Features:

- 10A high switching capability
- Size:29mm×12.8mm×26.2mm
- Contact gap:2.0mm
- Material compliance (Compliant with RoHS)

Approvals

UL (File No.) : E179745-1-30
TUV (File No.) : R50540860
CQC (File No.) : CQC22002336811

Contact Data

Contact arrangement	2 Form A / 2Form C
Contact material	$AgSnO_2$
Contact Resistance	100mΩ max(@ 6VDC 1A)
Contact Rating (resistive load)	10A 250VAC
Max. Contact Voltage	277VAC
Max. Contact Current	10A
Max. Breaking Capacity	2770VA
Min. recommended contact load	1A,6VDC
Operate Time (at nominal volt.)	≤15ms
Release Time (at nominal volt.)	≤15ms
Electrical endurance	NO: 10A,277VAC,resistive load, 85℃ ,1s on : 9s off,3×10^4ops. NC: 10A,277VAC,resistive load, 85℃ ,1s on : 9s off,1×10^4ops.

Note:
The above electrical endurance tests are completed with flux-proof product(with vent hole). The venting hole should be opened in electrical endurance test.

Coil Data

Nominal Voltage VDC	Max. Operate Voltage VDC	Min. Release Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance (1±10%) Ω	Coil Power W	Holding Voltage
5	3.75	0.25	5.5	18	1.4	50% to 100% Nomi. Volt. (at 23℃) 55% to 100% Nomi. Volt. (at 85℃)
6	4.5	0.3	6.6	26		
9	6.75	0.45	9.9	58		
12	9	0.6	13.2	102		
24	18	1.2	26.4	410		
48	36	2.4	52.8	1650		

Note:
(1) Do not apply the maximum voltage on the product continuously for more than 10min to avoid coil heating
(2) The coil holding voltage is the voltage applied to coil 200ms after the rated voltage
(3) Operation voltage of change over product ≤85% rated voltage, coil tolerance of (1±15%)

Insulation Data

Insulation resistance	1000MΩ (500VDC)
Initial dielectric strength	
between open contacts	2500VAC, 50/60Hz 1min.
between contact sets	3000VAC, 50/60Hz 1min.
between contact and coil	5000VAC, 50/60Hz 1min.

Other Data

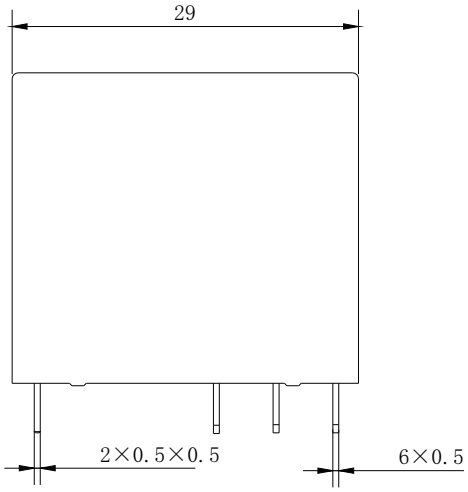
Material compliance	EU RoHS/ELV, China RoHS, REACH
Temperature rise	< 70K(After the coil is energized with rated voltage for 200ms,set the holding voltage to 60% of rated voltage,load current carrying 10A, @85℃)
Shock resistance	Functional 98m/s² Destructive 980m/s²
Vibration resistance	10Hz to 55Hz 1.0mm DA
Mechanical endurance	3×10^5ops
Ambient temperature	-40℃ to +85℃
Humidity	5% to 85%RH
Weight	Approx. 19g

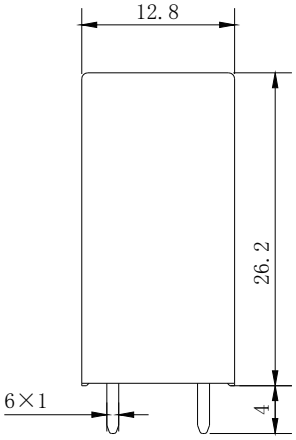
Note:
The above values are initial values

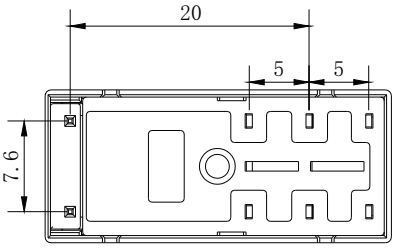
Safety certification load

Certification	File No.	Approved ratings
UL	E179745	10A 125/250/277VAC
TUV	R50540860	
CQC	CQC22002336811	

Dimensions



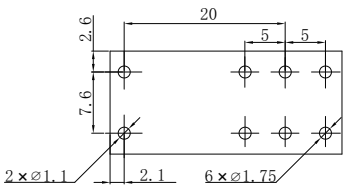




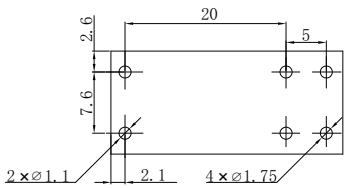
Unless otherwise specified:
If dimension < 1mm, tolerance: ±0.2mm;
If dimension 1~5mm, tolerance: ±0.3mm;
If dimension > 5mm, tolerance: ±0.4mm.

Note:
1. Terminal dimension is dimension before soldering.
2. Tolerance of P.C.B. layout: ±0.1mm.

PCB layout (bottom view)

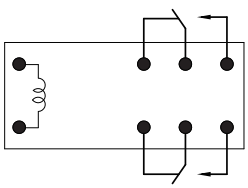


type C

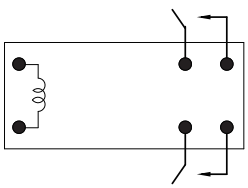


type A

Wiring Diagrams



type C



type A

Product Code Structure

SMIA	-S	-2	12	D	M	-XX	

Special parameters: Nil-Standard type,
Letters or digits-Special requirement

Contact material: $AgSnO_2$

Contact form: Nil-Form C , M-Form A

The power consumption of the coil:D-1.4W

Coil specification(VDC): 05, 06, 09, 12, 24, 48

Number of contact groups: 2-2 groups

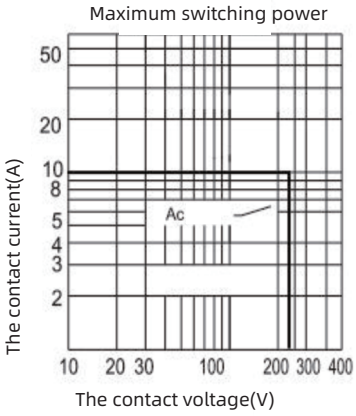
Protective construction: S- Flux type, SH- Waterproof

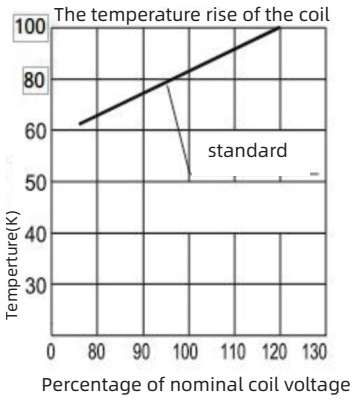
Basic model:SMIA

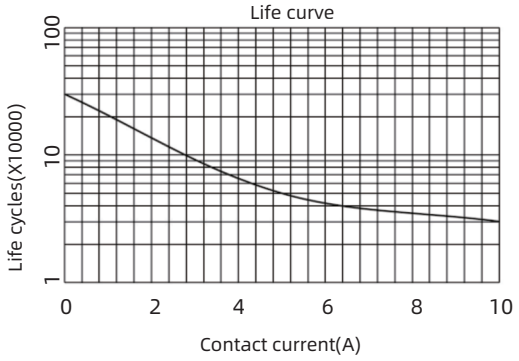
Note:

(1) Flux-proof type can not be used in polluted environment containing H_2S, SO_2, NO_2, dust and other pollutants.
(2) Water cleaning or surface process is not suggested after the flux-proofed relays are assembled on PCB..
(3) Customer special requirements (XX) shall be evaluated by our company and marked by specail suffix.

Performance curve



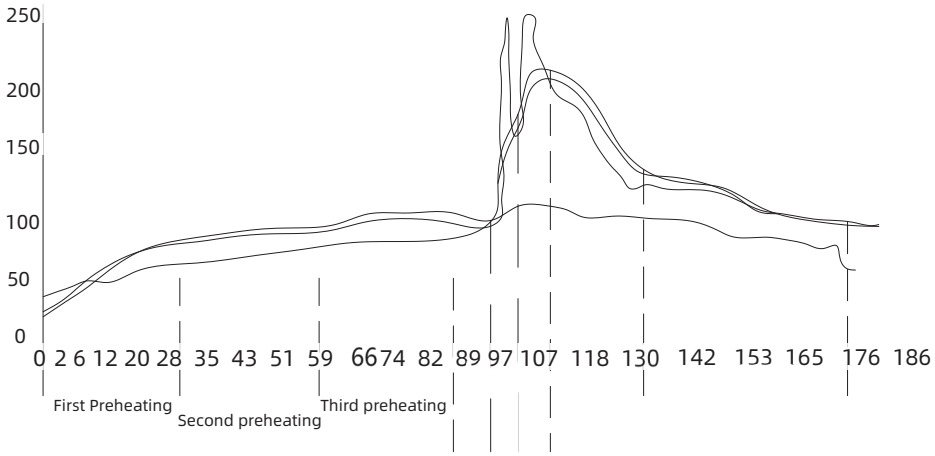




Welding conditions (recommended)

(1) Wave soldering installation conditions

In the case of automatic welding, refers to the following conditions. Pre-heating: within 150℃ (welding surface terminal) within 150 seconds.



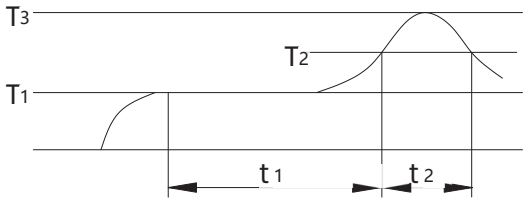
Wave soldering temperature profile

Recommended welding temperature and time: 240℃~260℃, 3s-5s. In addition, the impact on the relay may vary according to the type of substrate actually used.Therefore, check the actual substrate for confirmation.

(2)Reflow welding installation conditions (PIN-in-paste process)

Under the condition of mixed parts on the same substrate, the temperature rise of the relay largely depends on the heating method of reflow welding machine, so please set the temperature condition.

Make the temperature of the relay terminal welding part and the surface of the relay shell less than the above conditions, and then confirm with the actual machine in advance.

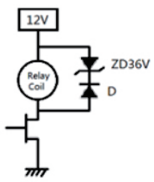


T_1 = 150℃~180℃
T_2 ≥ 230℃
T_3 ≥ 250℃
t_1 = 60S~120S
t_2 ≤ 30S

(3)Coil end parallel circuit (recommended)

Varistor (ZNR) could absorb the coil surge of relay that is recommended.

(Example)



Disclaimer

This product specification is for reference only, subject to change without prior notice.It is not possible for Sanyou to evaluate all the performance parameter requirements of relays in each specific application field, so customers should choose the suitable product according to the specific application conditions. If you have any questions, please contact us for more technical support, but the customer should be responsible for product selection.