-1P	A/C(NO)	10A,250VAC,cos ϕ=1,85℃	$1X10^5$
SMI-1P	A/C(NO)	1/3 hp,125VAC,85℃	$3X10^4$
SMI-1P	A/C(NO)	TV-3,250VAC,40℃	$2.5X10^4$
SMI-2P	A/C(NO)	5A,250VAC,cos ϕ=1,85℃	$1X10^5$
SMI-2P	A/C(NO)	1/8 hp,125VAC,85℃	$3X10^4$
SMI-2P	A/C(NO)	TV-3,120VAC,40℃	$2.5X10^4$
GB/T 21711.1-2023			
SMI-1P	A/C(NO)	10A,250VAC,105℃	$2X10^4$
SMI-2P	A/C(NO)	5A,250VAC,105℃	$2X10^4$
EN 60730-1			
SMI-1P	A/C(NO)	10A,250VAC,85℃	$1X10^5$
SMI-2P	A/C(NO)	5A,250VAC,85℃	$1X10^5$
Mechanical endurance			$\geq 1x10^7$

Coil Data

Coil voltage range:	5 to 48VDC
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	≥0.5	46	540
6	≤4.5	≥0.6	67	540
9	≤6.75	≥0.9	150	540
12	≤9	≥1.2	270	540
18	≤13.5	≥1.8	600	540
24	≤18	≥2.4	1067	540
48	≤36	≥4.8	4267	540
5	≤3.75	≥0.5	35	720
6	≤4.5	≥0.6	50	720
9	≤6.75	≥0.9	113	720
12	≤9	≥1.2	200	720
18	≤13.5	≥1.8	450	720
24	≤18	≥2.4	800	720
48	≤35	≥4.8	3200	720

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

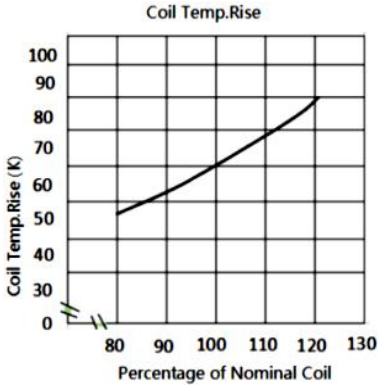
Insulation Data

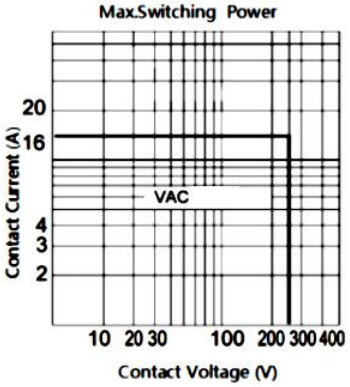
Initial dielectric strength	
between open contacts	1000VAC
between contact and coil	5000VAC
Clearance/Creepage	
between contact and coil（Clearance）	≥5.0mm(actual)
between contact and coil（Creepage）	≥9.0mm(actual)
Material group of insulation parts	IIIa
Tracking index of relay	PTI 175V/PTI 250V

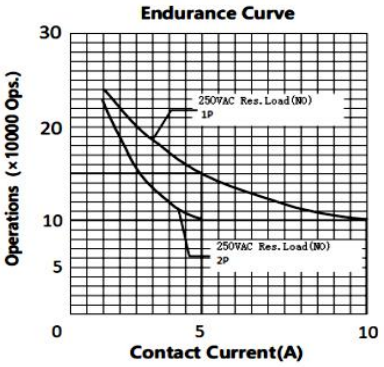
Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH,

Ambient temperature	-40℃ to +85℃,-40℃to +105℃
Category of environmental protection	
IEC 61810	RTII - flux proof RTIII - Sealed type washable
Weight	Approx. 13.0g
Resistance to soldering heat THT (IEC 60068-2-20)	260°C/5s
Packaging/unit	tube, tray



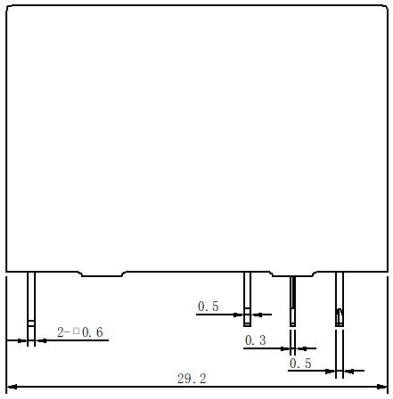


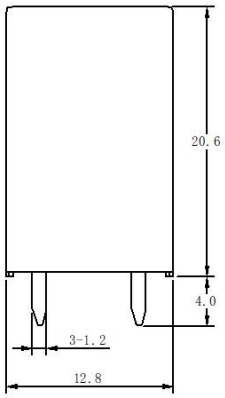


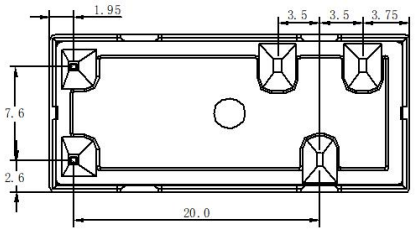
Note:
(1)Test conditions: room temperature, flux-proof product,Resistive load, 1s on:9s off.
(2)The above curves mare for reference only, and the final result is subject to the experiment.

Dimensions

1Pole

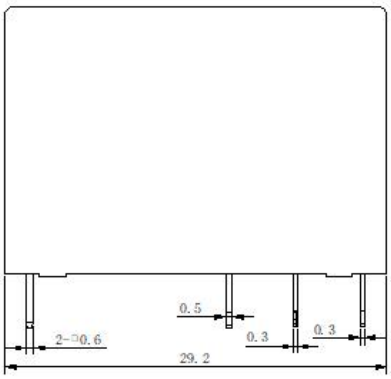


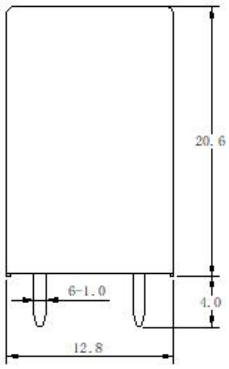


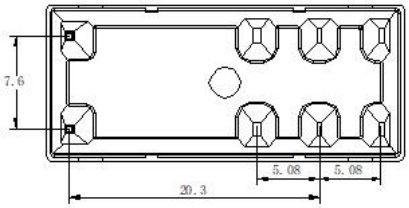


(bottom view)

2Pole





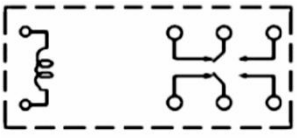


(bottom view)

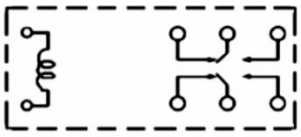
Wiring Diagrams（bottom view）

1a

1c

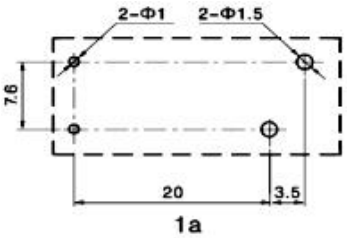


2c



2c

PCB Layouts（bottom view）



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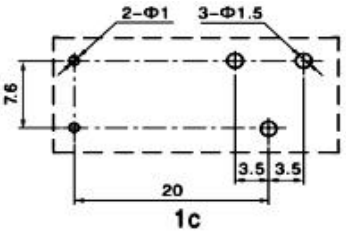
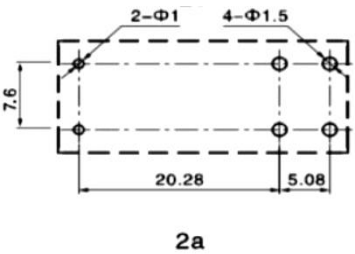
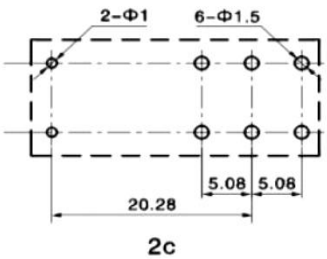


1c



2a



2c

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

SMI	-S	-1	12	L	M		-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:$AgSnO_2$

Contact Arrangement:
Nil-Form C
M-Form A

Coil Power:
L-0.54W, D-0.72W

Rated Coil Voltage(VDC):
05, 06, 09, 12, 18, 24, 48

Number of Poles:
1-1Pole, 2-2Pole

Protective Construction
S - Flux-proof SH- Sealed type washable

Type: SMI

(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.

Examples of Ordering Codes

SMI-S-112LM relay SMI-1P, Flux-proof, rated DC voltage 12V, coil power 0.54W, 1NO, and contact material $AgSnO_2$

SMI-S-112L relay SMI-1P, Flux-proof, rated DC voltage 12V, coil power 0.54W, 1CO, and contact material $AgSnO_2$

SMI-S-212LM relay SMI-2P, Flux-proof, rated DC voltage 12V, coil power 0.54W, 2NO, and contact material $AgSnO_2$

SMI-S-212L relay SMI-2P, Flux-proof, rated DC voltage 12V, coil power 0.54W, 2CO, and contact material $AgSnO_2$

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.

General Power Relay