

HCZ02-50 Specifications

Ratings:

- ◇ Max. Switching Voltage: 1500VDC
- ◇ Rated Current: 50A
- ◇ Main Contact Type: SPST-NO
- ◇ Auxiliary Contact: SPST-NO
- ◇ Auxiliary Contact Type: Optional
- ◇ Coil Rated Voltage : 12VDC\ 24VDC\ 48VDC
- ◇ Ambient Operation Temperature : -40°C~+85°C
- ◇ Ambient Operation Humidity : 5%~85%RH



Approvals/Standard:

- ◇ REACH
- ◇ RoHS
- ◇ CE
- ◇ UL

Features&Benefits:

Compact structure, fully sealed package, internal filled with inert gas, combined with magnetic arc blowing out can quickly extinguish the arc, so that the product shape can be small;

Epoxy resin package, the contact part is sealed in thesealed chamber filled with inert gas, contact no oxidation, arc noeakage, so as to ensure that the product has good safety;

Carrying current 50A continuously at 85°C;

Product Model:

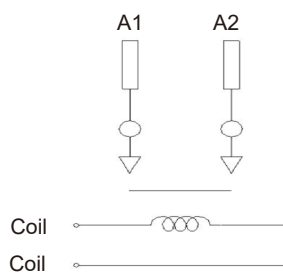
	HC	Z02	-	50	F	-24	P	- ()
Company Code								
Series Code	Z02 Series							
Contact Rating(Rated Current)	50:50A							
Auxiliary Contact	Nil: No Auxiliary Contact F: SPST-NO							
Coil Voltage	12:12VDC; 24:24VDC; 48:48VDC							
Main Contact Type	Nil: SPST-NO, Non-Polarized P: SPST-NO, Polarized							
Special Code	XXX: Customer Special Code; Nil: Standard							

Characteristic parameter

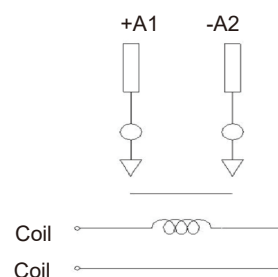
MAIN CONTACT DATA					
Max. Switching Voltage	1500VDC	Rated Current	50A (@10mm ² wire)		
Contact Arrangement	SPST-NO	Contact Voltage Drop	≤0.1V(at 50A)		
Limiting Short-time Current	150A:30s; 250A:10s				
Electrical Life (Resistive Load)	50A 450VDC 10000 ops	50A 750VDC 3000 ops	50A 1000VDC 1000 ops	15A 1500VDC 1000 ops	
Max.Breaking Current(Resistive Load)	400A 320Vdc 1ops				
CHARACTERISTIC DATA					
Dielectric Strength	Between Main Contacts and Coil	Before Test≥3000VAC (1min) After Test≥3000VAC (1min)	Insulation Resistance	Between Main Contacts and Coil	Before Test≥1000MΩ (1000VDC) After Test≥50MΩ (1000VDC)
	Between Open Main Contacts	Before Test≥2200VAC (1min) After Test≥1500VAC (1min)		Between Open Main Contacts	Before Test≥1000MΩ (1000VDC) After Test≥50MΩ (1000VDC)
Shock Resistance	Functional	196m/s ² 20G above	Vibration Resistance	Functional	10~500Hz,49m/s ²
	Destructive	490m/s ² 50G above			
Operate Time	Max:30ms		Mechanical Life	2*10 ⁵ ops	
Release Time	Max:10ms		Weight	Approx 180g	
COIL DATA					
Rated Voltage	12VDC		24VDC	48VDC	
Pick-up Voltage	≤9VDC		≤18VDC	≤36VDC	
Drop-out Voltage	≥1VDC		≥2VDC	≥4VDC	
Rated Operating Power	5.5W		6.0W	6.0W	
Coil Resistance	27(1±7%)Ω		96(1±7%)Ω	392(1±7%)Ω	
AUXILIARY CONTACT DATA					
Auxiliary Contact Arrangement	SPST-NO		Auxiliary Contact Range	30mA/5VDC~1A/125VAC	
Auxiliary Contact Resistance	≤150mΩ		Auxiliary Switch Minimum Load	5Vd.c. 100mA	

Wiring diagram

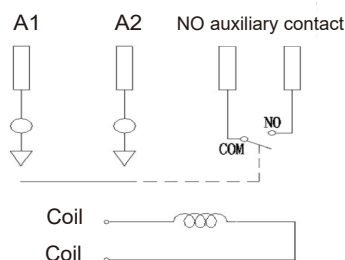
Load non-polar, no auxiliary



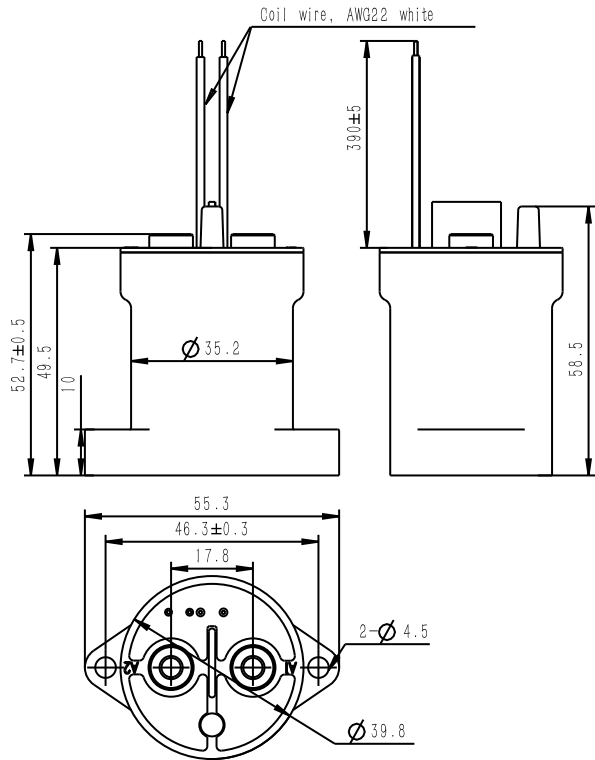
The load is polar , no auxiliary



Load non-polar, with normally open auxiliary contact



Outline dimensional



Caution:

1. All the performance parameters listed in this specification are deemed as initial value measured under standard testing conditions.
2. Used in environment temperature $-40^{\circ}\text{C}\sim+85^{\circ}\text{C}$, humidity 5%~85%RH.
3. Please avoid installing the device near high magnetic fields (eg. transformers or magnetics) or hot objects.
4. The electrical life test is performed with resistive load. Therefore, please take surge absorption measures in parallel with inductive load when the device is applied to inductive load circuit with $L/R\geq 1\text{ms}$. Otherwise, the electrical life is likely to decline, resulting in poor cutting off.
5. Measures including precharging etc. must be taken if the device is to be applied in capacitive load circuit. It is suggested that the differential pressure be controlled within 20V when the contactor is in closed position. Otherwise, it might lead to contact adhesion.
6. It is recommended to install a non-linear resistor (Variable resistors are preferred with over 1J maximum energy tolerance and 1.5-2 times of rated voltage) to suppress the reverse electromotive force generating from the contactor coil. Please be noted that the using of diode will prolong the release time of contactor, leading to degradation of cut-off performance.
7. Please avoid adhering such foreign matters as grease etc. on the leading-out terminals. Over 35mm^2 conductors shall be used. Otherwise, it will cause abnormal heating of leading-out terminals.
8. Please avoid collision or falling during use or transportation. In order to maintain the performance of the product, it is not recommended to continue to use it after impact or fall.
9. When the product is connected with one or more conductive copper bars, please ensure that the conductive busbars closely fit the contact terminal surface (The conductive copper bars with high current must be close to the contact terminal surface if there are multiple copper bars and then conductive busbars with low current), followed by flat washers, spring washers and screws. Incorrect connection sequence perhaps give rise to severe overheating. Refer to Figure 1 as follows:

10. When installing the screws, the thread engagement depth shall not be too shallow, otherwise it may cause the sliding teeth to become loose. It is recommended that the engagement depth be at least 2/3 of the thread depth.

11. To prevent looseness, the contactor shall be locked with washer screws during installation, and the screw locking torque of each part shall be controlled within the following range:

Main loading installation part				Contactor shell installation department (figure 2)		
Installation method	Torque requirements	Diameter of busbar	Busbar thickness	Installation method	Torque requirements	Diameter of baseboard
M5 Screw	3.4N·m~4.5N·m	Ø5mm~Ø5.5mm	2~4mm	M4 Screw	1.8N·m~2.5N·m	M4

12. 有效日期 Period of Validity: 二年 Two years

