



Features:

- High contact capacity: 150A of ability to switch contacts.
- Coil holding voltage can be reduced to 50~55%V of coil rated voltage to achieve energy saving effect.
- A group of normally open contact, contact gap > 3.0mm.
- Meet European pv standards IEC62109、VDE0126 。

Safety Approval

UL, C-UL File No: E190598

TUV File No: R50442051

CQC File No: CQC19002216643

Contact Capacity

Model	150A
Nominal switching capacity (res. load)	High operating current 40A, Load current 150A, Cut off capacity 40A/240VAC, On 1s/O ff9s, at 85°C, 30K ops
	High operating current 30A, Load current 150A, Cut off capacity 30A/400VAC, On 1s/O ff9s, at 85°C, 30K ops
	switching: 3000number(60VDC,100A) On 1s/O ff9s, at 23.5°C,
Max. switching current	150A
Max. switching voltage	690VAC
Max. switching power	103,500VA

Characteristic Data

Contact arrangement	Silver alloy	
Contact resistance	50mv/at 10A (max) Voltage drop.	
Operate time (at nominal volt.)	30msec. Max.	
Release time (at nominal volt.)	10msec. Max.	
Insulation resistance	1,000MΩ Min.(DC500V)	
Initial dielectric strength	Between open contacts: AC2,000V, 50/60Hz 1min.	
	Between coil and contact: AC5,000V, 50/60Hz 1min	
Vibration resistance	Functional	10 ~ 55Hz at double amplitude of 1.5 mm
	Destructive	10 ~ 55Hz at double amplitude of 1.5 mm
Shock resistance	Functional	100G Min.
	Destructive	10G Min.
Endurance	Mechanical (at 9000 ops./h)	1,000,000 cycles
Ambient temperature	-40°C ~ +85°C (no condensation)	
Unit weight	Approx. 155g	

Coil Data (at 20°C)

150A type

Nominal voltage (VDC)	Nominal operating current ±10% (mA)	Coil resistance ±10% (Ω)	Pick-up voltage (1) (Max.)	Drop-out voltage (Min.)	Keep voltage (2)	Nominal operating power
12	208.3	57.6	额定电压的 Nominal voltage 75 %	额定电压的 Nominal voltage 5 %	额定电压的 Nominal voltage 50~55 %	2.5W
24	104.2	230.4				

Comment:

- (1) Relays apply full coil voltage to maintain 200ms
- (2) The coil holding voltage is 50~55% of the rated coil voltage after the coil excitation voltage is maintained for 200ms
- (3) Relay coils are not allowed to exceed the upper limit of the holding voltage for long periods of time to prevent the relay from overheating and burning out

Safety Approval Ratings

Approval	TUV	CQC	UL/CUL
File No.	R50442051	CQC19002216643	E190598
Approved ratings	SPV150: Making 40A/240VAC, Carrying 150A/240VAC Breaking 40A/240VAC T85°C Making 30A/690VAC, Carrying 150A/690VAC Breaking 30A/690VAC T85°C	SPV150: Making 40A/240VAC, Carrying 150A/240VAC breaking 40A/240VAC T85°C Making 30A/690VAC, Carrying 150A/690VAC Breaking 30A/690VAC T85°C	SPV150: Making 40A/240VAC, Carrying 150A/240VAC Breaking 40A/240VAC T85°C Making 30A/690VAC, Carrying 150A/690VAC Breaking 30A/690VAC T85°C

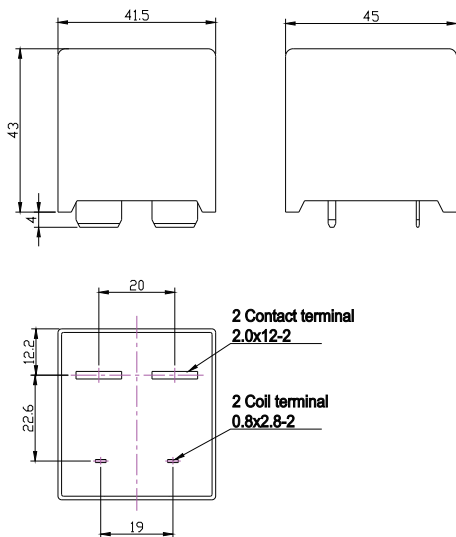
Ordering Information

Nomenclature	
SPV 150- S - M	□ □ □ □
Special Parameter: Letter or number:	Nil-Standard type Special requirement
Installation dimensions:	Nil-standard type H-H type
Contact material:	1-AgSnO2
The coil voltage:	12: 12VDC 24: 24VDC
Contact form:	M-Form A
Form of protection:	S-Flux proofed SH-Sealed type washable
The load type:	150-150A
Type designation:	SPV

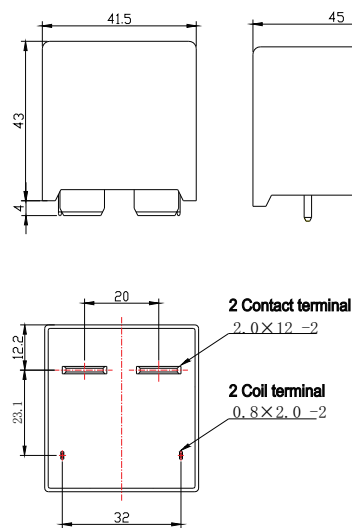
Customer special feature number 1 indicates load voltage 120VDC, (magnetic blowing arc extinguishing)

Outline Dimensions

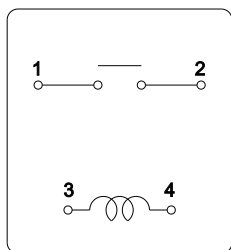
150A Standard type



150A H type



Wiring diagram



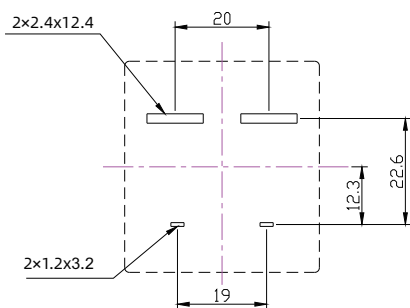
Unless otherwise specified :

- If dimension < 1mm, tolerance: $\pm 0.2\text{mm}$;
- If dimension 1~5mm, tolerance : $\pm 0.3\text{mm}$;
- If dimension > 5mm, tolerance: $\pm 0.4\text{mm}$.

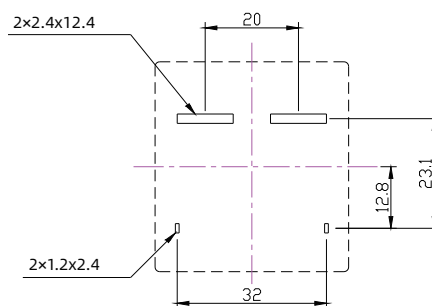
Note: 1. Extended terminal dimension is dimension before soldering.
2. Tolerance of P.C.B. layout: $\pm 0.1\text{mm}$.

PCB board bore hole drawing

150A Standard type



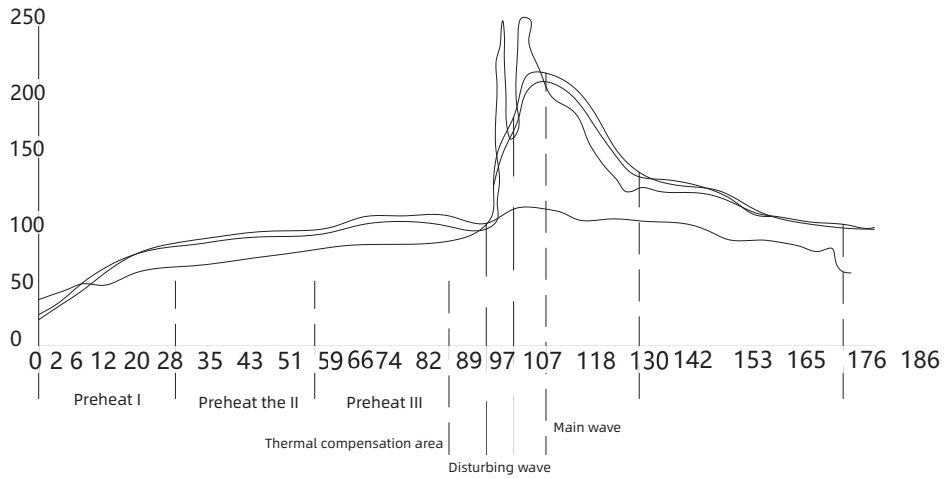
150A H type



Matters needing attention:

(1) Wave soldering installation conditions

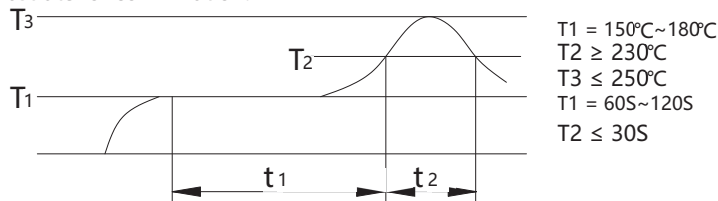
In the case of automatic welding, observe the following conditions. Pre-heating: within 150°C (welding surface terminal) within 150 seconds.



Wave soldering temperature profile

Recommended welding temperature and time: 240°C~260°C, 3s-5s. In addition, the impact on the relay may vary according to the type of substrate actually use

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.

Disclaimer:

This datasheet is the customers' reference. All the specification are subject to change without notice.

We could not evaluate all the performance and all the parameters for every possible application. Thus the user should in a right position to choose the suitable product for their own application. If there is any query, please contact Sanyou for the technical service. However it is the user's responsibility to determine which product should be used only. ©

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