

Features:

- High contact capacity:90A contact switching capability.
- The coil holding voltage can be reduced to 50~60% of the rated coil voltage to achieve energy saving.
- A set of normally open contacts with contact spacing>4mm.
- In line with European photovoltaic standards IEC62109、VDE0126.



Approvals

UL (File No.) : E179745

TUV (File No.) : R50632515

CQC (File No.) : CQC24002433093

Contact Data

Contact arrangement	1 Form A
Contact material	AgSnO ₂
Contact Resistance	10mΩ MAX.(6VDC 20A)
Contact Rating (resistive load)	90A 1000VAC
Max. Contact Voltage	1000VAC
Max. Contact Current	100A
Max. Breaking Capacity	100,000VA
Min. recommended contact load	100mA 6VDC
Operate Time (at nominal volt.)	≤30ms
Release Time (at nominal volt.)	≤10ms
Electrical endurance	(1) Making 30A, Carrying 100A , Breaking 30A,1000VAC, resistiveload,85℃, 1s on : 9s off,3×10 ⁴ ops. (2) 90A,320VAC, resistiveload, 85℃,1s on : 9s off,1×10 ³ ops.

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
12	9	0.6	13.2	75	1.92	40% to 100% Nomi. Volt. (at 23℃)
24	18	1.2	26.4	300		50% to 60% Nomi. Volt. (at 85℃)

Note:

- (1) The relay applies full coil voltage to maintain 200ms.
- (2) Coil holding voltage is the coil excitation voltage maintained after 200ms, down to 50~60% of the rated coil voltage.
- (3) The relay coil is not allowed to apply more than the upper limit of the holding voltage for a long time to prevent the relay from overheating and burning out.

Insulation Data

Insulation resistance	1000MΩ (500VDC)
Initial dielectric strength	
between contact sets	2000VAC, 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 90A, @85℃)
Shock resistance	Functional 98m/s ² Destructive 980m/s ²
Vibration resistance	10Hz to 55Hz 1.5mm DA
Mechanical endurance	1×10 ⁶ ops
Ambient temperature	-40℃ to +85℃
Humidity	5% to 85%RH
Termination	PCB
Weight	Approx. 82g

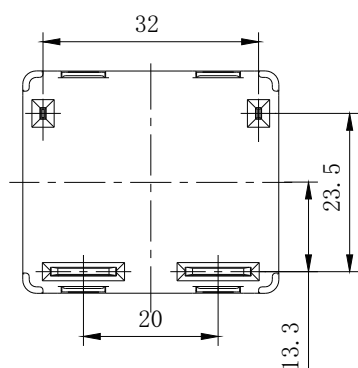
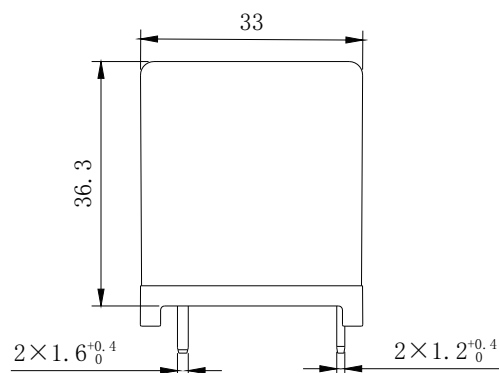
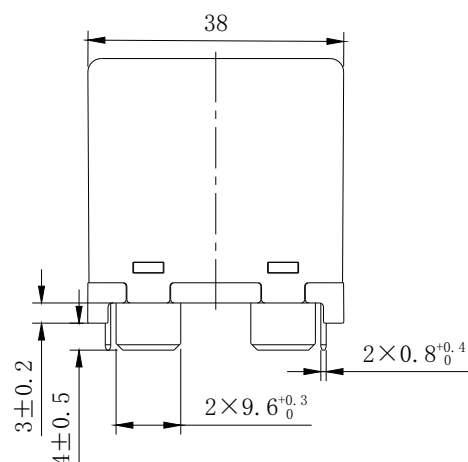
Note:

The above values are initial values

Safety certification load

Certification	File No.	Approved ratings
UL	E179745	320VAC 90A 1000VAC 30A/100A/30A
TUV	R50632515	
CQC	CQC24002433093	

Dimensions



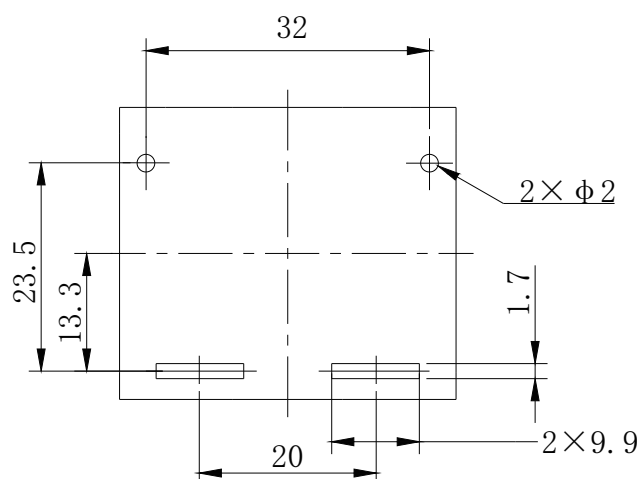
Unless otherwise specified:

If dimension < 1mm, tolerance: $\pm 0.2\text{mm}$;

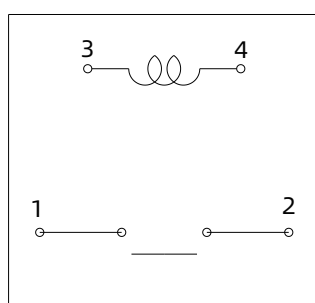
If dimension 1~5mm, tolerance: $\pm 0.3\text{mm}$;

If dimension > 5mm, tolerance: $\pm 0.4\text{mm}$.

Wiring diagram (bottom view)



Wiring Diagrams



Product Code Structure

SPV	90	- M	12	1		
						Special parameters: Nil-Standard type, Letters or digits-Special requirement
						Contact material: 1-AgSnO2
						Coil specification: 12, 24 (VDC)
						Contact form: M-Form A
						Load current: 90-90A
						Basic model: SPV

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.