三友继电器
® SANYOU RELAYS
Relays for advanced technology

High Voltage DC Relay **SEL300B**

Feature

- 300 amps continuous carry,product miniaturization and lightweight
- Max. Load current capacity:8000A
- 2000 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		250A	
Contact resistance		≤0.5mΩ（@6V 20A）	
Min.Switching load		12VDC 1A	
Max. Switching voltage		1000VDC	
Max. Breaking current		2000A，(800VDC，1 time)	
Max. Short Circuit Current		No smoke,no fire at 8000A(5ms)	
Electrical endurance(1)		500V type	800V type
	Resistive load	500VDC,300A 1000 cycles	800VDC,300A 500cycles
	Capacitive load	7.0×10^4cycles 50VDC,τ=1ms inrush 180A	7.0×10^4cycles 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
0peration time (at rated coil voltage)		≤30ms
Release time (at rated coil voltage)		≤10ms
Shock resistance	Functional	Closed State：490m/s² (50G) Disconnected state：98m/s² (10G)
	Destructive	490m/s² (50G)
Vibration resistance		10Hz~500Hz 49m/s² (5G)
Ambient temperature		-40℃~+85℃
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 (±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

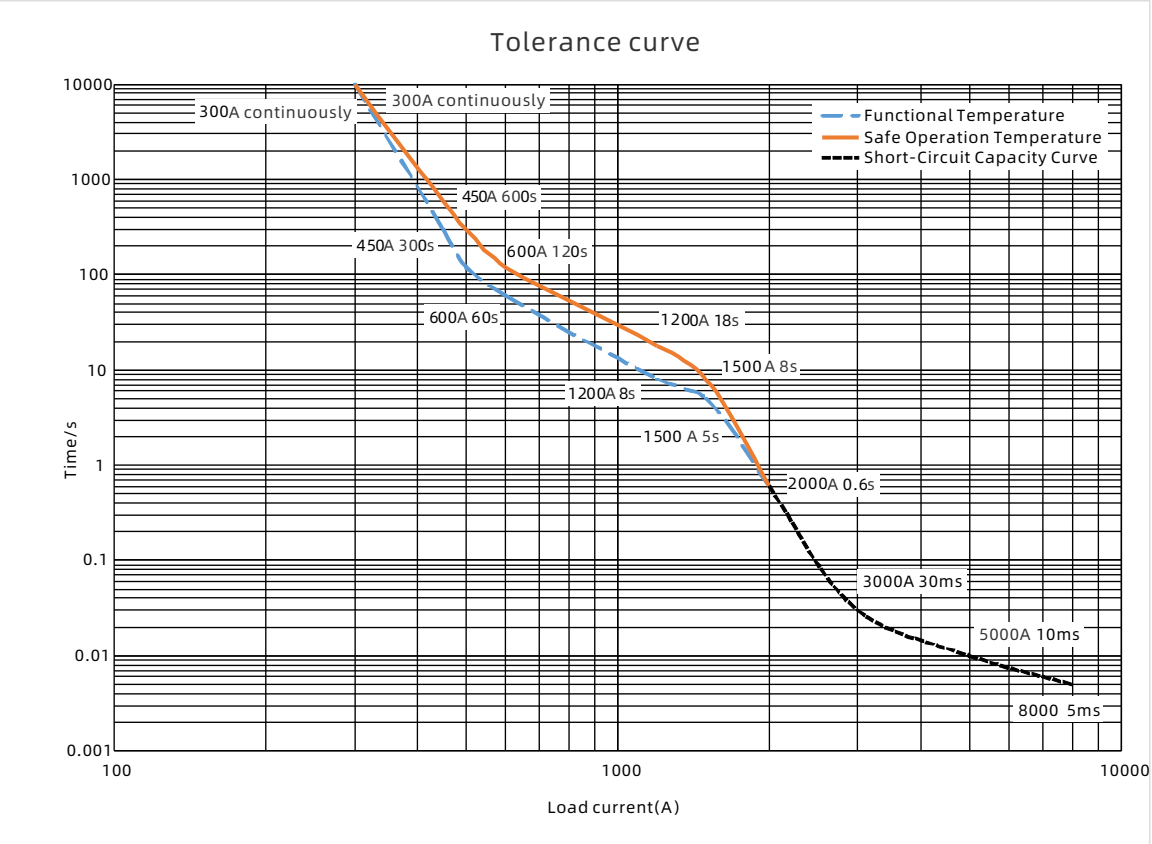
NOTES:

(1) Ambient temperature:23℃, L/R≤1ms., on:off/0.6s: 5.4s;

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

Reference date

Load current (A)



NOTE:

(1)The upper limit of safety temperature is 180℃ , and the upper limit of functional temperature is 150℃;

(2)If the product needs to work for a long time, it is recommended that the product temperature should not exceed 150℃. If the safety temperature exceeds 180℃, the relay may be ignited.

(3)Ambient temperature is 85℃, wire cross sectional area ≥185mm²; (Test conditions for this curve)

(4)Relay load current ovre 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

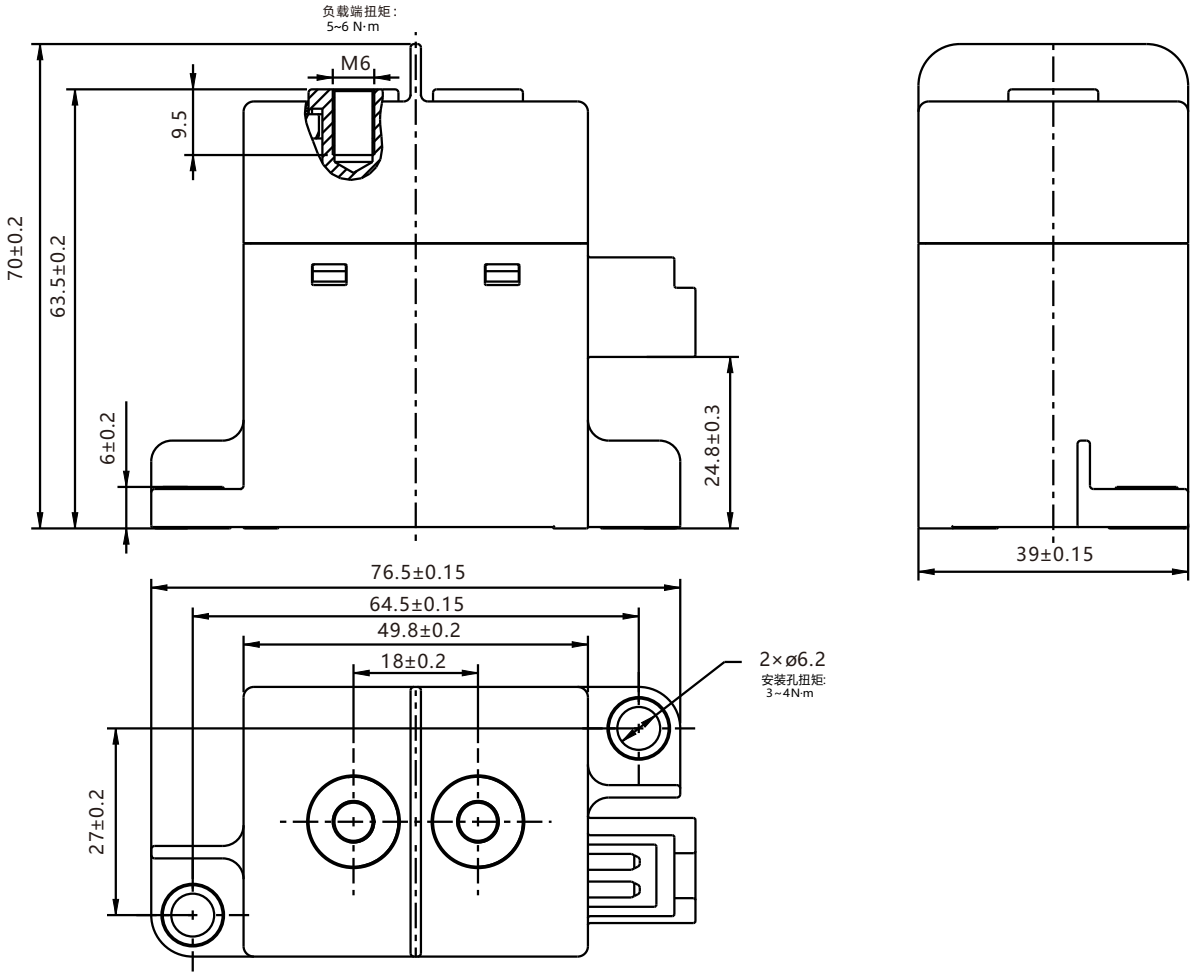
Nomenclature

SEL 300B - V □ M □ 2 □

Customer special code	Nil: No customer special requirement Numbers or Letters: Customer special requirement
Load connection type	2: internai thread
Coil voltage	12: 12VDC 24: 24VDC
Contact arrangement	M: 1 Form A
Voltage rating	800: 800VDC 500: 500VDC
Installation	V: Vertical installation
Load current	300B: 300A
Type designation	SEL

Packing style:45pcs / box

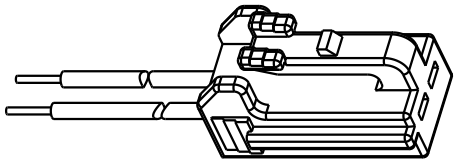
Outline Dimnsions



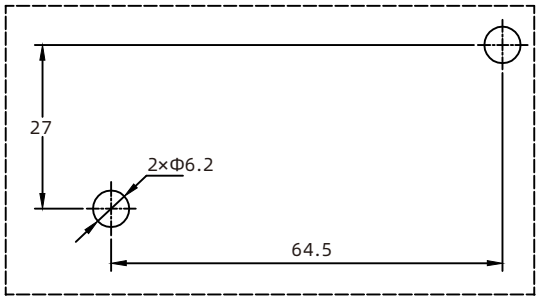
未注尺寸公差:
≤10mm时，公差为±0.3mm
10~50mm时，公差为±0.5mm
≥50mm时，公差为±0.8mm

Coil Connection Type

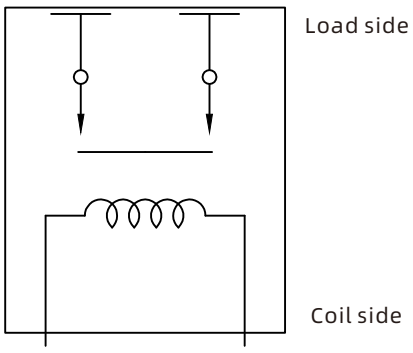
1 Connectors: Yazaki: 7283-1020 or Tianhai:0435308(Suggested connector will not be provided by Sanyou and customer should buy it themself.)



Installation Size Chart



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 ℃ ~ 85 ℃ 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 performanceof 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 < 0.1s, otherwise the Product performance can be not guarantee.

Disclaimer:

1.This datasheet is for customer’s reference only.Sanyou had tried its best toensure 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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