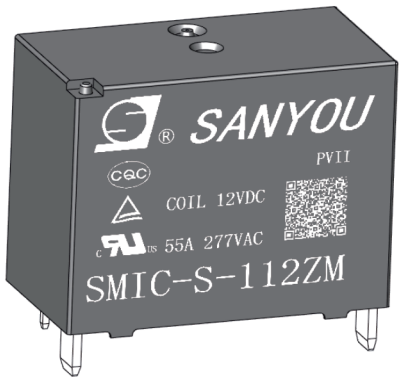
Features:

- 55A high switching capability
- Most suitable for solar photovoltaic power inverter, UPS
- Contact gap:2.0mm , 2.3mm (IEC62109-2-2011and VDE0126)
- Material compliance (Compliant with RoHS)



Approvals

UL (File No.) : E179745-1-31
TUV (File No.) : R50540861
CQC (File No.) : CQC22002336810

Contact Data

Contact arrangement	1 Form A
Contact material	AgSnO2
Contact Resistance	100mΩ max(@ 6VDC 20A)
Contact Rating (resistive load)	55A 250VAC
Max. Contact Voltage	277VAC
Max. Contact Current	55A
Max. Breaking Capacity	15235VA
Min. recommended contact load	1A,6VDC
Operate Time (at nominal volt.)	≤20ms
Release Time (at nominal volt.)	≤10ms
Electrical endurance	Making 20A, Carrying 55A , Breaking 20A,277VAC,resistive load,85℃ ,1s on : 9s off,5×10⁴ops.

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	16	1.6	50% to 100% Nomi. Volt. (at 23℃) 55% to 100% Nomi. Volt. (at 85℃)
6	4.5	0.3	6.6	23		
9	6.75	0.45	9.9	51		
12	9	0.6	13.2	90		
18	13.5	0.9	19.8	203		
24	18	1.2	26.4	360		

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) The contact gap 2.3mm product coil resistance ±15%

Insulation Data

Insulation resistance	1000MΩ (500VDC)
Initial dielectric strength	
between open contacts	2500VAC, 50/60Hz 1min.
between contact and coil	4500VAC, 50/60Hz 1min.

Other Data

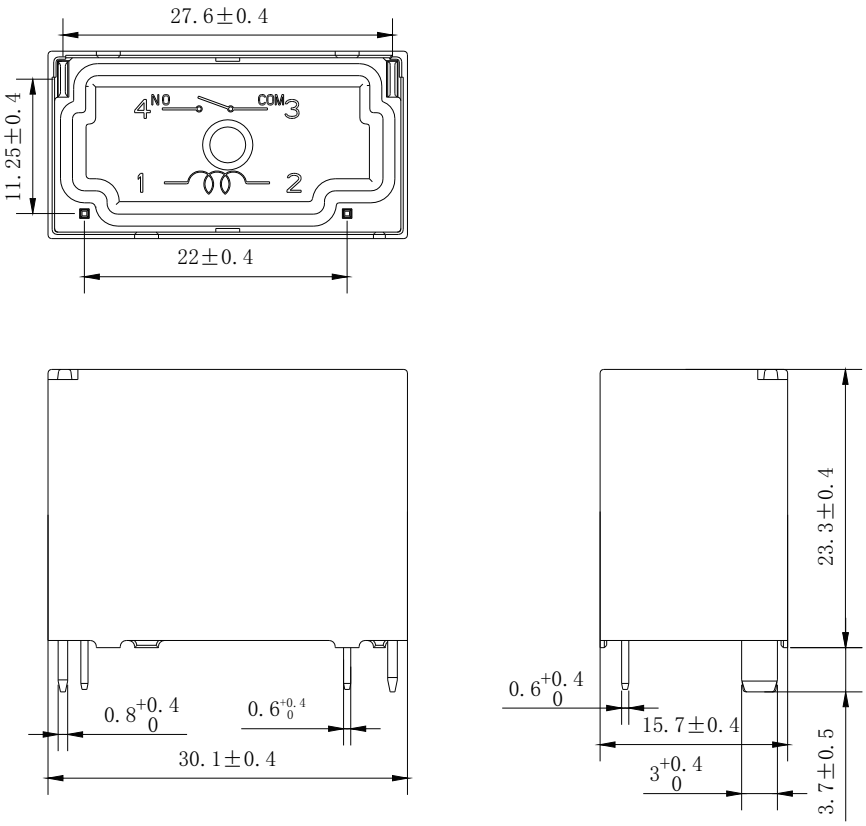
Material compliance	EU RoHS/ELV, China RoHS, REACH
Temperature rise	< 70K(After the coil is energized with rated voltage for 200ms,set the holding voltage to 60% of rated voltage,load current carrying 55A, @85℃)
Shock resistance	Functional 98m/s² Destructive 980m/s²
Vibration resistance	10Hz to 55Hz 1.0mm DA
Mechanical endurance	1×10⁵ops
Ambient temperature	-40℃ to +85℃
Humidity	5% to 85%RH
Weight	Approx. 20g
Impulse withstand voltage between contact and coil	AC10,000V 1.2/50μs

Note:
The above values are initial values

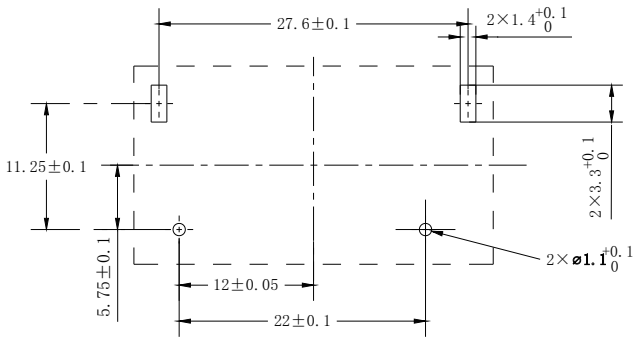
Safety certification load

Certification	File No.	Approved ratings
UL	E179745	55A 125/250/277VAC
TUV	R50540861	
CQC	CQC22002336810	

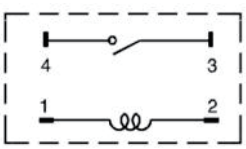
Dimensions



PCB layout (bottom view)



Wiring Diagrams



Product Code Structure

SMIC	-S	-1	12	Z	M		-XX	

Special parameters: Nil-Standard type, 1-Contact gap 2.3mm

Contact material: Nil-$AgSnO_2$

Contact form:M-Form A

Load current:Z-55A

Coil specification(VDC): 05, 06, 09, 12, 18, 24

Number of contact groups: 1-1 groups

Protective construction: S- Flux type, SH- Waterproof

Basic model:SMIC

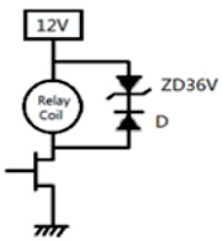
Note:

(1) Flux-proof type can not be used in polluted environment containing H_2S, $S0_2$, $N0_2$, 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.

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.