

Feature

- 150 amps continuous carry, product miniaturization and lightweight
- Max. Load current capacity: 5000A
- 1500 amps interrupte under extreme condition
- Hermetically sealed with hydrogen gas, the arc is not exposed. Be able to use in explosive & harsh environments without oxidation or contamination of contacts
- There is no polarity requirement for load wiring and no polarity requirement for coil drive

Contact Data

Item	Specification
Contact arrangement	1 Form A
Rated current	150A
Contact resistance	≤0.5mΩ (@6V 20A)
Min.Switching load	12VDC 1A
Max. Switching voltage	1000VDC
Max. Breaking current	1500A, (800VDC, 1 time)
Max. Short Circuit Current	No smoke, no fire at 5000A(5ms)
Electrical endurance ⁽¹⁾	Resistive load
	Switch: 500VDC, 150A 3000 cycles
	Switch: 800VDC, 150A 1000 cycles
	Switch: 1000VDC, 150A 500 cycles
Capacitive load	7.0×10 ⁴ cycles 50VDC, τ=1ms inrush 180A

Parameters

Item	Specification	
Mechanical endurance	2×10 ⁵ cycle	
Insulation resistance	1000MΩ(1000VDC)	
Dielectric strength	Between open contacts	4000VAC 1min 1mA
	Between contact and coil	4000VAC 1min 1mA
Operation time (at rated coil voltage)	≤30ms	
Release time (at rated coil voltage)	≤10ms	
Shock resistance	Functional	Closed State: 490m/s ² (50G) Disconnected state: 98m/s ² (10G)
	Destructive	490m/s ² (50G)
Vibration resistance	10Hz~500Hz 49m/s ² (5G)	
Ambient temperature	-40°C~+85°C	
Ambient humidity	5%~85% RH	
Weight	325g	
External dimension	81×39×70	

CoilData

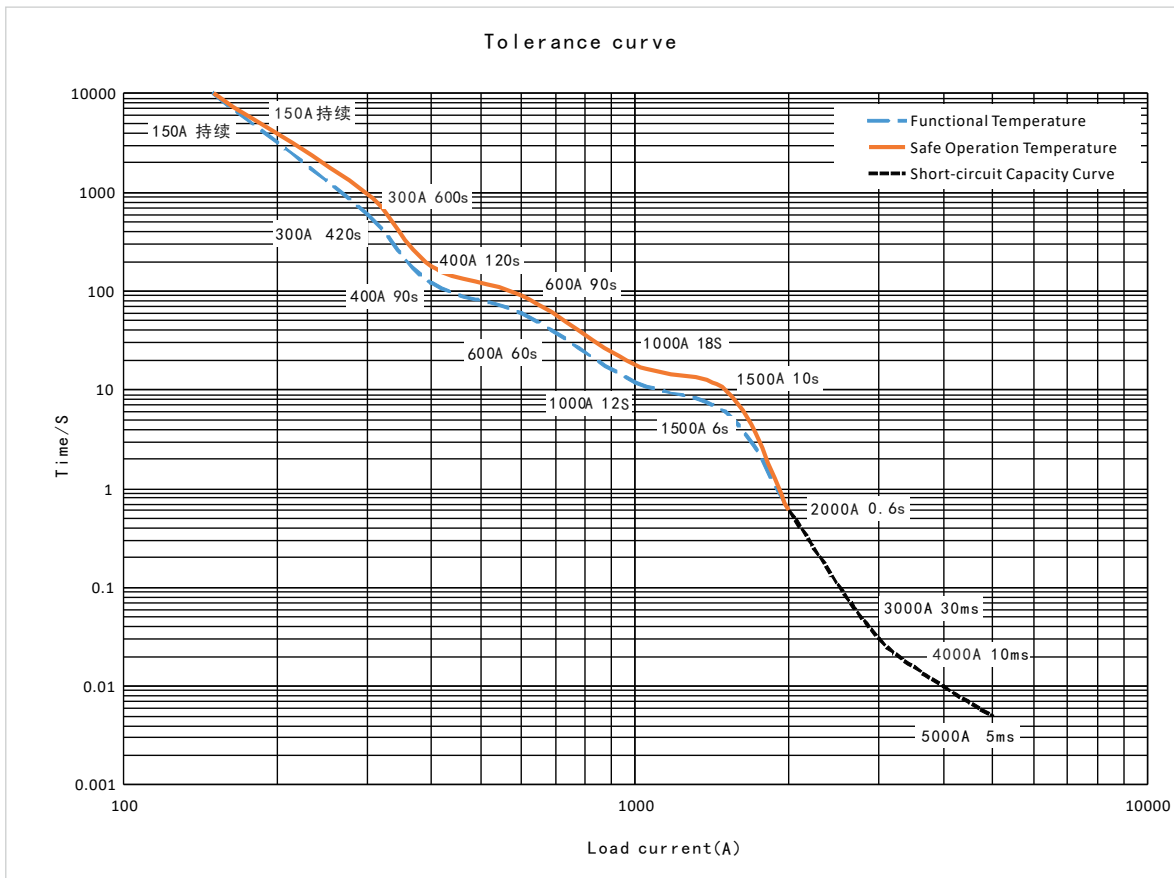
Rated voltage (VDC)	Operation voltage (VDC)	Max. voltage (VDC)	Pick-up voltage (VDC)	Drop-out voltage (VDC)	Coil resistance ($\pm 10\%$)(Ω)	Operating power (inrush, W)	Operating power (stable, W)
12	12	16	≤ 9	≥ 1.0	24	6	6
24	24	32	≤ 18	≥ 2.0	96	6	6

NOTES:

(1) Ambient temperature: 23°C, L/R \leq 1ms., on:off/0.6s: 5.4s;

(2) Other types of rated voltage, please contact us.

Reference date



NOTE:

- (1) The upper limit of safety temperature is 180°C, and the upper limit of functional temperature is 150°C;
- (2) If the product needs to work for a long time, it is recommended that the product temperature should not exceed 150°C. If the safety temperature exceeds 180°C, the relay may be ignited.
- (3) Ambient temperature is 85°C, wire cross sectional area $\geq 50\text{mm}^2$; (Test conditions for this curve)
- (4) Relay load current over 2000A is short circuit resistance performance. The relay can guarantee no fire or explosion within this curve. When the current is greater than 3000A, the relay contact may be repulsed by a large current.

Ordering Information

Nomenclature

SEL 150 - M 2

Customer special code Nil:
No customer special requirement

Numbers or Letters:
Customer special requirement

Load connection type 2: internal thread

Coil voltage 12: 12VDC
24: 24VDC

Contact arrangement M: 1 Form A

Voltage rating 1000: 1000VDC
800: 800VDC
500: 500VDC

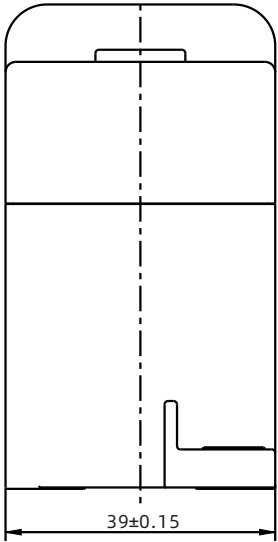
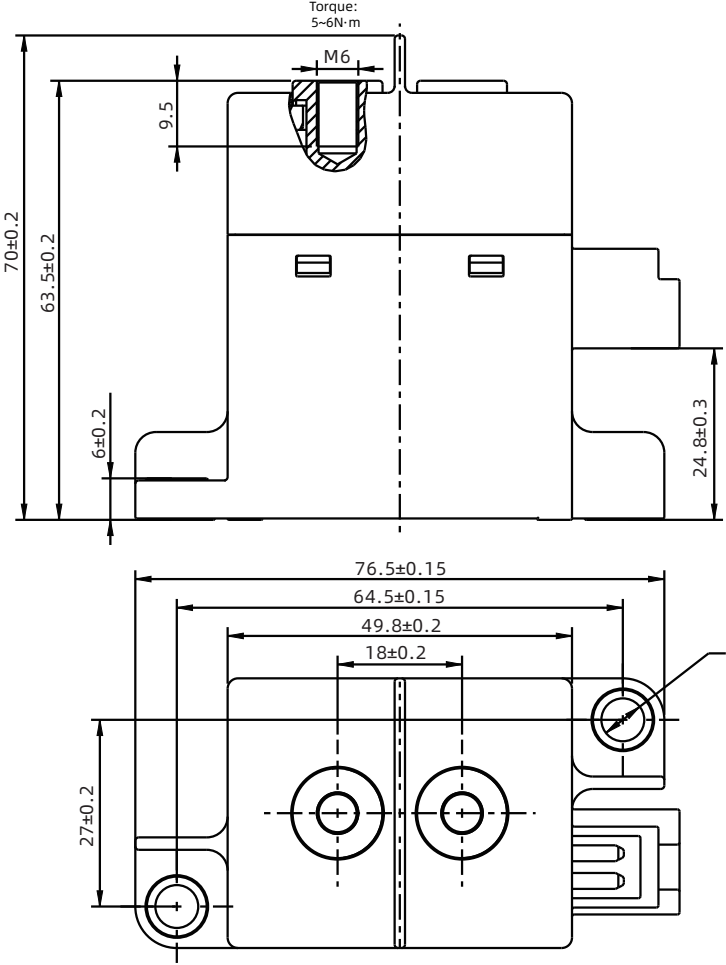
Installation V: Vertical installation
H: Horizontally

Load current 150: 150A

Type designation SEL

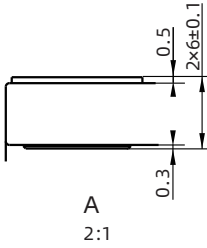
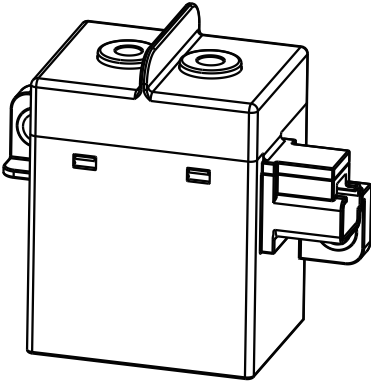
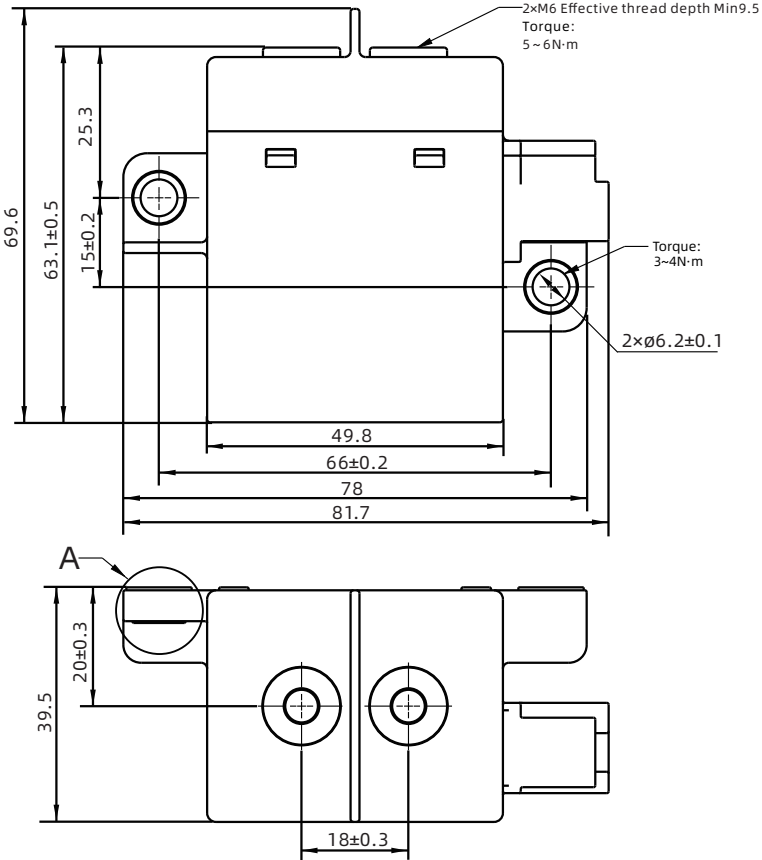
Packing style: 45 pcs / box

The type of vertical:



Size	tolerance
Less than 10mm:	$\pm 0.3 \text{ mm}$
10 to 50mm:	$\pm 0.5 \text{ mm}$
More than 50mm:	$\pm 0.8 \text{ mm}$

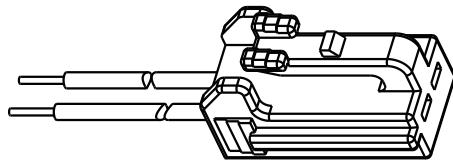
The type of horizontally:



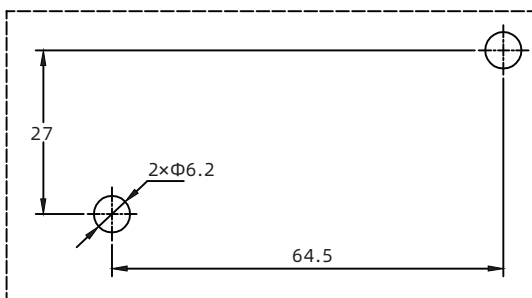
Size	tolerance
Less than 10mm:	$\pm 0.3 \text{ mm}$
10 to 50mm:	$\pm 0.5 \text{ mm}$
More than 50mm:	$\pm 0.8 \text{ mm}$

Coil Connection Type

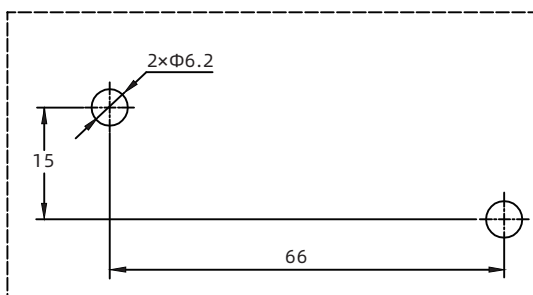
1 Connectors: Yazaki: 7283-1020 or Tianhai:0435308(Suggested connector will not be provided by Sanyou and customer should buy it themself.)



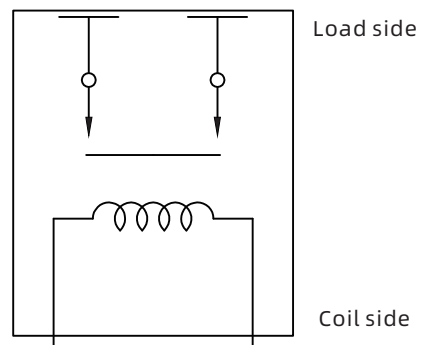
The type of vertical



The type of horizontally



Schematic Diagram



Note: No polarity on load side and coil side

NOTES:**● Mounting Precautions**

1. By principle, please do not use it when the relay drops on the ground.
2. It's forbidden to use the product at the temperature beyond $-40\text{ }^{\circ}\text{C} \sim 85\text{ }^{\circ}\text{C}$ for a long time as the relay contacts are sealed and filled with gas and when the contact temperature changes, the gas will break the ceramic sealed chamber.
3. When installing the relay, always use washers to prevent the screws from loosening.
4. Tighten each screw with given torque as suggested. Exceeding the maximum torque may result in screw loose, breakage, etc. When using screws, please make sure the washers are strong enough to prevent the case from deformation.
5. Avoid mounting the relay near strong magnetic fields or a heat generator.

● Precautions for connection of the load terminals

1. Please avoid excessive load applied to the product. If the product exceeds the rated range, the performance of the product cannot be guaranteed.
2. Please treat the relay as a product with limited life and replace it when necessary.
3. Be careful that foreign particles or oil attach on the terminals, which will lead to abnormal heating on terminals. And below connectors or conductors with sizes are suggested.

10A	Min. 2mm^2 nominal cross-sectional area
20A	Min. 3mm^2 nominal cross-sectional area
40A	Min. 10mm^2 nominal cross-sectional area
60A	Min. 15mm^2 nominal cross-sectional area
100A	Min. 35mm^2 nominal cross-sectional area
150A	Min. 45mm^2 nominal cross-sectional area
200A	Min. 60mm^2 nominal cross-sectional area
250A	Min. 80mm^2 nominal cross-sectional area
300A	Min. 100mm^2 nominal cross-sectional area
400A	Min. 200mm^2 nominal cross-sectional area

● Precautions for connection of the coil

1. Please note that when using a diode, the release time will increase and the switching capacity may decrease. We recommend installing a surge protector varistor.
2. The pick-up voltage and drop-out voltage will change with ambient temperature, please use rated voltage to make sure the relay operate reliably. Don't exceed maximum coil voltage.
3. Please do not continuously apply maximum voltage on the coil.
4. The product with PWM, recommend using increase rapidly (phase step power supply mode) to drive the coil.
5. The product with PWM, after 0.1s the coil current automatic switch, please do not repeat switch the coil voltage at $< 0.1\text{s}$, otherwise the Product performance can be not guarantee.

Disclaimer:

1. This datasheet is for customer's reference only. Sanyou had tried its best to ensure the information accuracy but impossible to be avoided all the incorrects. The product specification and parameter might be change due to the product improvement. All of specification are subject to change without notice, please refer to the specification and samples.

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

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