



Feature

- 150 amps continuous carry, 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. Contacts' part meet IP42 protection degree.
- Not position sensitive- can be mounted in any position for ease of installation.
- RoHS compliant.

Contact Data

| Item | Information | | |
|--------------------------------------|-------------------------|---|---|
| Contact arrangement | 1 Form A contact | | |
| Current rating | 150A | | |
| Contact resistance | ≤0.5mΩ (@6V 20A) | | |
| Min.Switching load | 12VDC 1A | | |
| Max. Switching voltage | 750VDC | | |
| Max. Breaking current | 1500A (500VDC, 1 cycle) | | |
| Max. Switching power | 112KW | | |
| Electrical life ⁽¹⁾ | Resistive load | 500V type | 750V type |
| | | 500VDC,150A 1.5×10 ³ cycles | 750VDC,150A 500 cycles |
| | Capacitive load | 500VDC,-150A 500 cycles | |
| | | 2.5×10 ⁴ cycles 22.5VDC,τ=1ms inrush 400A steady 150A | 1.5×10 ⁴ cycles 37.5VDC,τ=1ms inrush 400A steady 150A |
| Load current capacity ⁽²⁾ | 150A: continuity | | |
| | 180A: 2h | | |
| | 300A: 10min | | |
| | 600A: 2min | | |
| | 900A: 30S | | |

NOTES:

- (1) Ambient temperature:23°C, L/R≤1ms.
 (2) Ambient temperature:23°C, 35mm² conductor.
 (3) Other types of rated voltage,please contact us.

Parameters Table

| Item | Information | |
|--------------------------------------|------------------------------------|---------------------------|
| Mechanical life | 2×10 ⁵ 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) | ≤30ms | |
| Release time (at rated coil voltage) | ≤10ms | |
| Shock resistance | Functional | 196m/s ² (20G) |
| | Destructive | 490m/s ² (50G) |
| Vibration resistance | 10Hz~500Hz 49m/s ² (5G) | |
| Ambient temperature | -40°C~85°C | |
| Ambient humidity | 5%~95% RH | |
| Weight | Approx.300g | |
| External dimension | 76mm×40mm×67mm | |

Coil Data ⁽³⁾

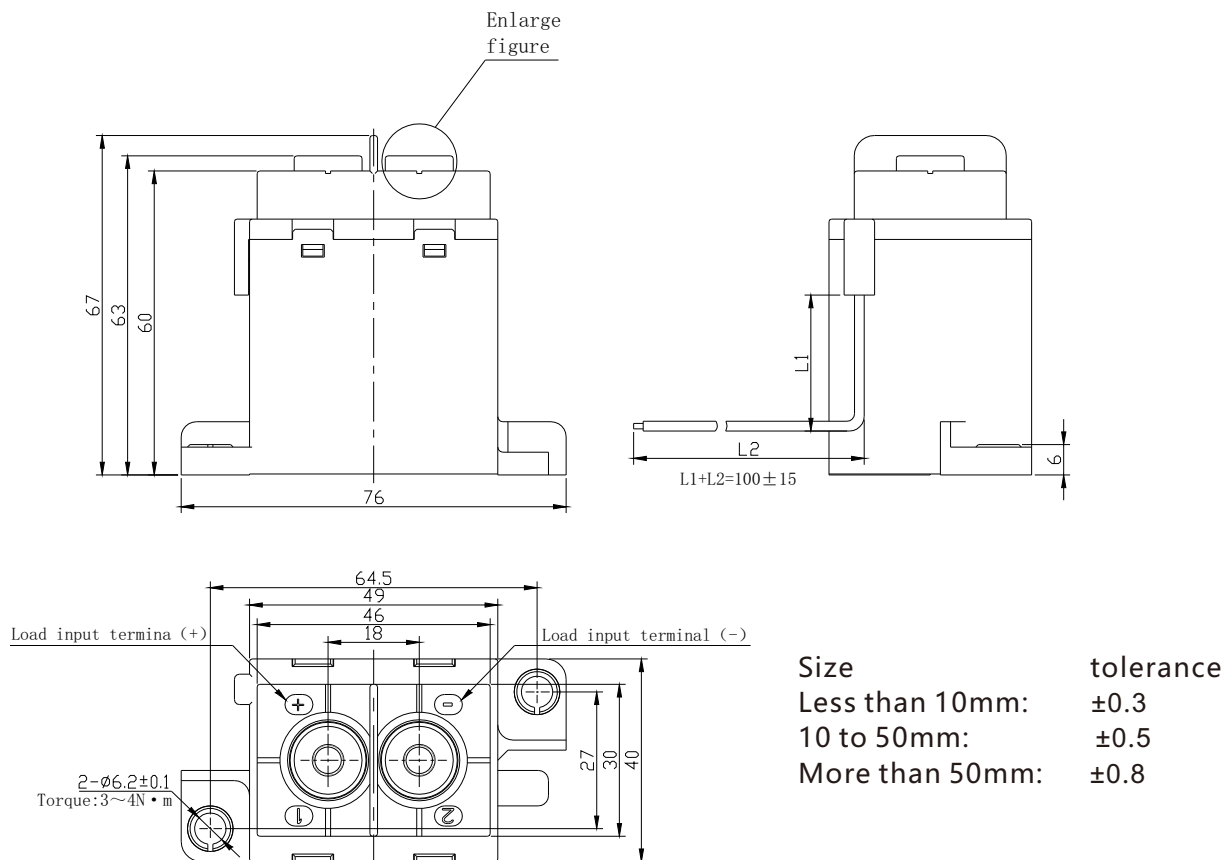
| Rated voltage (VDC) | 12 | 24 | 48 |
|-----------------------------|------|------|------|
| Operation voltage (VDC) | 12 | 24 | 48 |
| Max. voltage (VDC) | 16 | 32 | 64 |
| Pick-up voltage (VDC) | ≤9 | ≤18 | ≤36 |
| Drop-out voltage (VDC) | ≥1.0 | ≥2.0 | ≥4.0 |
| Coil vesistance(±10%)(Ω) | 24 | 96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

Ordering Information

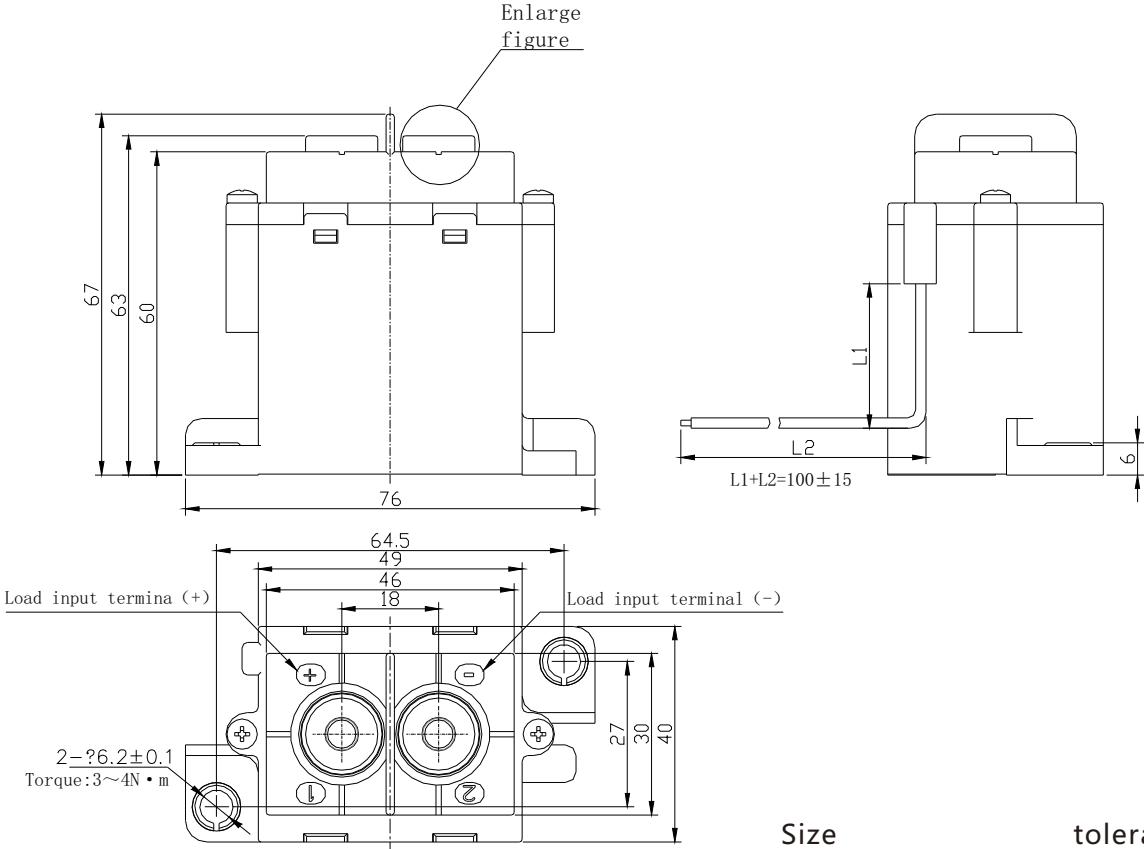
| Nomenclature | |
|--|--|
| SES 150B- | <input type="checkbox"/> M <input type="checkbox"/> <input type="checkbox"/> 2 <input type="checkbox"/> <input type="checkbox"/> |
| Customer special code Nil: No customer special requirement Numbers or Letters: Customer special requirement | |
| Reinforce the way 1: Card buckle type 2: Screw type | |
| 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 750: 12~750VDC 500: 12~500VDC | |
| Load current 150: 150A | |
| Type designation SES | |

Packing quantity:1 pcs inner carton, 20pcs outer carton

Outline Dimensions(Card buckle type)

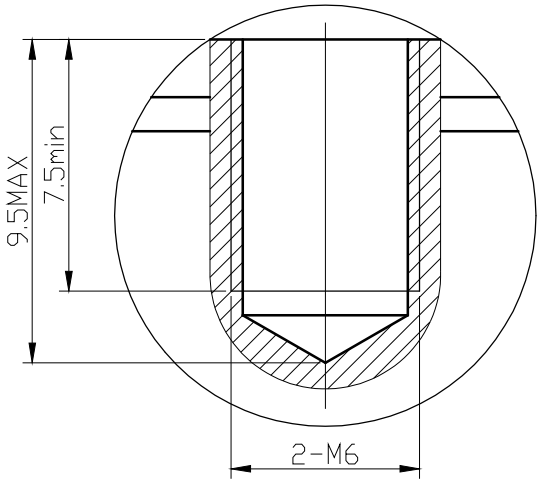


Outline Dimensions(screw type)

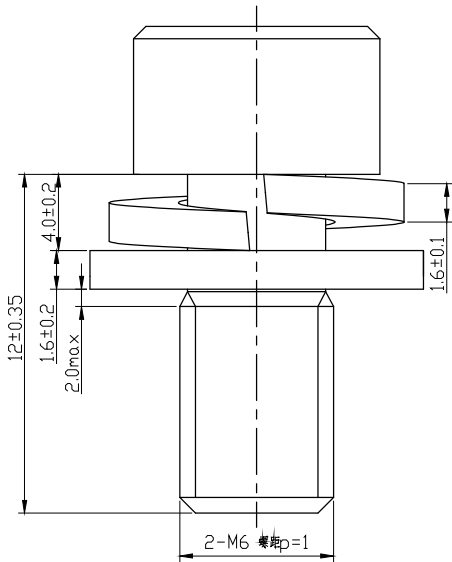


| Size | tolerance |
|-----------------|-----------|
| Less than 10mm: | ± 0.3 |
| 10 to 50mm: | ± 0.5 |
| More than 50mm: | ± 0.8 |

Enlarge figure

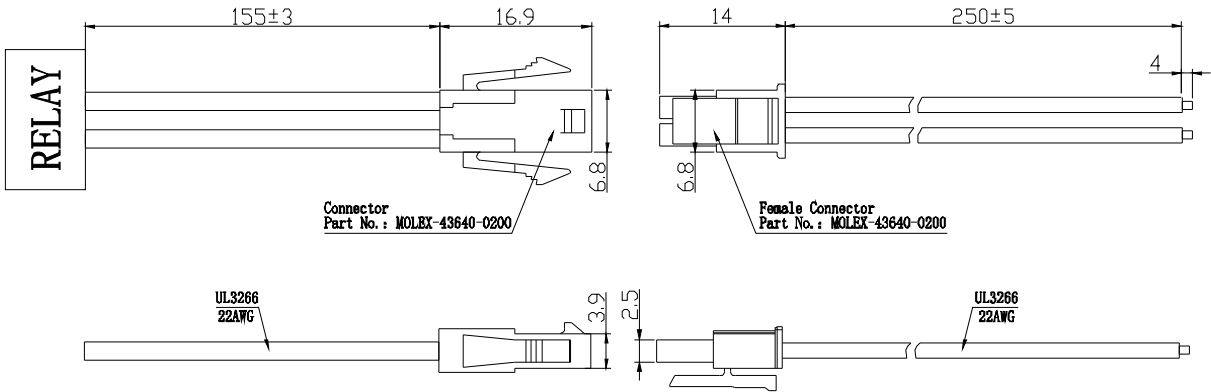


Combinded screw drawing

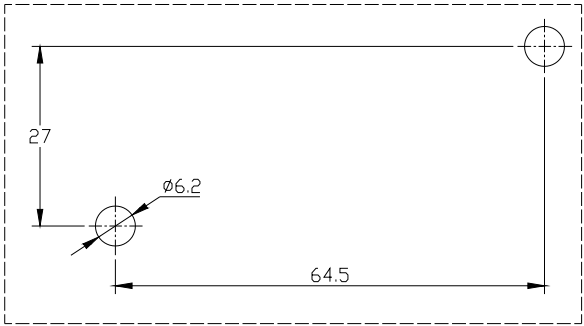


Coil Connection Type

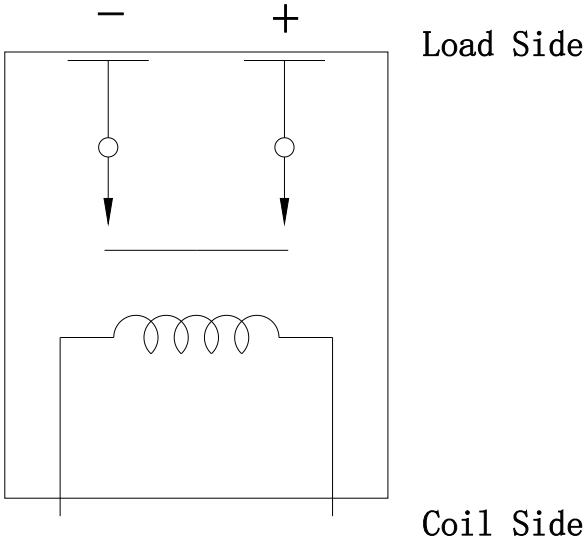
C: Outgoing Line+Connector (Accessories)



Installation Size Chart



Schematic Diagram



NOTE: The contacts are polarized

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 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 |

●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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