三友继电器
® SANYOU RELAYS
Relays for advanced technology

High Voltage DC Relay | SES60B

Feature

- 60 amps continuous carry
- 600 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
- There is no polarity requirement for load wiring and no polarity requirement for coil drive
- RoHS compliant

Contact Data

Item		Information	
Contact arrangement		Power Contact:1 Form A	
Current rating		60A	
Contact resistance		≤1mΩ（@6V 20A）	
Min.Switching load		12VDC 1A	
Max. Switching voltage		1000VDC	
Max. Breaking current		600A（450VDC，1 cycle）	
Max. Switching power		60KW	
Electrical life(1)	Resistive load	500VDC 500V type	750VDC 750V type
		Refer to the switchover life line chart	
Load current capacity(2)		Reference tolerance curve	

Parameters Table

Item		Information
Mechanical life		2×10^5 cycles
Insulation resistance		1000MΩ(1000VDC)
Dielectric strength	Between open contacts	3000VAC 1min 1mA
	Between contact and coil	3000VAC 1min 1mA
Action time (at rated coil voltage)		≤30ms
Release time (at rated coil voltage)		≤10ms
Shock resistance	Functional	98m/s² (10G)
	Destructive	490m/s² (50G)
Vibration resistance		10Hz~500Hz 49m/s² (5G)
Ambient temperature		-40℃~+85℃
Ambient humidity		5%~95% RH
Weight		156g
External dimension		64×33×52.8

Coil Data [3]

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	27.7	5.2	5.2
24	24	32	≤18	≥2.0	110.8	5.2	5.2

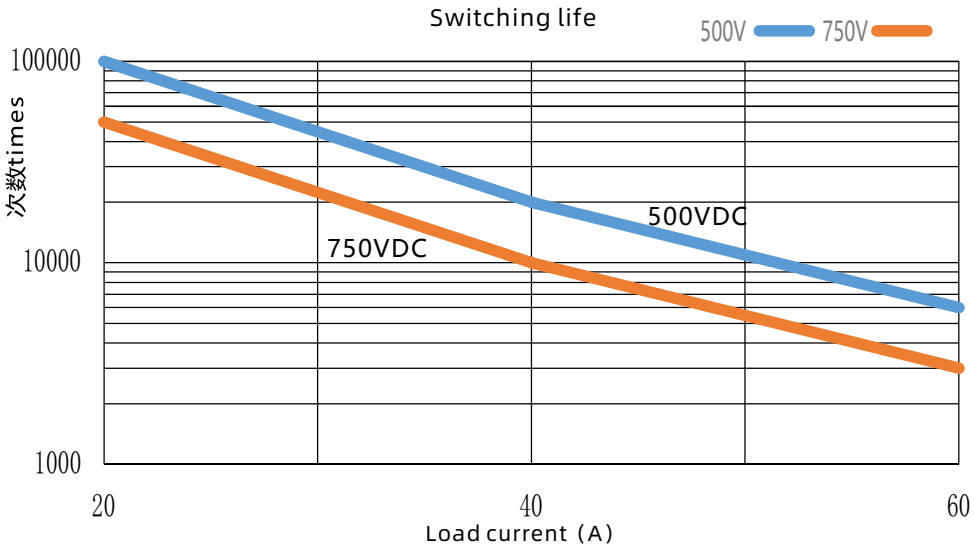
NOTES:

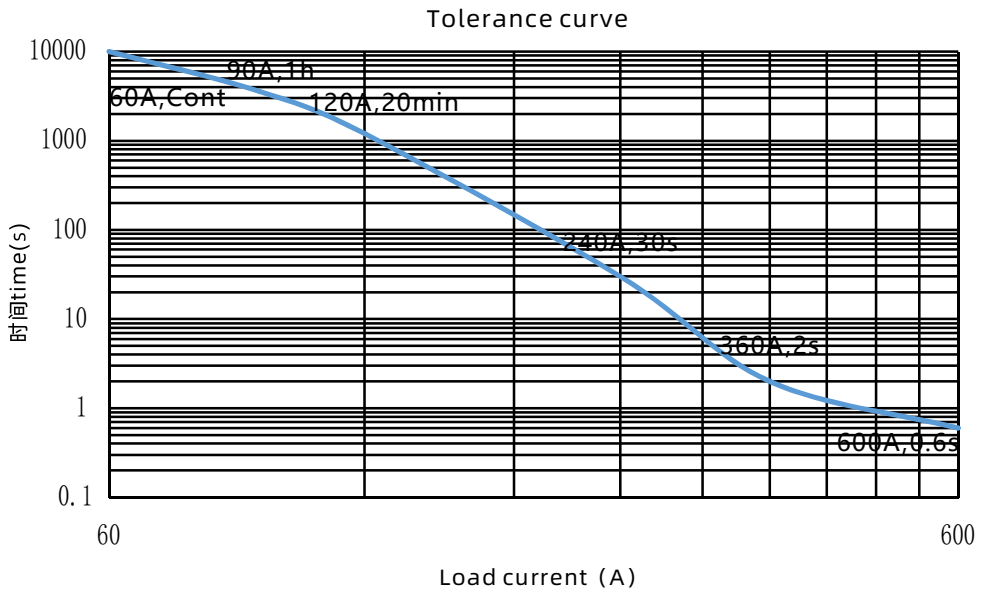
(1) Ambient temperature:23℃, L/R≤1ms.

(2) Ambient temperature:85℃, 15mm² conductor.

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

Reference date





Ordering Information

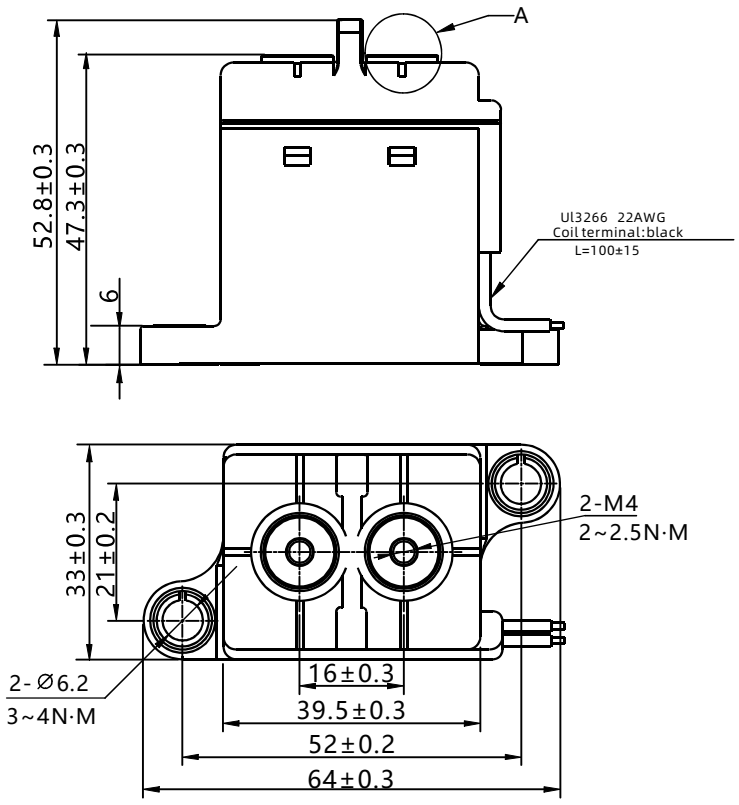
Nomenclature

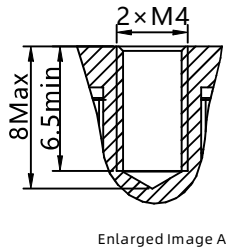
SES 60B - □ M □ □ 2 □

Customer special code	**Nil**: No customer special requirement **Numbers or Letters**: Customer special requirement
Load connection type	2: internai thread
Coil connection type	Nil: outgoing line C: outgoing line+connector
Coil voltage	12: 12VDC 24: 24VDC
Contact arrangement	M: 1 Form A
Voltage rating	750: 12~750VDC 800: 12~800VDC
Load current	60B: 60A
Type designation	SES

Packing quantity:54pcs carton

Outline Dimensions(Internal thread)



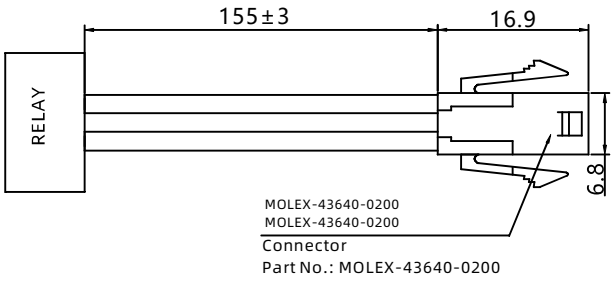


Enlarged Image A

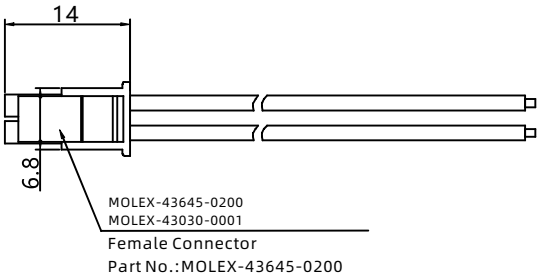
Size	tolerance
Less than 10mm:	±0.3
10 to 50mm:	±0.5
More than 50mm:	±0.8

Coil Connection Type

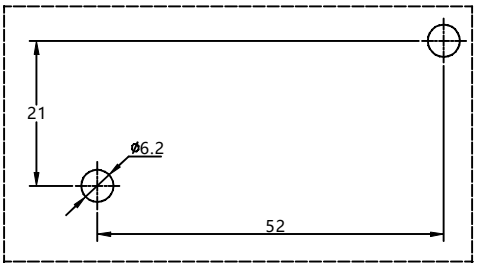
C:Outgoing Line+Connector



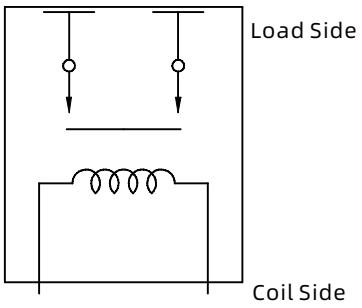
Connector (No accessories)



Installation Size Chart



Schematic Diagram



NOTE: No polarity on load side and coil side

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 ℃ ~ 85 ℃ 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^2 nominal cross-sectional area
Min. 3mm^2 nominal cross-sectional area
Min. 10mm^2 nominal cross-sectional area
Min. 15mm^2 nominal cross-sectional area
Min. 35mm^2 nominal cross-sectional area
Min. 45mm^2 nominal cross-sectional area
Min. 60mm^2 nominal cross-sectional area
Min. 80mm^2 nominal cross-sectional area
Min. 100mm^2 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).

5After 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 0.1seconds interval, as doing so may damage the relay.