



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
- 20A 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	4.5mΩ (at 20A)	
Contact Rated Load	20A	
Mechanical Durability	2×10 ⁵ times	
	450V type	750V type
Max. Switching Voltage	1000VDC	1000VDC
Max. Breaking Current	200A(320VDC)1times	200A(320VDC)1times
Max. Switching Power	9kW	15kW
The Durability Of Electricity ⁽¹⁾	Resistive Load	Switchover: 1×10 ⁵ times (450VDC,20A)
		Switchover: 7.5×10 ⁴ times (750VDC,20A)
Current Tolerance ⁽²⁾		20A:last; sustain
		30A:1h
		40A:20min
		80A:30s
		120A:10s
		200A:0.6s

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 ≥ 4 mm². 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 ²
	Strength	490m/s ²
Vibration		10Hz~500Hz 49m/s ²
Fumidity		5%~85%RH
Temperature		-40°C~85°C
Form Of Load Outlet		QC outlet
Weight		About 150g
Dimensions		78.0mm×39.8mm×46.1mm

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	2.6
24	≤18	≥2	2.6

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

Example Of Order Marking

HFEVC - 1 F 020 / 750 - 12 - C N SM -

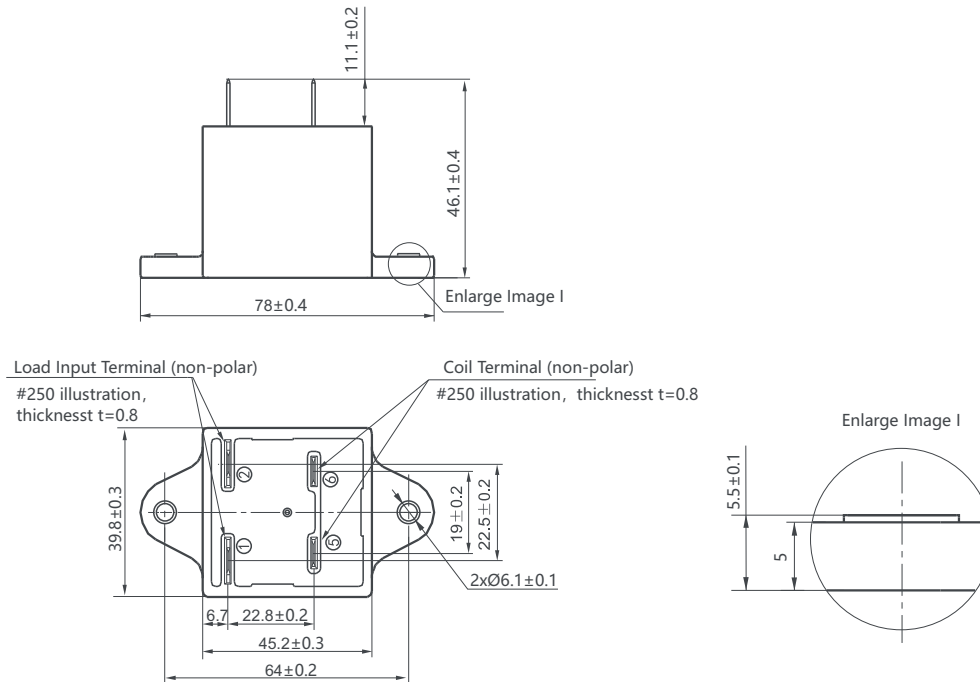
1 2 3 4 / 5 6 7 8 9 10

- | | |
|----------------------------------|--|
| 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 | 010: 10A |
| 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; QC Insert Type Leading End |
| 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

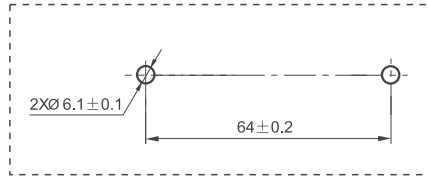
Unit: mm



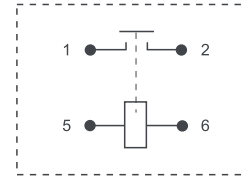
Note: The external dimension of part of the product is not marked with tolerance. When the external dimension is ≤10mm, the tolerance is ±0.2mm; When the external dimensions are between (10~50) mm tolerance is ±0.3mm; When the external dimension is > 50mm, the tolerance is ±0.4mm.

Mounting hole size/Wiring diagram

Mounting hole size



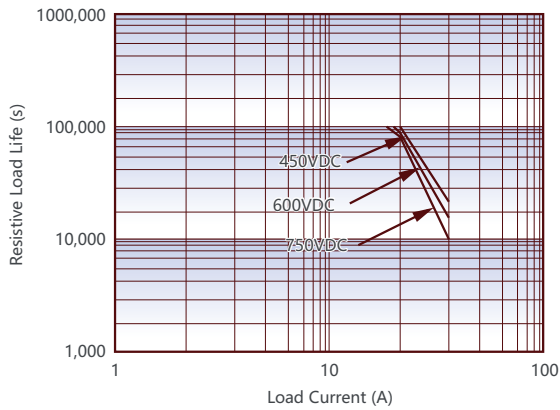
Wiring diagram



Note: Neither the load nor the coil is polar

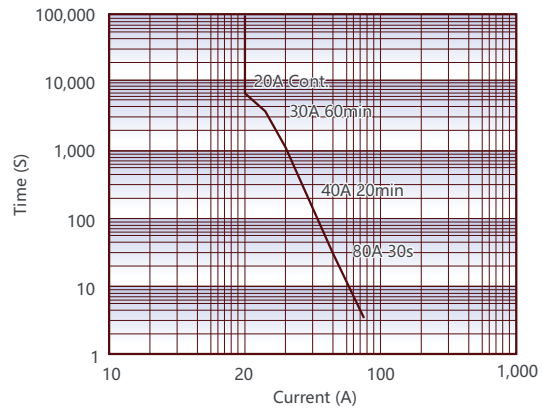
Performance graph

Electrical life curve



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.

Tolerance curve



Note: The above data is measured under the conditions of ambient temperature 85°C and the sectional area of conductor wire $\geq 4 \text{ mm}^2$. 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. M4 screw should be used at the installation of contactor, and the locking torque of screw should be controlled within 3N·m~4N·m; the allowable pulling force of lead out pin of contactor is (1) load outlet: $\leq 49\text{n}$; (2) coil lead out pin: $\leq 49\text{n}$. In case of exceeding the range, it may cause damage.
2. Please avoid sticking grease and other foreign matters on the lead-out piece, and use the connecting wire with the specification of more than 4mm^2 , otherwise it may cause abnormal heating of the lead-in end.



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.