

Feature

- 40 amps continuous carry
- 400 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
- Adopt ceramic brazing sealing structure.
- The load has polarity requirements, and the coil drive has non-polarity requirements.
- RoHS compliant

Contact Data

Item	Information		
Contact arrangement	1 Form A contact		
Current rating	40A		
Contact resistance	≤10mΩ (@6V 20A)		
Min.Switching load	12VDC 1A		
Max. Switching voltage	1000VDC		
Max. Breaking current	400A (1000VDC, 1 cycle)		
Max. Switching power	40KW		
Electrical life <sup>(1)</sup>	Resistive load	500VDC 500V type	750VDC 750V type
		500VDC,40A 6000 cycles	750VDC,40A 3000cycles
	Refer to the switchover life line chart		
Load current capacity <sup>(2)</sup>	Reference tolerance curve.		

Parameters Table

Item	Information	
Mechanical life	2×10 <sup>5</sup> cycles	
Insulation resistance	1000MQ(1000VDC)	
Dielectric strength	Between open contacts	3000VAC 1min 1mA
	Between contact and coil	4000VAC 1min 1mA
Action time (at rated coil voltage)	≤30ms	
Release time (at rated coil voltage)	≤10ms	
Shock resistance	Functional	196m/s <sup>2</sup> (20G)
	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%~95% RH	
Weight	155g	
External dimension	67×32.6×50.5	

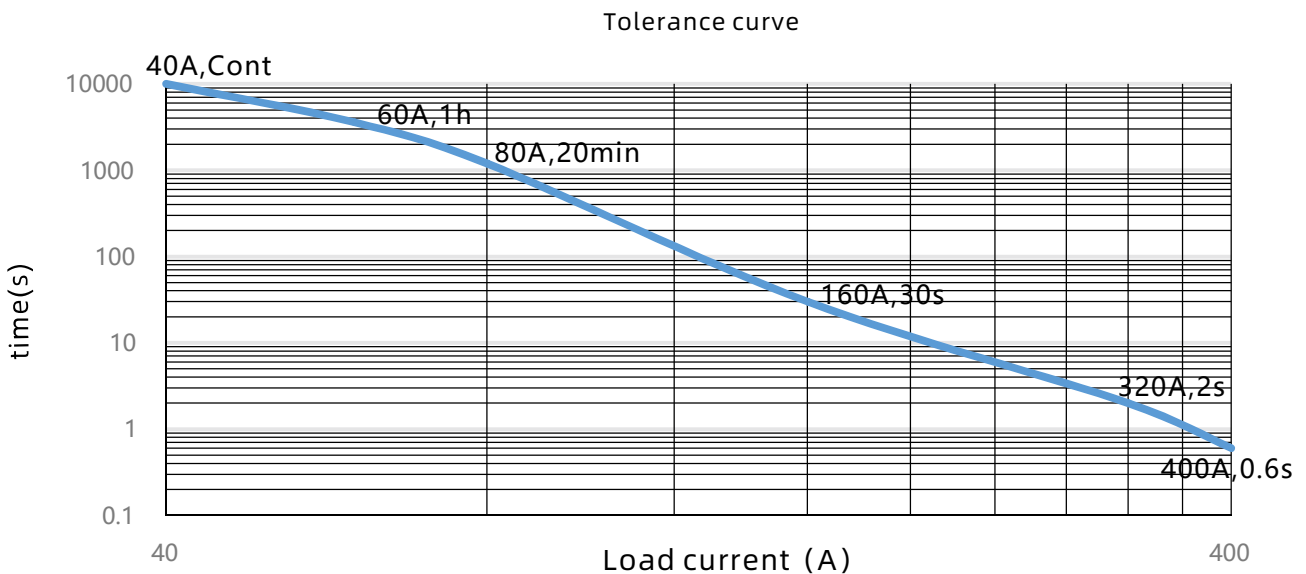
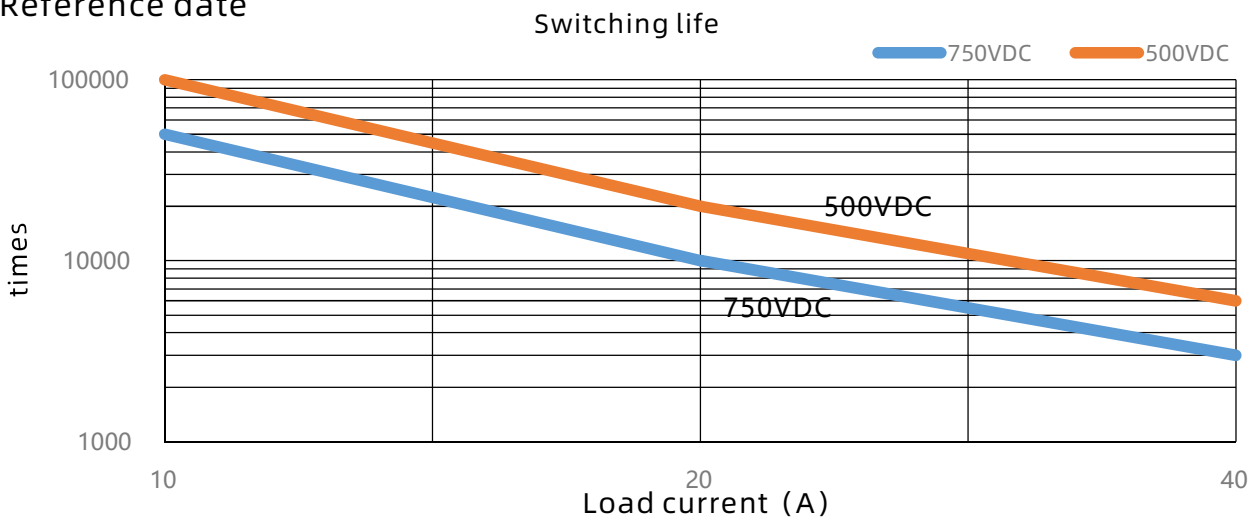
CoilData <sup>(3)</sup>

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	48	3	3
24	24	32	≤18	≥2.0	192	3	3
48	48	64	≤36	≥4.0	768	3	3

NOTES:

- (1) Ambient temperature:23°C, L/R≤1ms.
- (2) Ambient temperature:23°C, 10mm<sup>2</sup>conductor.
- (3) Other types of rated voltage,please contact us.
- (4) The release time of products with coil voltage of 48V shall be =15ms.

Reference date



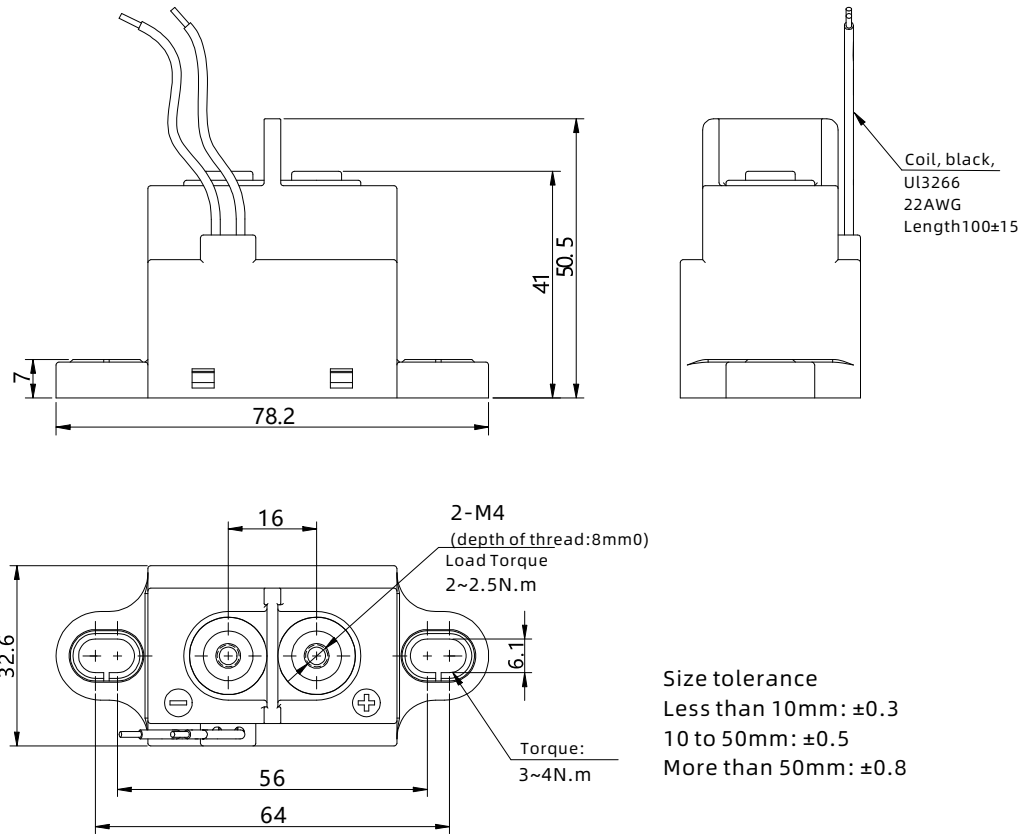
Ordering Information

Nomenclature

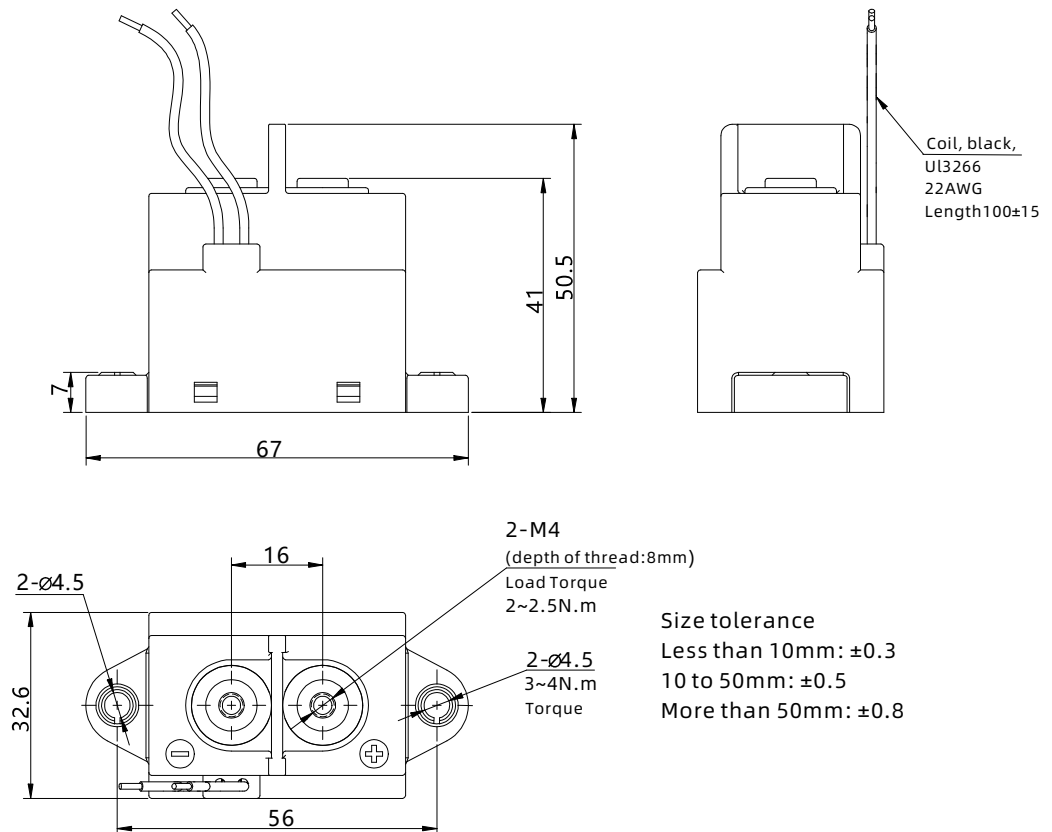
SEV	40 -	<input type="checkbox"/>	M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
								Customer special code (-3): Elliptical hole installation (-4): Round hole installation.  Numbers or Letters: Customer special requirement
								Load connection type 2: internal thread
								Coil connection type Nil: outgoing line C: outgoing line+connector
								Coil voltage 12: 12VDC 24: 24VDC 48: 48VDC
								Contact arrangement M: 1 Form A
								Voltage rating 1000: 12~1000VDC 800: 12~800VDC 750: 12~750VDC 500: 12~500VDC
								Load current 40: 40A
								Type designation SEV

Packing style: 54PCS/ box.

Customer Features Label-3(Oval Mounting Hole)



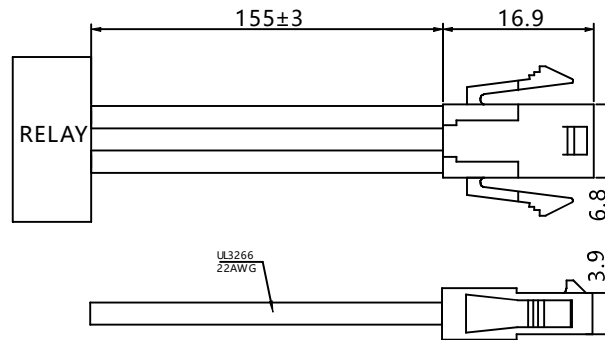
Customer Features Label-4



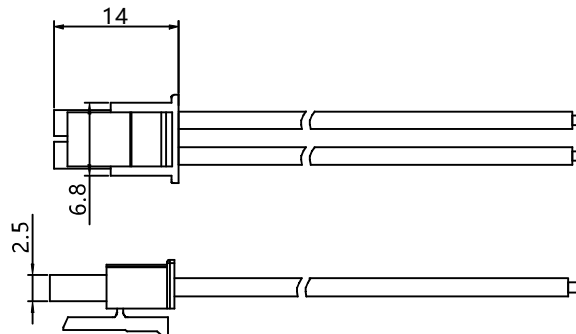
## Coil Connection Type

### C:Outgoing Line+Connector

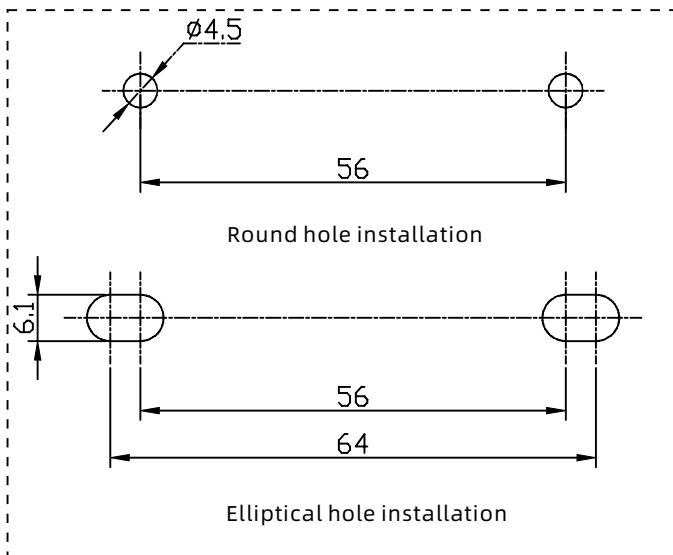
Connector Part No:MOLEX-43640-0200 Wire pressing terminal:MOLEX-43031-0001



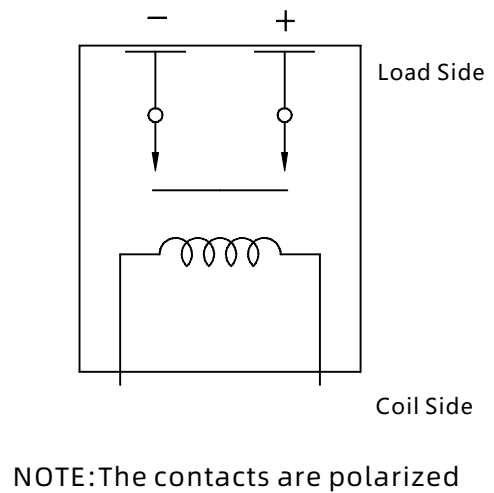
Connector Part No:MOLEX-43645-0200 Wire pressing terminal:MOLEX-43030-0001  
(not include in the box)



### Installation Size Chart



### Schematic Diagram



**NOTES:****● Mounting Attention**

1. In principle, please do not use it when the relay has fallen down.
2. The relay contacts are sealed and filled with gas. When the contact temperature changes, there is internal gas penetrating characteristic. SANYOU relays are forbidden to be used at the temperature beyond our suggestion -40 °C ~ 85 °C for long time.
3. When installing the relay, always use washers to prevent the screws from loosening.
4. Tighten each screw within the rated range given in the outline dimensions. Exceeding the maximum torque may result in breakage.
5. 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.

Min. 2mm<sup>2</sup> nominal cross-sectional area  
Min. 3mm<sup>2</sup> nominal cross-sectional area  
Min. 10mm<sup>2</sup> nominal cross-sectional area  
Min. 15mm<sup>2</sup> nominal cross-sectional area  
Min. 35mm<sup>2</sup> nominal cross-sectional area  
Min. 45mm<sup>2</sup> nominal cross-sectional area  
Min. 60mm<sup>2</sup> nominal cross-sectional area  
Min. 80mm<sup>2</sup> nominal cross-sectional area  
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. Please do not continuously load the maximum voltage on the coil.
4. 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).
5. 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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