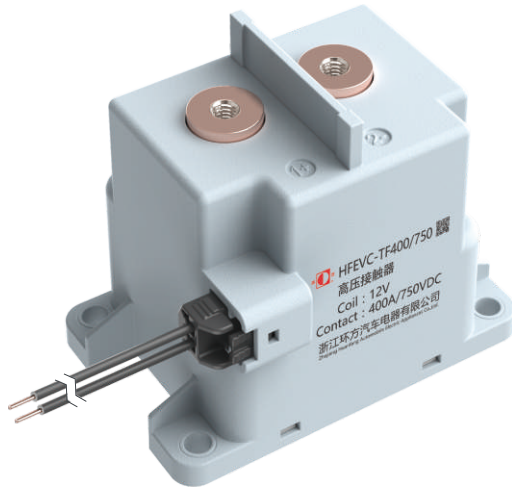


### Product Features



- 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
- 400A 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
- 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	≤0.5mΩ (at 400A)		
Contact Rated Load	400A		
Mechanical Durability	2×10 <sup>5</sup> times		
	<b>450V type</b>	<b>750V type</b>	
Max. Switching Voltage	1000VDC	1000VDC	
Max. Breaking Current	2500A(320VDC)1times	2500A(320VDC)1times	
Max. Switching Power	180kW	300kW	
The Durability Of Electricity <sup>(1)</sup>	Capacitive Load	Switch on: 2×10 <sup>4</sup> times (22.5VDC, τ=1ms, impact 500A, steady state 400A)	Switch on: 1×10 <sup>4</sup> times (37.5VDC, τ=1ms, impact 500A, steady state 400A)
	Capacitive Load	Switch on 1times (360VDC, τ=1ms, impact 1350A, steady state 400A)	
	Resistive Load	Breaking 1×10 <sup>4</sup> times (450VDC,80A)	Breaking 1×10 <sup>4</sup> times (750VDC,80A)
	Resistive Load	Switchover: 2×10 <sup>3</sup> times (450VDC,400A)	Switchover: 1×10 <sup>3</sup> times (750VDC,400A)
Current Tolerance <sup>(2)</sup>	400A:last; sustain		
	600A:20min		
	1200A:30s		
	3000A:0.6s		

Remarks: (1) Unless otherwise indicated, the test temperature is 23 °C, the on-off ratio is 0.6s: 5.4s.

(2) The ambient temperature is 85 °C, and the cross-sectional area of the conductor is ≥ 120 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		M6 Internal Thread
Weight		About 700g
Dimensions		93.0mm×65.1mm×74.9mm

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	≥3.6	When switched on: 45 (Switch on 0.2s) When holding: 3.8
24	≤18	≥7.2	When switched on: 45 (Switch on 0.2s) When holding: 3.8

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

**Example Of Order Marking**

**HFEVC - T F 400 / 750 - 12 - C N SM -**  

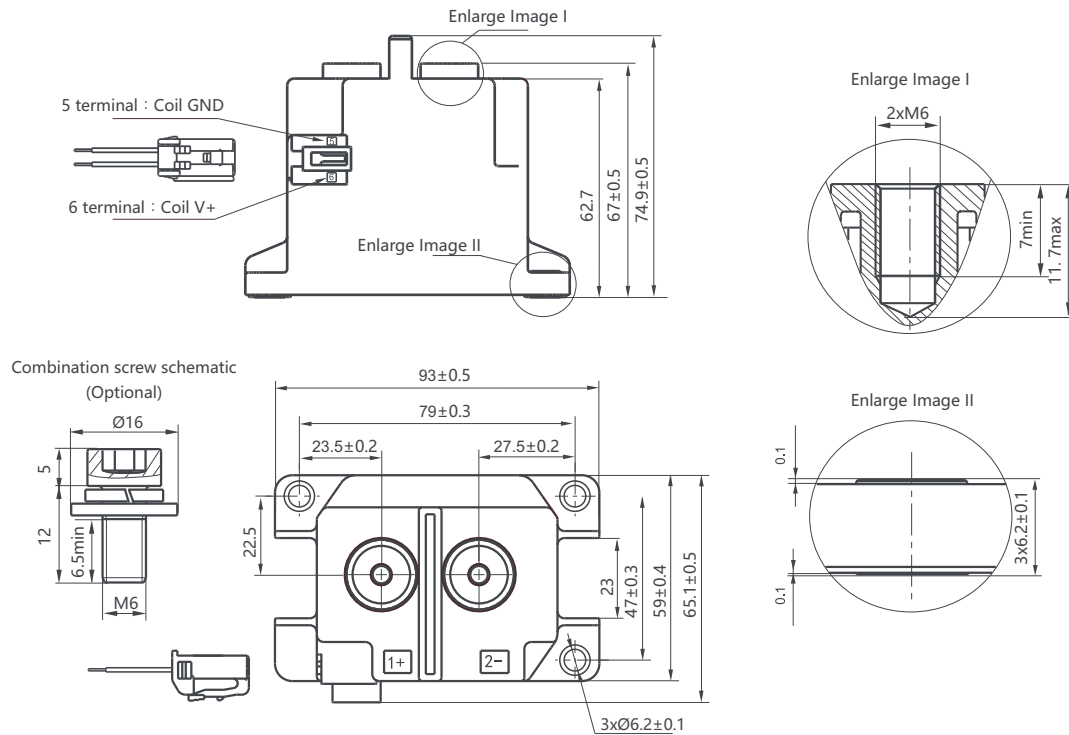
1 2 3 4 / 5 6 7 8 9 10

- |                                   |  |
|-----------------------------------|--|
| 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                    | 400: 400A  |
| 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.

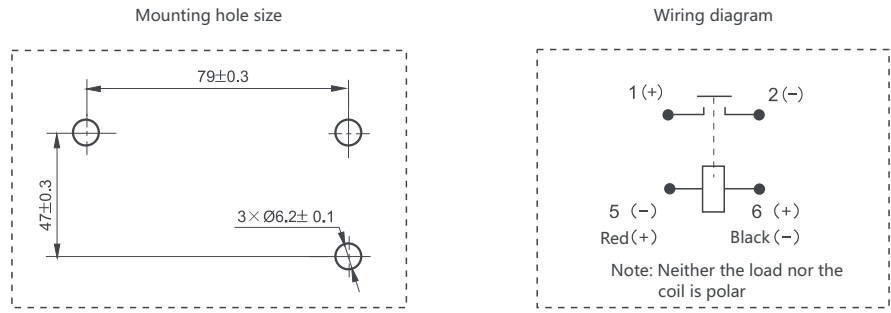
**Outline drawing, mounting hole size**

Unit: mm



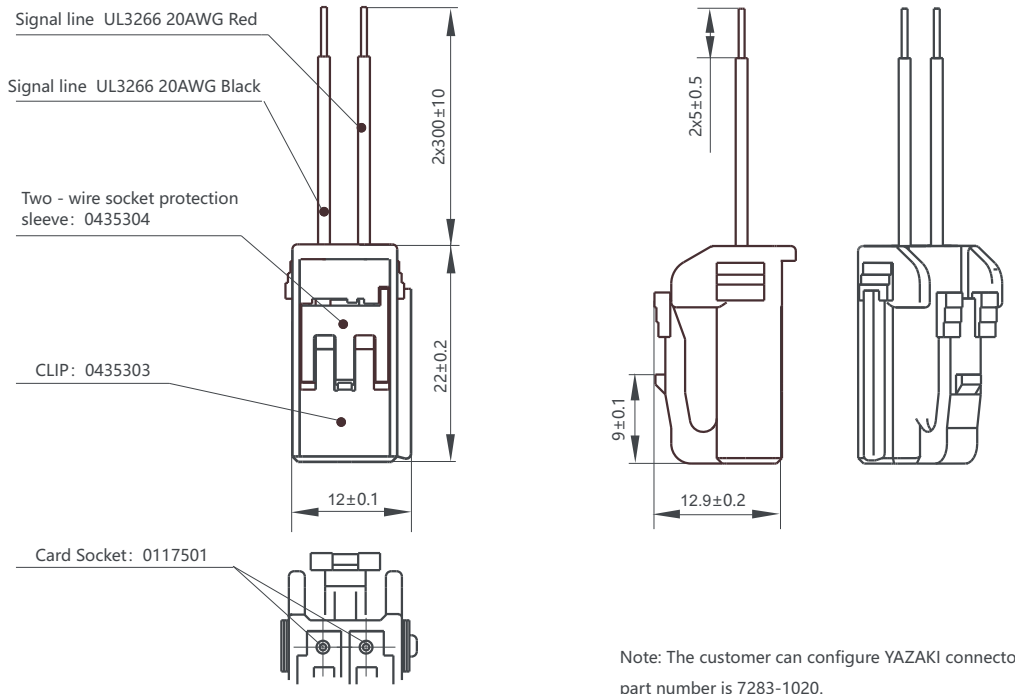
Note: The external dimension of part of the product is not marked with tolerance. When the external dimension is ≤10mm, the tolerance is ±0.3mm; When the external dimensions are between (10~50) mm tolerance is ±0.5mm; When the external dimension is > 50mm, the tolerance is ±0.8mm.

**Mounting hole size/Wiring diagram**

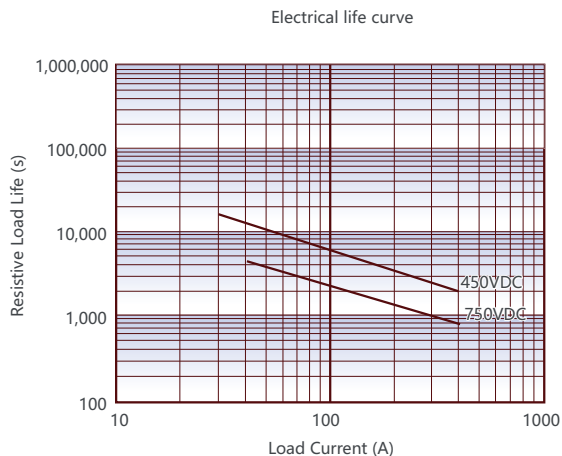


**Coil take-up form**

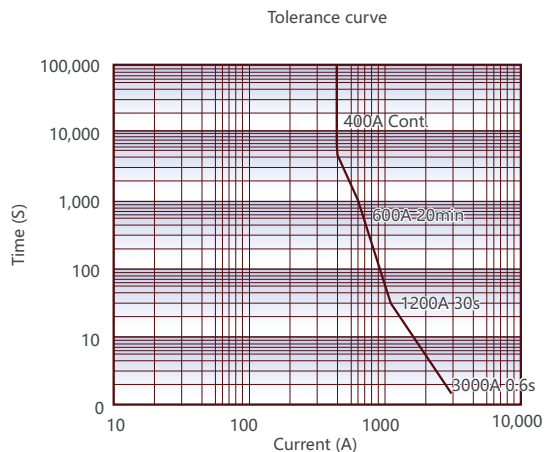
C : Connector ( YAZAKI 7283-1020)



## 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  $\geq 120\text{mm}^2$ . The data is for reference only, do not use it to select fuse directly.



## Precautions for use

1. To prevent looseness, use a gasket when installing the contactor. Please use M5 screw at contactor installation. Screw locking torque should be controlled within 3N·m~4N·m; The screw locking torque at the installation of the leading end should be controlled at 9N·m~11N·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
M6 Screw	9N·m~11N·m	Ø6.0~Ø6.5mm	6mm	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 120mm<sup>2</sup> 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 < 0.2s 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!
5. It is recommended that the thickness of copper strip be 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.