■ Feature

·400A Contact switch capacity, Small volume;
·A set of bridge type N.O. contacts & a set of N.O. aux contact,
contact circuit is non-polarity;
·Coil power is very low, coil maintain power Max 4W;
·Application: Telecom equipment、Solar system、 Engineering machinery、
Electro-mobile、Electric vehicle、Charging system、UPS ect.;
• ROHS

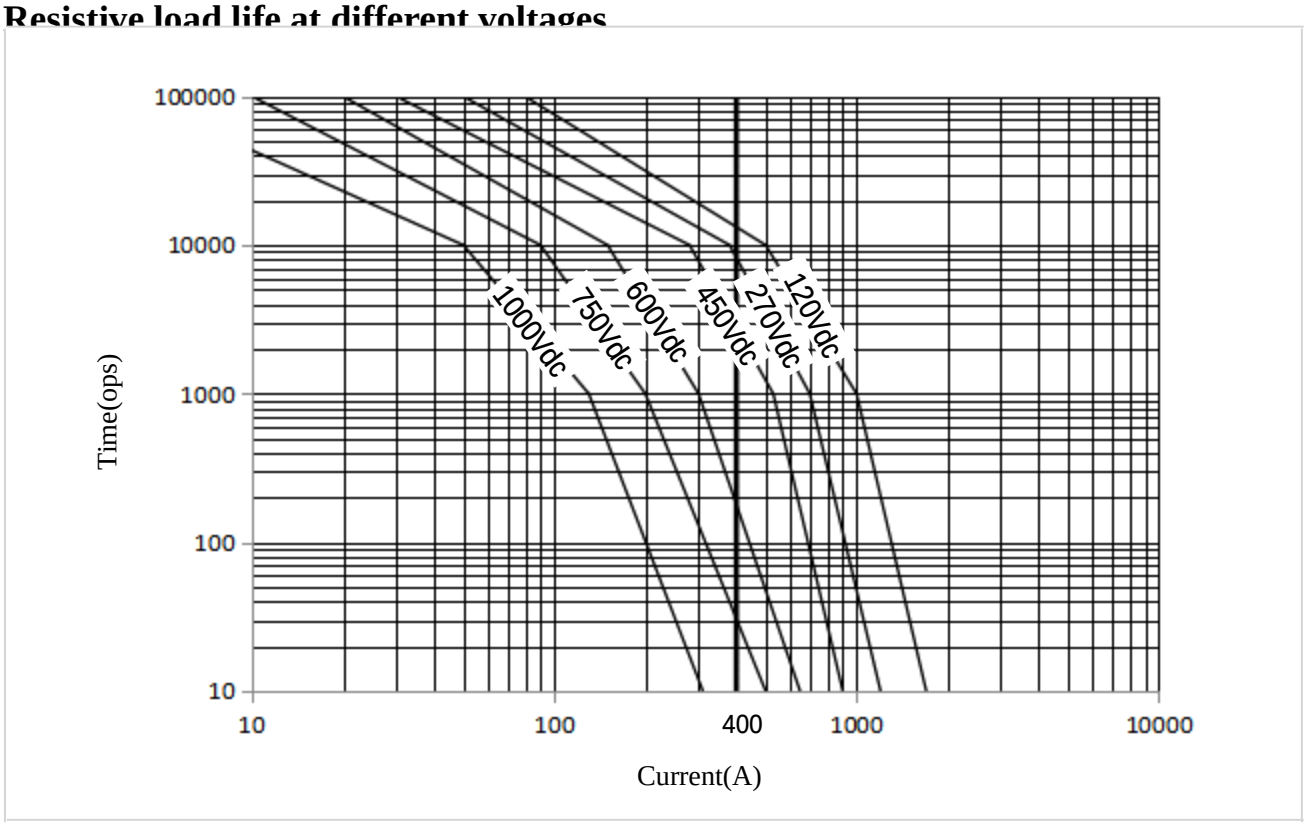
■ Specification

Part No.	DHV400
Contact type	1H(SPST-NO)
Rated load current (Resistive load)	400A
The max. switching current	2500A(320VDC) 1cycles
Contact voltage drop	≤160mV@400A
Switching voltage	12～1000V DC
Standard pick-up time	Max. 35ms.
Contact bounce time	Max. 5ms.
Release time	Max. 10ms.
Vibration（Sinusoid、10～500HZ、peak）	(10～500)HZ，5g
Shock（11ms,1/2 Sinusoid、peak、pick-up）	20g
Operating ambient temperature	-40℃~+85℃
Relative humidity	20%~90% RH
Insulation Resistance	Min. 100MΩ @ 500VDC
Dielectric strength （Between Insulated Electric Parts）	2200VAC 50 Hz/60 Hz (1 minute) 1000VAC 50Hz/60Hz (1 minute) （ between aux.contacts）Leak current＜1mA
Electrical life	Please refer to diagram of resistance load life
Mechanical life	300000 cycles
Aux.contact type	1NO
Rated load of aux. contact	2A/24V
Min. load of aux. contact	100mA/8V
Mounted direction	Any direction
Working duty	Continuous
Weight	0.65kg

■ Coil Data

P/N	Coil voltage (V)	Coil operating voltage（V）	Pick-up voltage （V）	Release voltage （V）	Starting power （W）	Holding power （W）
DHV400	9～36	12～24	8～9	5.5～7	40～50	3～4

■ Resistive load life at different voltages



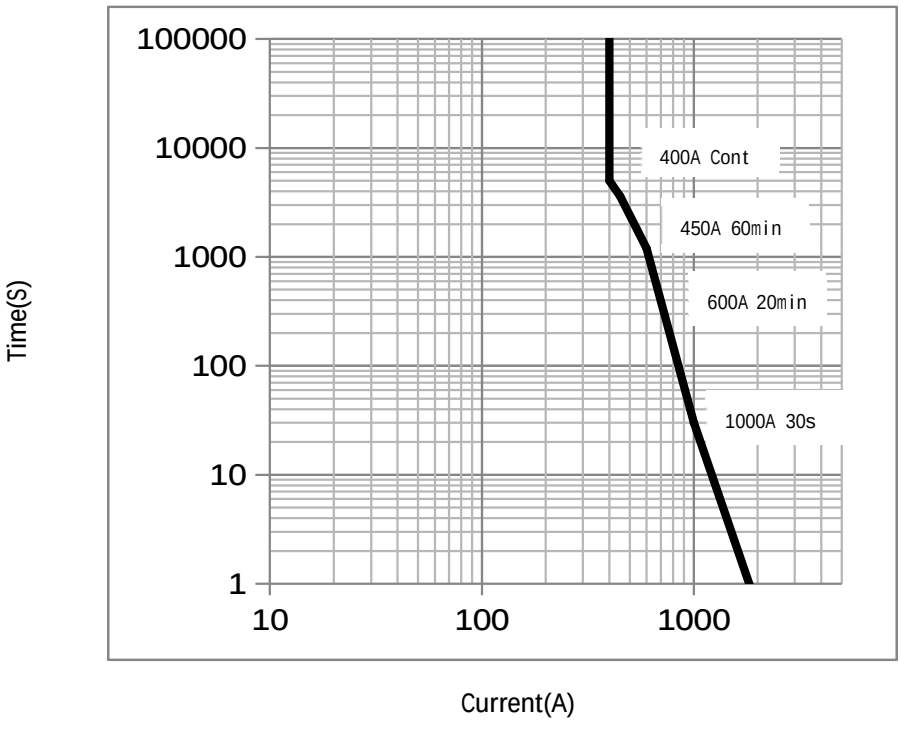
Note:

●The rated electrical life is based on resistance load test. The load max inductance≤300μH; If used with inductive load, please check with the manufacturer firstly

● The figure above is drawn according to the estimation of test and inferred data, and it is recommended that users test and confirm according to the actual use

● When the dielectric voltage resistance and insulation resistance of the product are less than the parameters in the product parameter table, the product is defined as the end of life.

■ Current Tolerance Curve



Note: The above data was tested at 85℃, with bus bar≥240mm². The data is for reference only, please do not use to select the fuse directly.

■ Ordering System

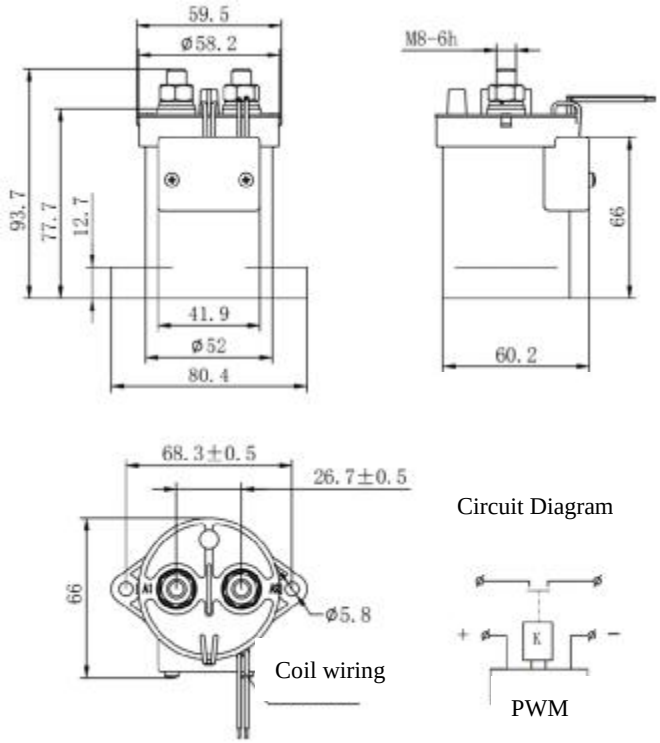
DHV 400 A□ A N A □

- □ — Customer code
- A — Installation（A:Horizontal；H:Crosswise）
- N — Terminal type（N：None; M：terminal blocks）
- A — Coil Wire Length（A：390mm；B：150mm）
- A — Coil voltage (A：9～36V)
- A□ — Contact Form
  - A：Main contact N.O.(stud type) H：Main contact N.O.（stud type)with N.O. aux. contact
  - C：Main contact N.O.(Screw type) D：Main contact N.O.(Screw type)with N.O. aux. contact
- 400 — Circuit rated current（Resistive load 400A）
- DHV — Design code（Sealed type non-polarity high voltage dc contactor）

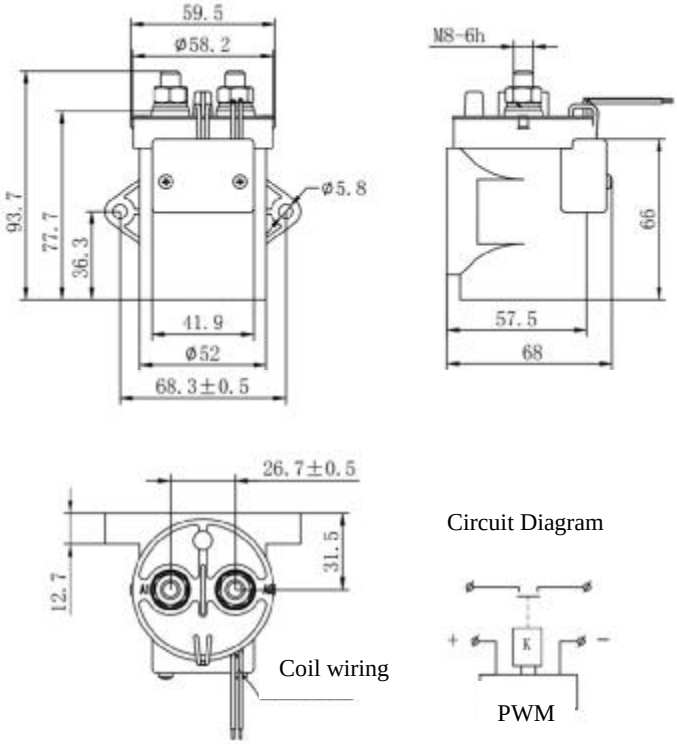
For example：DHV400AAANA：Sealed type high voltage DC Contactor， Rated current is 400A， main contact N.O. (stud type),without aux. contact,，coil voltage is DC 9～36V，coil wire length is 390mm，horizontal installation.

■Outline mounting dimension and circuit diagram (Unit: mm)

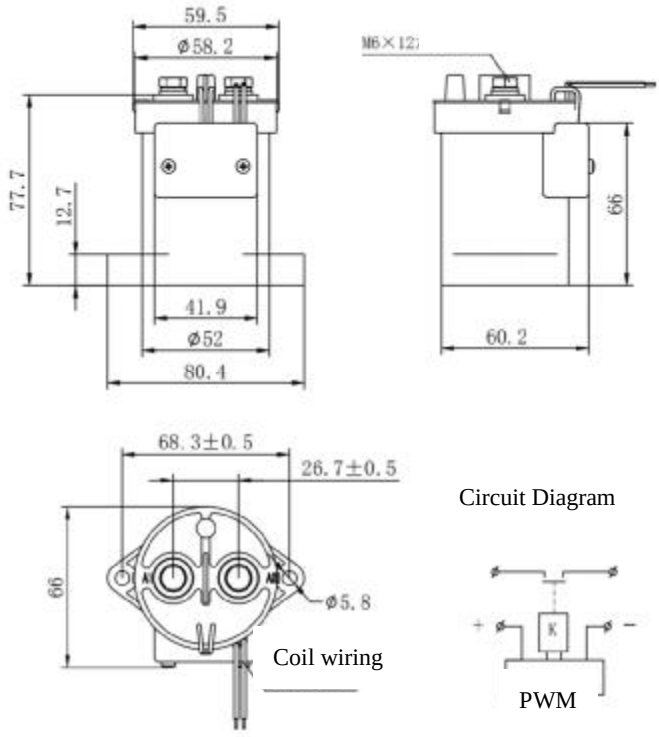
1、DHV400A□□NA



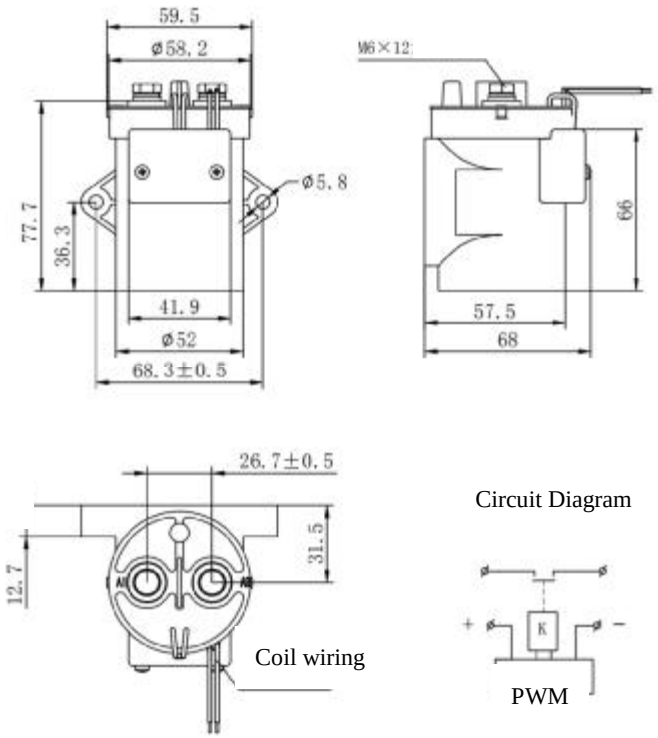
2、DHV400A□□NH



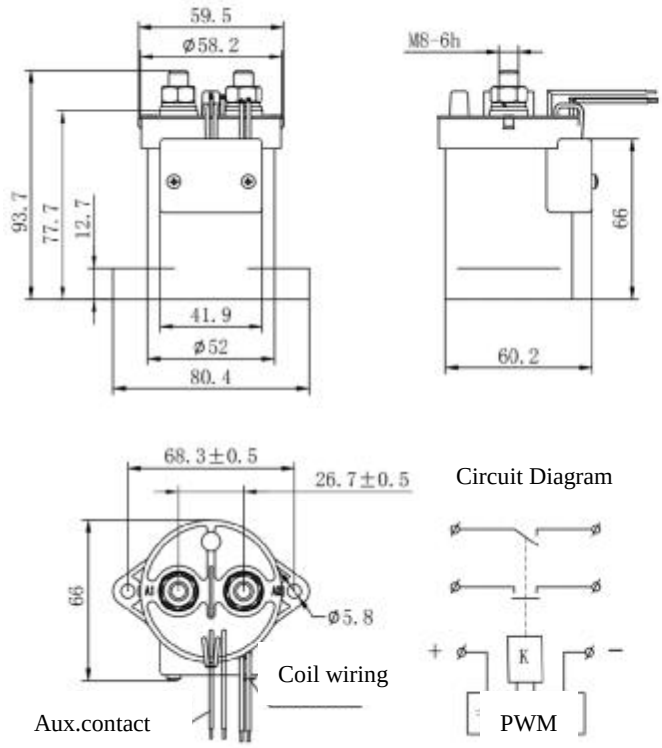
3、DHV400C□□NA



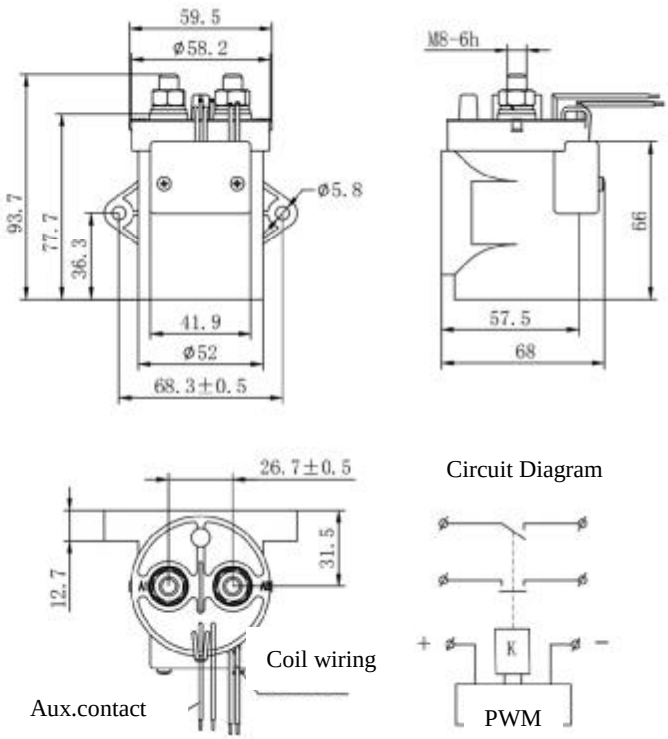
4、DHV400C□□NH



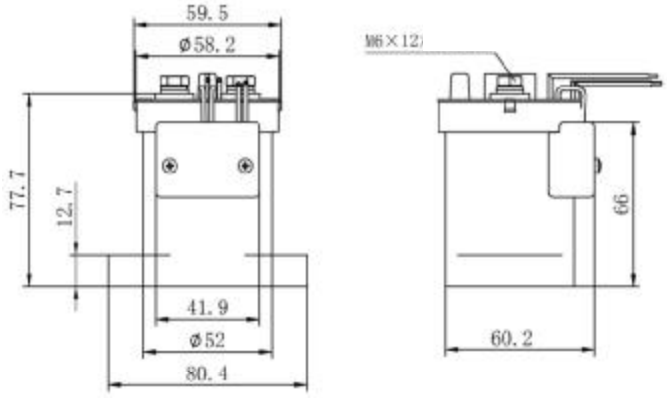
5、DHV400H□□NA

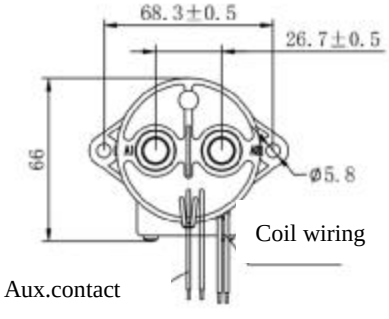


6、DHV400H□□NH

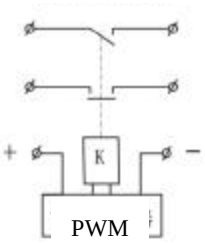


7、DHV400D□□NA

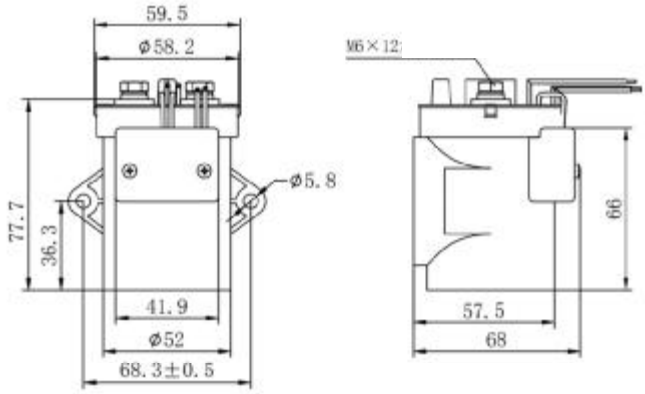


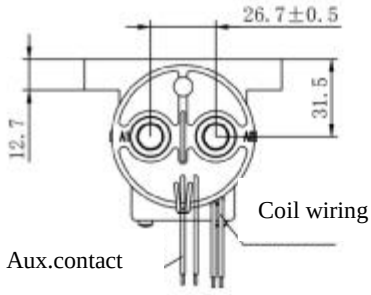


Circuit Diagram

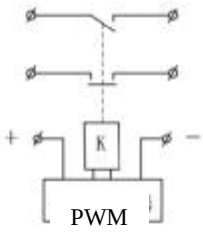


8、DHV400D□□NH





Circuit Diagram



0～30	±0.3
30～60	±0.5
60～100	±1
＞100	±2

Note:
●The outline mounting dimensions is same no matter with or without aux. contact；
●The coil is polarized, please connect red wire to"+" polarity& black wire to"-" polarity;； while the main contact is non-polarity and marked "A1","A2" beside the main terminal;

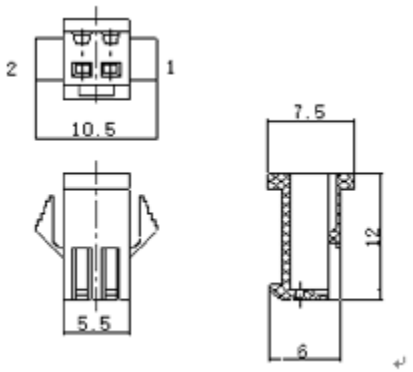
■ Accessory

DHV400 series with terminal part number is：DHV400□□□M□。

Socket type：SM-2Y-HW

Terminal type: SMY-HW

Socket size：



Fitted socket type：SM-2A-HW

Fitted terminal type：SMA-HW

The connector's two pinhole corresponding relationship with the coil lead-out wire：

1：Coil lead-out wire "+"terminal, red wire;

2：Coil lead-out wire "-"terminal, black wire.

■ Instructions

1.When installing the contactor, always use washers to prevent the screws from loosening. The torque range for tightening the screws is specified below, and exceeding the maximum torque value can cause the product to crack.

The torque of contact（ M8 nut）： 8～ 10N.m

The torque of installing： 1.7~3.5 N.m

2. The coil of this contactor is polarity, pls connect the coil according to the remark; The main contact is non-polarity. There is a reverse surge absorbing circuit in the energized board, so there is no need to use surge protector any more. We suggest installing a piezoresistor as a surge protector in the contactor which without energized board. However, please avoid using diode, because it will reduce the contactor's switching capacity.

3. Do not use the product which have been dropped off.

4. Avoid to install the products in strong magnetic field (near the transformer or magnet), or close to the thermal radiation of the objects.

5. Electrical life

This contactor is a high-voltage DC switch that, in its ultimate breakdown mode, may lose its proper interruption function. Therefore, do not use it beyond its switching capacity and life parameters (treat this contactor as a product with a specified lifespan, and replace it when necessary). Once the contactor loses its disconnection capability, it may cause surrounding components to burn. Therefore, it is important to design the circuit diagram properly to ensure that the power supply can be cut off within 1s.

6. The diffusion life of internal gases

The contactor uses the sealed chamber contacts, with the chamber filled with gas. The diffusion life of the gas is determined by the temperature inside the contact chamber (i.e., ambient temperature plus the temperature rise generated by contact energization). Therefore, it is necessary to ensure that the ambient temperature is between -40°C to +85°C.

7. If the coil and contacts of the contactor are continuously energized with the rated voltage (or current), and the power supply is immediately reconnected after being disconnected, the increased temperature of the coil will cause its resistance to rise, leading to an increase in the pull-in voltage of the product, which may exceed the rated pull-in voltage. In such a scenario, the following measures should be taken: reducing the load current, limiting the duration of continuous energization, or using a coil voltage higher than the rated pull-in voltage.

8. For resistive loads, the rated parameters of the main contacts in the ratings are applicable. However, if inductive loads (L loads) are utilized and the L/R ratio exceeds 1 millisecond, a surge current protection device should be paralleled with the inductive load.

9. The power of the driving circuit for the product's coil must be greater than the power of the product's coil itself; otherwise, it will reduce the product's breaking capacity.

10.Be cautious to prevent debris and oil contamination from touching the main lead-out terminals. The external connection terminals should reliably connect with the product's main lead-out terminals; otherwise, it may lead to excessive heating at the lead-out terminals. Additionally, the wires connected to the product must meet the required conductivity to prevent overheating and ensure longevity (with a wire cross-sectional area of 240mm² or more for connecting to the main contact).

11.After the product is switched on, the coil will start to switch automatically after approximately 0.1s. The operating frequency should not exceed 6 times per minute, otherwise it may cause damage to the contactor.