



### Feature

- 300 amps continuous carry,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.Contacts' part meet IP42 protection degree.
- RoHS compliant.

### Contact Data

Item		Information	
Contact arrangement		1 Form A contact	
Current rating		300A	
Contact resistance		≤0.5mΩ(@6V 20A)	
Min.Switching load		1A 12VDC	
Outgoing Mode		M8 External Thread	
		500V type	750V type
Max. Switching voltage		750VDC	900VDC
Max. Connecting current		2400A ( 500VDC,1 cycle )	2400A ( 750VDC,1 cycle )
Max. Breaking current		3000A ( 500VDC,1 cycle )	2000A ( 750VDC,1 cycle )
Max. Switching power		150KW	225KW
Electrical life <sup>(1)</sup>	Capacitive load	25,000cycles ( 22.5VDC,τ=1ms inrush400A , steady300A )	15,000次 ( 37.5VDC,τ=1ms inrush400A , steady300A )
	Resistive load	10,000cycles ( 500VDC 80A )	10,000cycles ( 750VDC 80A )
	Resistive load	1,000cycles ( 500VDC 300A ) 500cycles ( 500VDC -300A )	500cycles ( 750VDC 300A ) 100cycles ( 750VDC -300A )
Load current capacity <sup>(2)</sup>		300A : continuity	
		450A : 60min.	
		600A : 20min.	
		1200A : 30s	
		3000A : 0.6s	

#### NOTES :

( 1 ) Ambient temperature:23°C , L/R≤1ms.

( 2 ) Ambient temperature:23°C , 100mm<sup>2</sup> conductor.

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

### Parameters Table

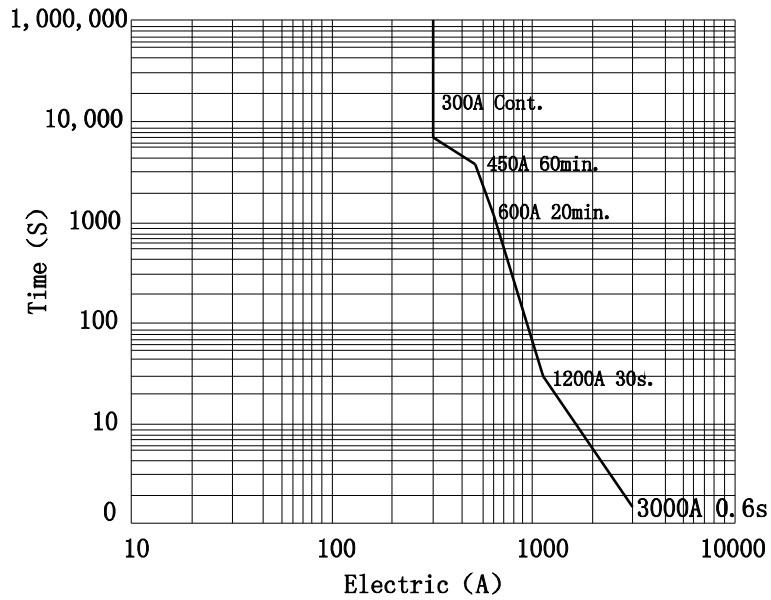
Item		Information
Mechanical life		5×10 <sup>5</sup> cycles
Insulation resistance		1000MΩ(500VDC)
Dielectric strength	Between open contacts	3000VAC 1min 10mA
	Between contact and coil	4000VAC 1min 10mA
Operate time (at rated coil voltage)		≤50ms
Release time (at rated coil voltage)		≤30ms
Shock resistance	Functional	98m/s <sup>2</sup> ( 10G )
	Destructive	490m/s <sup>2</sup> ( 50G )
Vibration resistance		10Hz~500Hz 49m/s <sup>2</sup> ( 5G )
Ambient temperature		-40°C~85°C
Ambient humidity		5%~85% RH
Weight		730g
External dimension		113.5×65×75.5

### Coil Data<sup>(3)</sup>

Model	12	24	48
Rated voltage ( VDC )	12	24	48
Max. voltage ( VDC )	16	32	64
Pick-up voltage ( VDC )	≤9	≤18	≤36
Drop-out voltage ( VDC )	≥1.0	≥2.0	≥4.0
Coil resistance(±10%)(Ω)	24	96	384
Operating power ( inrush , W )	6	6	6
Operating power ( stable , W )	6	6	6

Reference Data

Load capacity

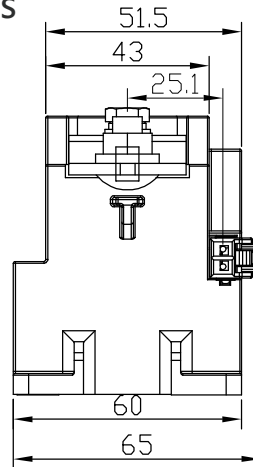
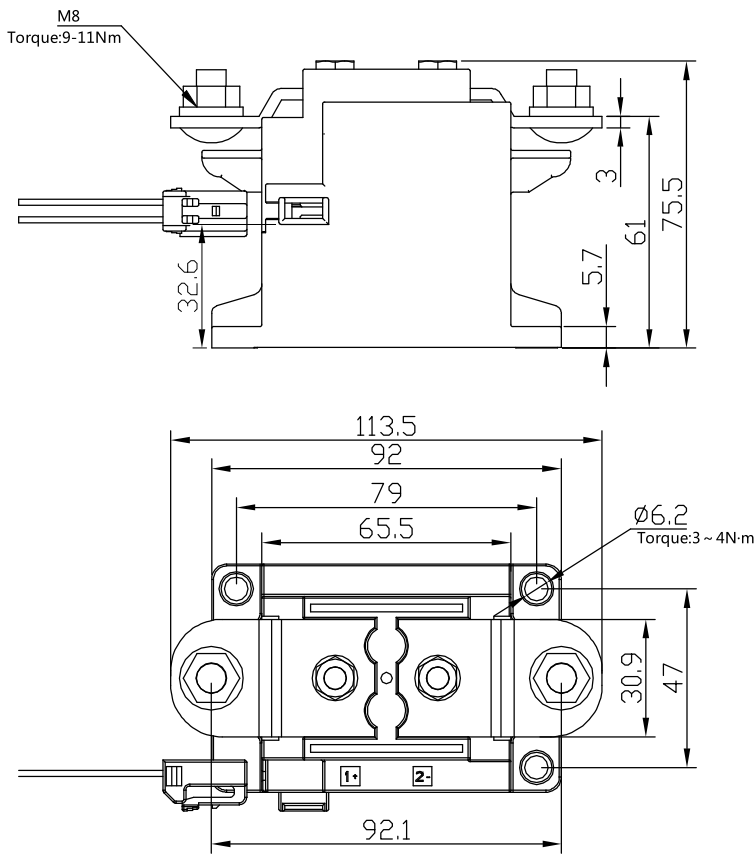


Ordering Information

Nomenclature							
<b>SES</b>	<b>300</b>	-	<input type="checkbox"/>	<b>M</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Customer features label:</b>  <b>Nil:</b> No Customer special requirements  <b>Numbers or Letters:</b> Customer special requirements</p>							
<p><b>Load connection type:</b>  <b>1:</b> connection piece+external thread  <b>2:</b> internal thread</p>							
<p><b>Coil connection type:</b> Nil: outgoing line+connector</p>							
<p><b>Coil Voltage (VDC) :</b> <b>12:</b> 12VDC  <b>24:</b> 24VDC  <b>48:</b> 48VDC</p>							
<p><b>Contact arrangement M :</b> 1 Form A</p>							
<p><b>Voltage rating</b> <b>750 :</b> 12~750VDC  <b>500 :</b> 12~500VDC</p>							
<p><b>Load current</b> <b>300 :</b> 300A</p>							
<p><b>Type designation</b> <b>SES</b></p>							

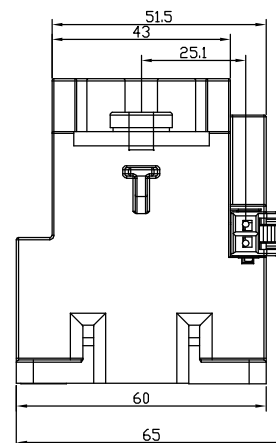
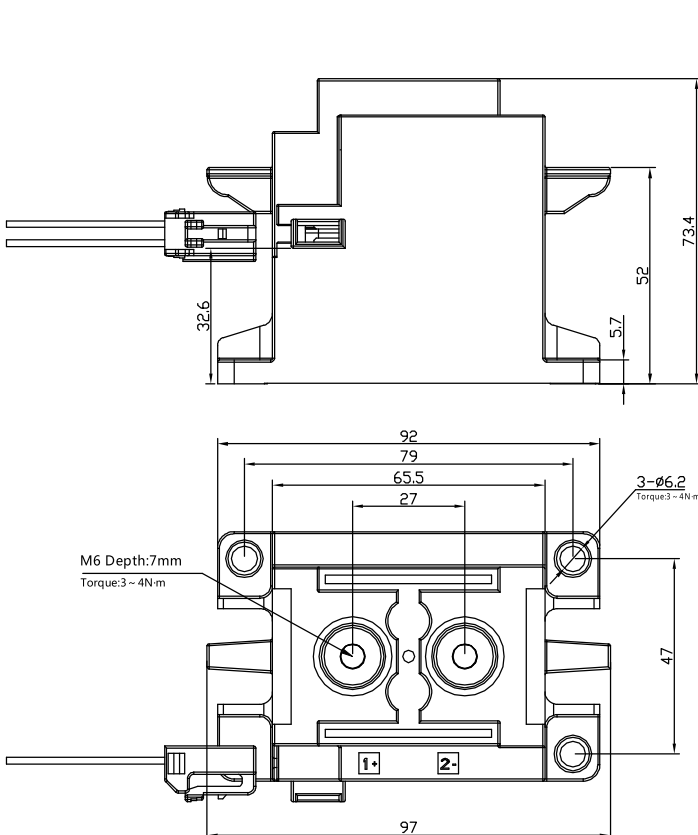
Packing quantity:1pcs inner carton, 10pcs outer carton

Outline Dimensions Of The Normal Products



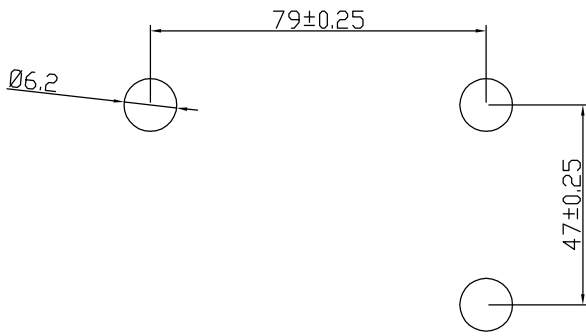
Size	tolerance
Less than 10mm:	$\pm 0.3$
10 to 50mm:	$\pm 0.5$
More than 50mm:	$\pm 0.8$

Outline Dimensions Of The Load Connection Type Is Internal Thread

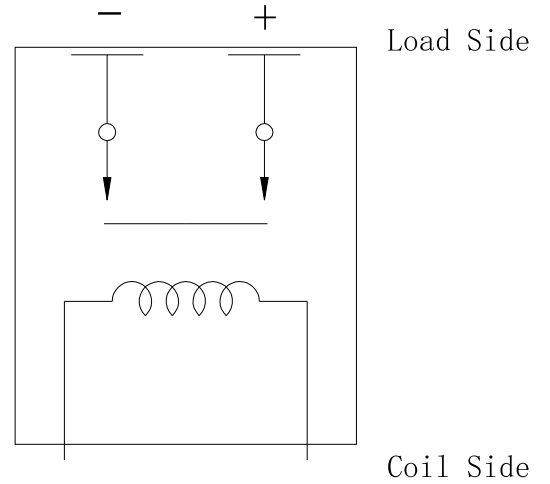


Size	tolerance
Less than 10mm:	$\pm 0.3$
10 to 50mm:	$\pm 0.5$
More than 50mm:	$\pm 0.8$

Installation Size Chart



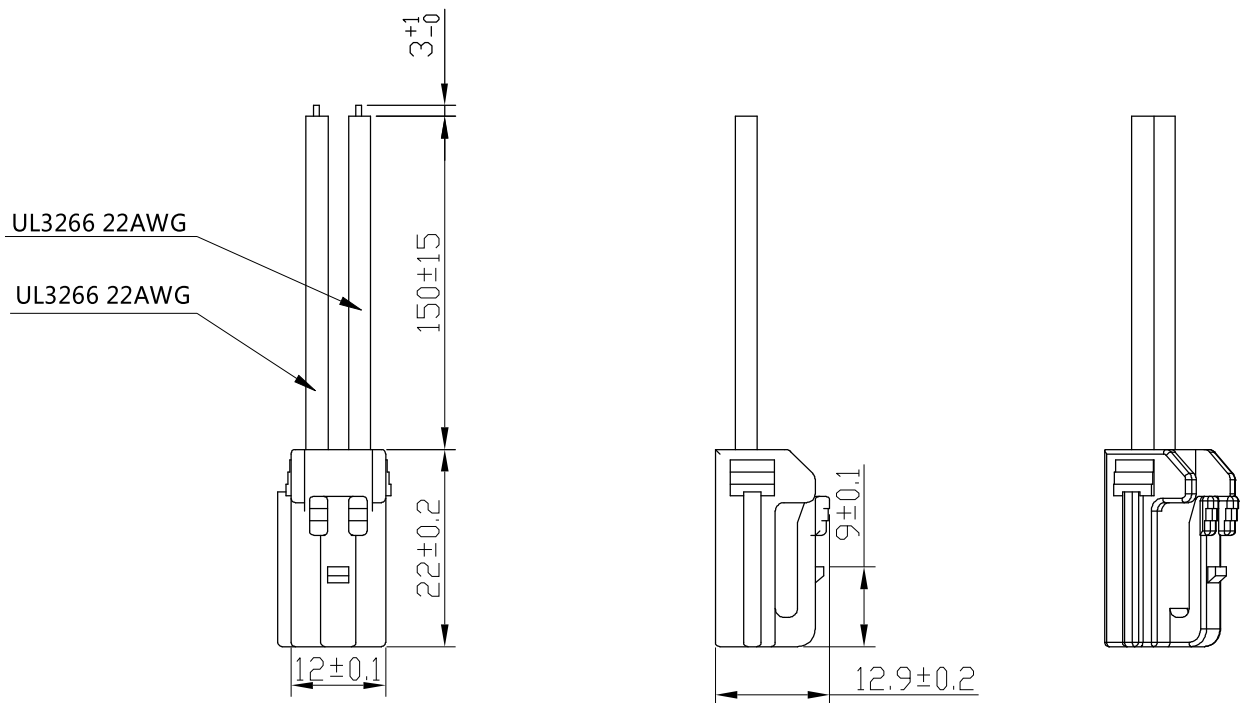
Schematic Diagram



NOTE: The contacts are polarized

Coil Connection Type

Connectors : Tian Hai :0435305 or Yazaki : 7283-1020(included in the box )



**NOTES****●Mounting Attention**

1. When installing the relay, always use washers to prevent the screws from loosening.
2. Tighten each screw within the rated range given in the outline dimensions. Exceeding the maximum torque may result in breakage.
3. Avoid mounting the relay in strong magnetic fields (near a transformer or magnet) or close to an object that radiates heat.

**●Electrical Life Attention**

1. This relay is a DC high-voltage switch. In its final breakdown mode, it may lose the ability to provide the proper cut-off. Therefore, do not exceed the indicated switching capacity and life.
2. Please treat the relay as a product with limited life and replace it when necessary.
3. The contacts of the relay are polarized. Please follow instructions in the connection schematic when connecting the contacts.
4. Be careful that foreign matter and oils and fats kind, don't stick to the main terminal parts because it is likely to cause terminal parts to give off unusual heat. Also, please use the following specifications of conductor.

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

**●Coil Attention**

1. Please note that when using a diode, the switching speed may decrease and cause a reduction in cut-off performance, 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 reliable. Don't exceed maximum coil voltage.
3. The 250A and 300A types have built-in dedicated drive circuit, please drive the coil with a quick startup (Built-in one-shot pulse generator circuit).
4. After the ON signal enters the 250A and 300A types, automatic coil current switching occurs after approximately 0.1 seconds. Do not repeatedly turn it OFF within that 0.1 seconds interval, as doing so may damage the relay.

**Disclaimer :**

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