



### Product Features

- Ceramic vacuum brazing seal is adopted to ensure no arc leakage, and the contact point can meet the protection grade of IP6K9K.
- The mixed gas mainly filled with hydrogen can quickly cool the arc and prevent the contact from oxidation and burning
- 600A 85°C long time current carrying capacity
- The rated voltage of cut-off load is 12-750VDC
- The insulation resistance reaches 1000m  $\Omega$  (1000VDC) and meets the requirements of IEC 60664-1
- Energy saving type: control by Double coil PCB board ,when at low power consumption, product can keep in incentive condition.

### Contact parameters

|  |  |
|--|--|
| Contact Form                                 | 1a   |
| Contact Resistance                           | $\leq 0.5\text{m}\Omega$ (at 600A)                                       |
| Contact Rated Load                           | 600A   |
| Mechanical Durability                        | $2 \times 10^5$ times  |
| Max. Switching Voltage                       | 1000VDC  |
| Max. Breaking Current                        | 3000A(320VDC)1 times   |
| Max. Switching Power                         | 600kW  |
| The Durability Of Electricity <sup>(1)</sup> | Switch on: $5 \times 10^4$ times (750VDC, 120A, 0.6s Connect:5.4s Break) |
|  | Switchover: $1 \times 10^5$ times (800VDC,10A)                           |
|  | Switchover: $1 \times 10^4$ times (800VDC,100A)                          |
|  | Switchover: $2 \times 10^3$ times (750VDC,300A)                          |
|  | Switchover: 500 times (750VDC,600A)                                      |
|  | Reverse Switch: $5 \times 10^3$ times (750VDC,-100A)                     |
|  | Reverse Switch: $1 \times 10^3$ times (750VDC,-300A)                     |
|  | Reverse Switch: 300 times (750VDC,-600A)                                 |
|  | Breaking: 1 times (800VDC,2500A)   |
|  | Switchover: 100 times (1000VDC,600A)                                     |
| Current Tolerance <sup>(2)</sup>             | 600A:last; sustain   |
|  | 800A:20min   |
|  | 1000A:5min   |
|  | 3000A:4s   |
|  | 8000A:10ms   |

Remarks: (1) Unless otherwise indicated, the test temperature is 23 °C, the on-off ratio is 0.05s:20s. During the test, the coil is not connected with surge suppression device. Please note that if the coil parallel diode is used, the release time of the contactor will be greatly prolonged and the service life will be reduced.

(2) The ambient temperature is 85 °C, and the cross-sectional area of the conductor is  $\geq 200 \text{ mm}^2$ . For detailed current loading conditions, please refer to the attached figure "tolerance curve".

(3) 8000A 10ms is short-circuit current tolerance, the contactor may stick, but it will not burn or explode

### Performance Parameters

|                                   |                           |                                 |
|-----------------------------------|---------------------------|---------------------------------|
| Insulation Resistance             |                           | 1000MΩ(1000VDC)                 |
| Dielectric Withstand Voltage      | Between Contacts and Coil | 3000VAC 1min                    |
|                                   | Between Open Contacts     | 3000VAC 1min                    |
| Operating Time (at rated voltage) |                           | ≤50ms                           |
| Release Time (at rated voltage)   |                           | ≤30ms                           |
| Impact                            | Stability                 | 196m/s <sup>2</sup>             |
|                                   | Strength                  | 490m/s <sup>2</sup>             |
| Vibration                         |                           | 10Hz ~ 500Hz 49m/s <sup>2</sup> |
| Fumidity                          |                           | 5% ~ 85%RH                      |
| Temperature                       |                           | -40°C ~ 85°C                    |
| Form Of Load Outlet               |                           | M10 External Thread             |
| Weight                            |                           | About 1850g                     |
| Dimensions                        |                           | 146mm×66.6mm×132.8mm            |

Note: The above values are the initial values at room temperature.

### Coil Parameters

| Rated Voltage VDC | Operating Voltage VDC | Release Voltage VDC | Coil Power Consumption W                                  |
|-------------------|-----------------------|---------------------|---|
| 12                | ≤9                    | 1~9                 | When switched on: 50 (Switch on 0.2s)<br>When holding: 10 |
| 24                | ≤18                   | 2~18                | When switched on: 50 (Switch on 0.2s)<br>When holding: 10 |

Note: The above values are conservative values in the full temperature range (-40°C ~ 85°C).

### Example Of Order Marking

**HFEVC - T F 600 / 750 - 12 - C N SM -**  

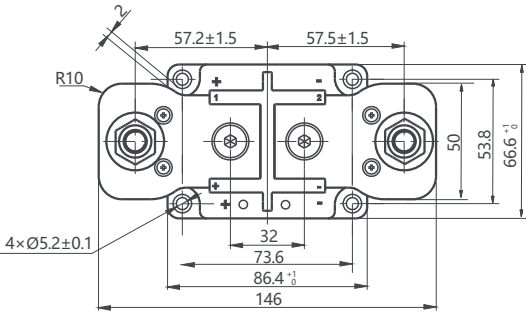
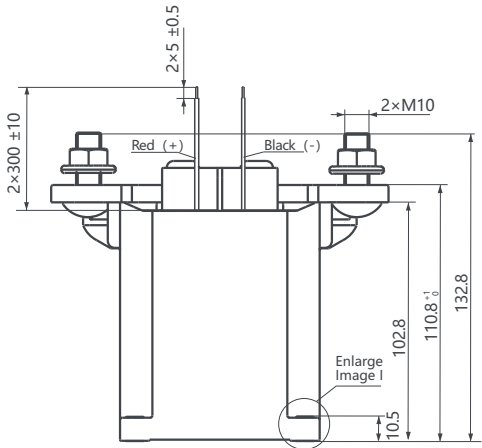
1 2 3 4 5 6 7 8 9 10

- |                                  |   |
|----------------------------------|---|
| 1、Product Model                  | HFEVC: Huanfang High Pressure Contactor                     |
| 2、Product Type                   | T: Ceramic Seal Type    H: Epoxy Sealed Type                |
| 3、Product Appearance             | F: Square Product    Y: Circular Products                   |
| 4、Series Code                    | 600: 600A   |
| 5、Voltage Classes                | DC Blank: 450V    750: 750V                                 |
| 6、Coil Voltage                   | 12: DC12V    24: DC24V    PWM: 9V~24V                       |
| 7、Coil Lead - out Mode           | C: Connector;    L: Outlet;                                 |
| 8、With Auxiliary Contact Or Not  | Blank: Without    N: With Normally Open Auxiliary Contacts  |
| 9、Installation Mode              | Blank: Vertical Installation    SM: Horizontal Installation |
| 10、Customer Characteristics Code | Subject To Customer Requirements                            |

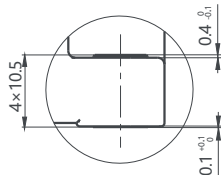
Remarks :(1) special requirements of customers shall be marked in the form of special number after review by our company.

### Outline drawing, mounting hole size

Unit: mm

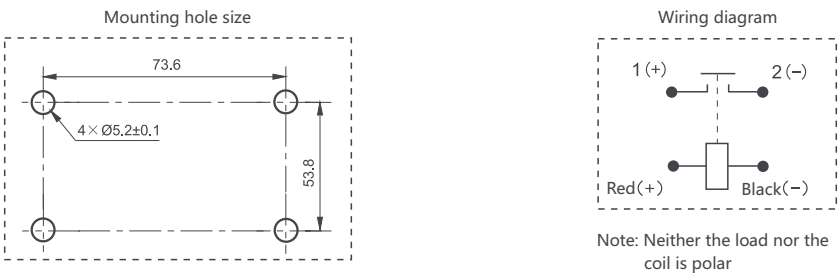


Enlarge Image I

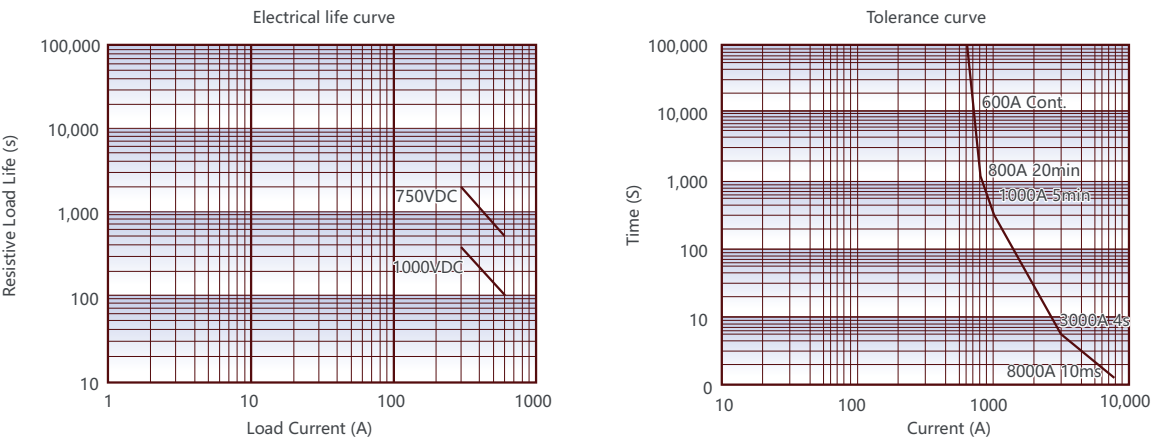


Note: The external dimension of part of the product is not marked with tolerance. When the external dimension is ≤10mm, the tolerance is ±0.3mm;  
When the external dimensions are between (10~50) mm tolerance is ±0.5mm; When the external dimension is > 50mm, the tolerance is ±0.8mm.

Mounting hole size/Wiring diagram



Performance graph



Remark: Rated electrical life number is based on resistive load. Test under switch on/off. Switch on for 0.6s and off for 5.4s.

Note: The above data is measured under the conditions of ambient temperature 85°C and the sectional area of conductor wire  $\geq 200\text{mm}^2$ . The data is for reference only, do not use it to select fuse directly.



Precautions for use

1. To prevent looseness, please use gasket when installing contactor. Please use M5 screw at the installation position of contactor, and the locking torque of screw should be controlled within 3N·m~4N·m; the screw locking torque at the installation position of outlet should be controlled within 20N·m~25N·m. In case of exceeding the range, it may cause damage.
- | Load the mounting part of the leading-out terminal |                    |                        |                      | Contactor mounting part |                    |
|--|--------------------|------------------------|----------------------|-------------------------|--------------------|
| Installation                                       | Torque requirement | Aperture of copper bar | Copper bar thickness | Installation            | Torque requirement |
| M10 Bolt   | 20N·m~25N·m        | Ø10~Ø10.5mm            | $\geq 6\text{mm}$    | M5 Screw                | 3N·m~4N·m          |
2. Avoid sticking grease and other foreign bodies on the leading-out piece, and use the connection wire of  $200\text{mm}^2$  or above, otherwise abnormal heating may be caused at the leading-out end.
3. The product is built with an energy-saving board. The coil will switch after 0.2s is driven, but the repeated on/off operation  $< 0.2\text{s}$  will cause contactor failure.
4. The product with built-in circuit board cannot be driven by slow rising voltage. Please drive the coil by fast rising edge (step power supply mode), otherwise it won't move!



Statement:

1. The document is for customer reference only. Huanfang has made every effort to ensure the accuracy of the information in this document. However, mistakes are inevitable, and the products, specifications and parameters may be changed due to product improvement. For the specific parameters and performance of each product, please refer to the specifications and samples provided by Huanfang without further notice.
2. As for the application field, it is impossible for Huanfang to evaluate all performance parameters of contactor in each specific application field. Therefore, customers should select the products matching with the contactor according to the specific service conditions. If the requirements are not specified clearly, please contact Huanfang for more technical support. Huanfang clearly states that the information in this document is only for selection reference, and the responsibility of product selection is only the responsibility of the customer.