

HCF250

DIRECT CURRENT RELAY



- Features:**
- Ceramic seal structure, filled in H₂ mixed gas, resist contacts oxidation, the contact resistance is low and stable
 - A group of normally open auxiliary contacts built in
 - Ceramic seal structure with magnetic blow-out technology, realize zero arc, ensure the safety and reliability when you using
 - Carrying current 250A continuously at 85℃
 - No polarity requirement on loading and coil side
 - High resistance to short circuit
 - Full compliance with RoHS requirements

Product Model

	H	C	F	250	□	/	1000	-	12	H	C	1	H	□	-	()
HC Company Code																
Series Code	F: Square Series															
Contact Rating (Rated Current)	250: 250A															
Derivative Model	Nil: Basic Model															
Load Voltage	450: 450VDC; 800: 800VDC; 1000: 1000VDC															
Coil Voltage	12: 12VDC; 24: 24VDC ; 48: 48VDC															
Main Contact Type	H: SPST-NO															
Coil Input Terminal	C: Connector															
Load Input Terminal	1: Internal Thread															
Auxiliary Contact	Nil: No Auxiliary Contact; H: SPST-NO															
Mounting	Nil: Vertical Mounting															
Special Code	XXX: Customer Special Code; Nil: Standard															

CHARACTERISTIC PARAMETER

MAIN CONTACT DATA

Max. Switching Voltage	1000VDC
Rated Current	250A
Contact Arrangement	SPST-NO
Contact Voltage Drop	≤0.125V (at 250A)
Limiting Short-time Current ^①	375A:10min; 500A:120s; 1000A:20s; 2500A:0.6s
Electrical Life(Resistive Load)	250A 450VDC 1000ops 250A 800VDC 500ops
Max. Breaking Current(Resistive Load)	2000A 450VDC 1ops
Overload Breaking(Resistive Load)	500A 450VDC 10ops
Short-Circuit Current	8000A(5ms) No Smoke Or Fire

AUXILIARY CONTACT DATA

Auxiliary Contact	Optional
Auxiliary Contact Arrangement	SPST-NO
Auxiliary Contact Current Range	100mA/8VDC~2A/30VDC

COIL DATA^②

Rated Voltage	12VDC	24VDC	48VDC
Pick-up Voltage	≤9VDC	≤18VDC	≤36VDC
Drop-out Voltage	≥1.2VDC	≥2.4VDC	≥4.8VDC
Rated Operate Power	Approx 6W	Approx 6W	Approx 6W
Max. Allowable Voltage	16VDC	32VDC	64VDC

CHARACTERISTICS DATA^③

Dielectric Strength	Between Contacts And Coil	4000VAC 1min
	Between Open Contacts	3000VAC 1min
Insulation Resistance	Between Contacts And Coil	1000MΩ(1000VDC)
	Between Open Contacts	1000MΩ(1000VDC)
Shock Resistance	Functional	20G Half-Sine Wave 11ms
	Destructive	50G Half-Sine Wave 6ms
Vibration Resistance	Functional	5.79G(10~2000Hz, Random)
Operate Time		Max:30ms
Release Time		Max:10ms
Mechanical Life		2*10 ⁵ ops
Weight		Approx 400g

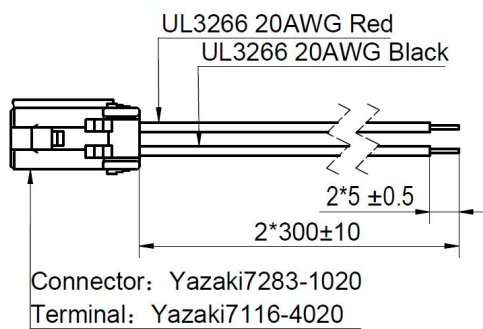
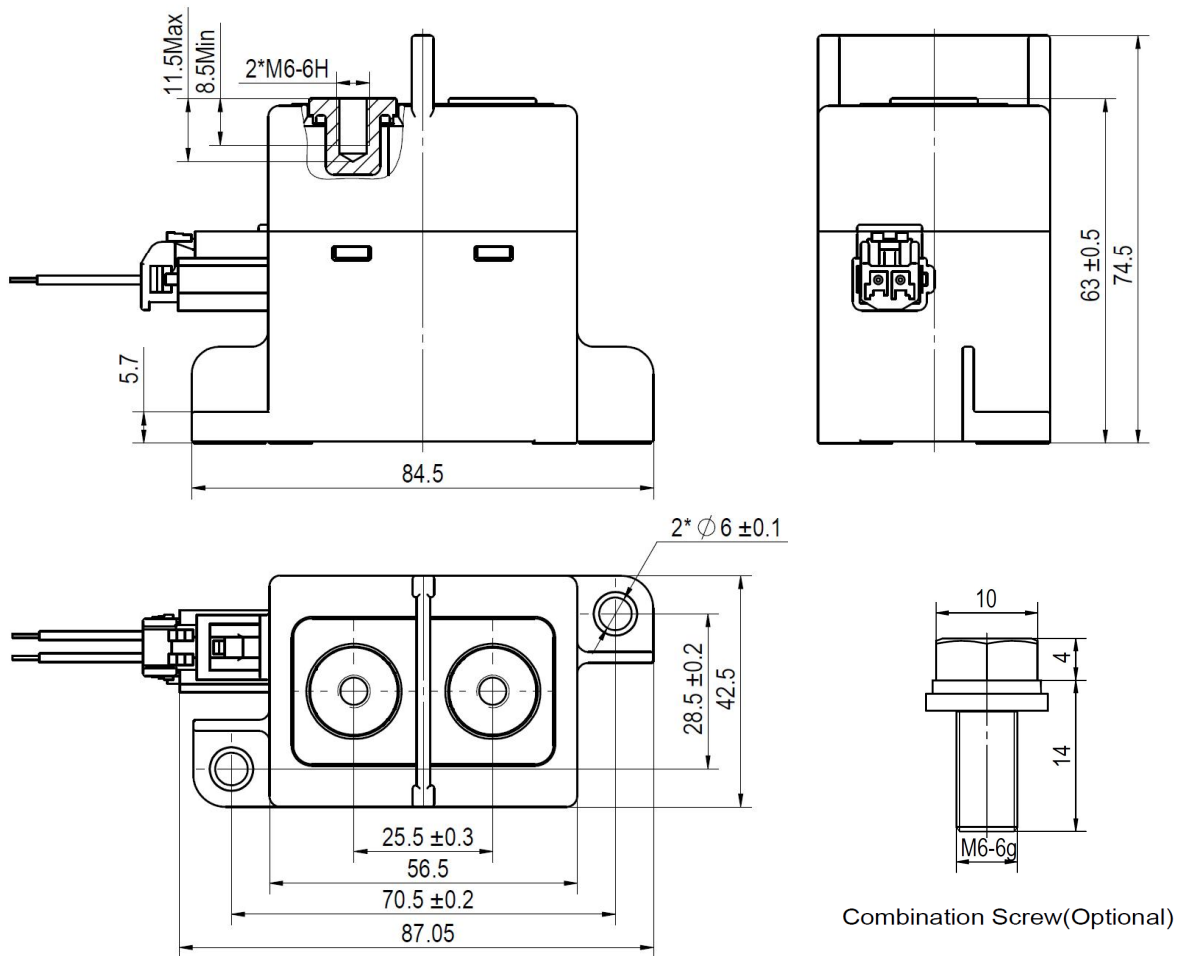
Remark:

① Loading current capability test under 100mm² sectional area cable;

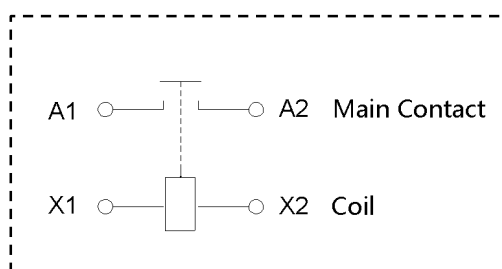
② Product work data test under 23℃;

③ Characteristics data test under 23℃ except vibration resistance; vibration resistance tested under -40℃~85℃; dielectric strength is 2500VAC min, insulation resistance is 50MΩ min after reliability test;

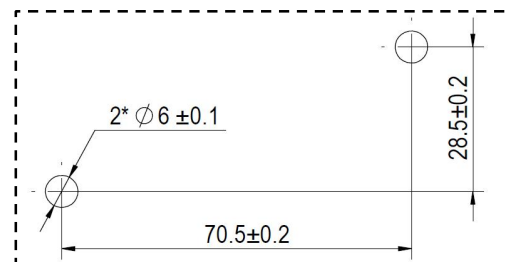
④ Unless special explain, electrical life test break-make ratio is 0.6s:5.4s.

OUTLINE DIMENSIONS
HCF250/□-□-HC1


General Tolerance:
<10mm: ±0.3mm
10~50mm: ±0.5mm
>50mm: ±0.8mm



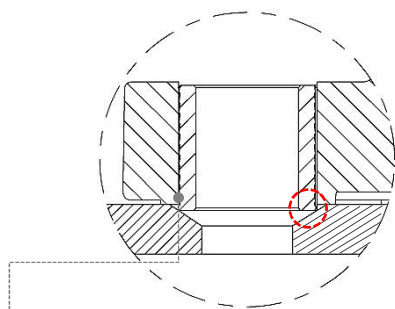
Coil Wiring Diagram



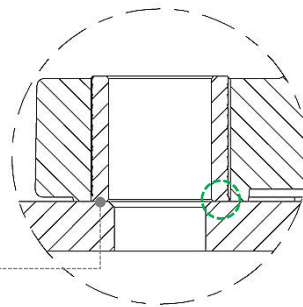
Installation Hole

CAUTIONS

1. Please avoid installing in strong magnetic fields (transformers, magnets around) or hot objects.
2. Use the environment temperature $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$, humidity 5%~85%RH.
3. Electrical life test under $L/R \leq 1\text{ms}$ condition.
4. Please be attention: If parallel diode on coil will increase relay release time and decrease electrical life.
5. Please avoid the adhesion of oil and other foreign material on the lead sheet, please use the cable with 100mm^2 or above, otherwise it may cause the abnormal fever in the lead-out part.
6. In order to prevent loosening, please use the washer screw to lock when the relay is installed, and the screw locking torque of each part should be controlled in the following range:
 - a) Relay shell installation department
Recommend M5 screw: $3\text{N.m} \sim 4\text{N.m}$
 - b) Main loading installation part
Recommend M6 screw: $6\text{N.m} \sim 8\text{N.m}$
7. When screw installation, depth of match should not be too shallow, otherwise may lead to screw loose, recommend $2/3$ of length of thread at least.
8. Relay installation baseboard hole can't be chamfered too much, otherwise relay shell bushes will loose, please refer to below figures:



Baseboard hole chamfering too much, bushes loose



Baseboard hole chamfering suitable, bushes steady