



### 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
- 50A 85°C long time current carrying capacity
- The rated voltage of cut-off load is 12-750VDC
- The insulation resistance reaches 1000m Ω (1000VDC) and meets the requirements of IEC 60664-1
- There is no polarity requirement for load and coil.

### Contact Parameters

Contact Form	1a	
Contact Resistance	≤1mΩ (at 20A)	
Contact Rated Load	50A	
Mechanical Durability	2×10 <sup>5</sup> times	
	<b>450V Type</b>	<b>750V Type</b>
Max. Switching Voltage	1000VDC	1000VDC
Max. Breaking Current	500A(320VDC)1 times	500A(320VDC)1 times
Max. Switching Power	22.5kW	37.5kW
The Durability Of Electricity <sup>(1)</sup>	Resistive Load	Switchover: 1.5×10 <sup>4</sup> times (450VDC, 50A)
		Switch on: 2×10 <sup>4</sup> times (450VDC,50A)
Current Tolerance <sup>(2)</sup>		Switchover: 4×10 <sup>3</sup> times (750VDC, 50A)
		Switch on: 1×10 <sup>4</sup> times (750VDC,50A)
		50A:last; sustain
		80A:10min
		120A:60s
		500A:1s

Remarks: (1) Unless otherwise indicated, the test temperature is 23 °C, the on-off ratio is 0.6s: 5.4s. 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 ≥ 14 mm<sup>2</sup>. For detailed current loading conditions, please refer to the attached figure "tolerance curve".

### 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)		≤30ms
Release Time (at rated voltage)		≤10ms
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		M5 Internal Thread
Weight		About 225g
Dimensions		54.5mm×40.5mm×57.8mm

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	≥1.2	3.6W
24	≤18	≥2.4	3.8W

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

### Example Of Order Marking

**HFEVC - T Y 050 / 750 - 12 - C N SM -**

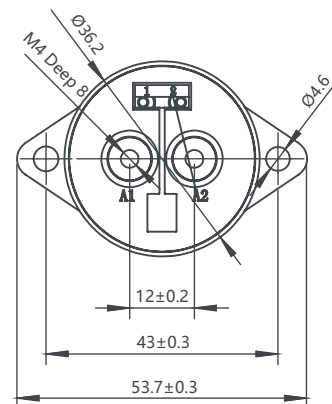
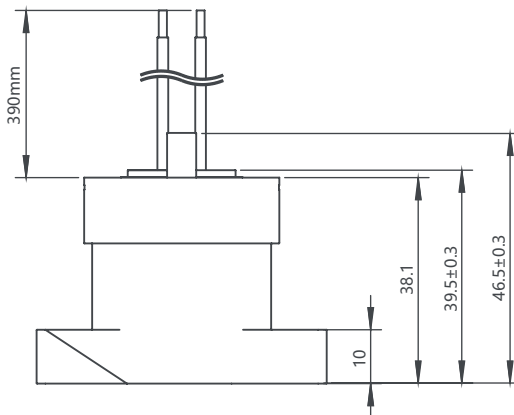
1 2 3 4 5 6 7 8 9 10

- |                                  |  |
|----------------------------------|--|
| 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                    | 050: 50A   |
| 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                         |

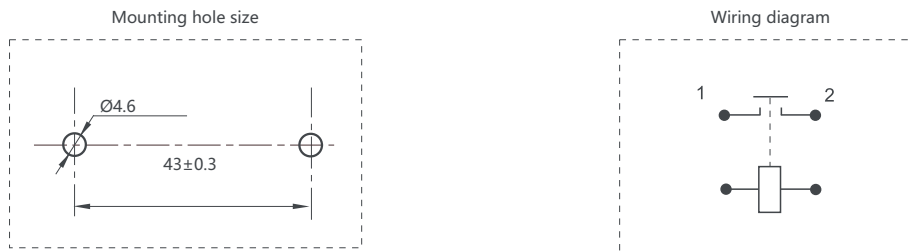
Remarks :(1) special requirements of customers shall be marked in the form of special number after review by our company.

### Outline drawing, mounting hole size

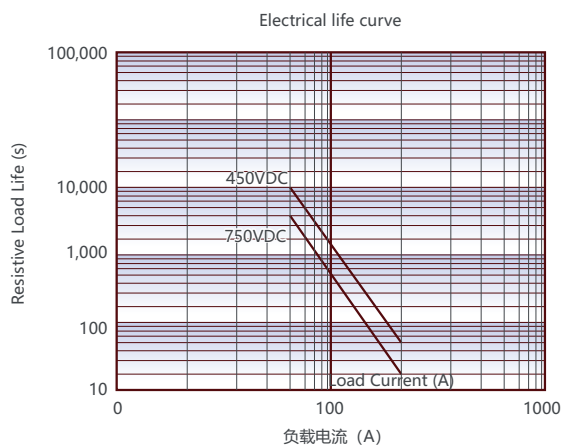
Unit: mm



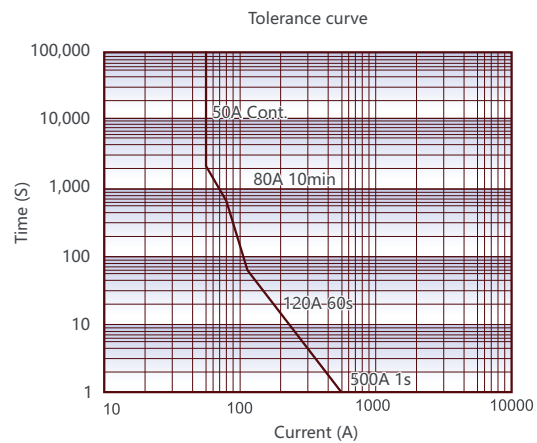
### Mounting hole size/Wiring diagram



### 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  $\geq 14\text{mm}^2$ . 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 install the contactor and load outlet in the way specified in the table below, and control the torque within the required range. In case of exceeding the range, the contactor may be damaged.

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
M4 Screw (Internal thread type)	1.8N·m~2.7N·m	Ø4.0~Ø4.5mm	3mm	M4 Bolt	1.8N·m~2.7N·m

2. Please to avoid sticking grease and other foreign bodies on the leading-out piece, and use the connection wire of  $14\text{mm}^2$  or above, otherwise abnormal heating may be caused at the leading-out end.
3. It is suggested that the thickness of copper strip is 3mm, otherwise it will cause the problem of thread sliding teeth or loose installation.



#### 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.