HF197F-135 MINIATURE HIGH POWER RELAY

File No.: CQC22002364474

Features

- Latching relay
- 135A switching capability
- No polarity on the load terminal
- Main contact gap≥0.8mm
- 2.5kV dielectric strength (Between open Main contacts)

RoHS compliant

CONTACT DATA

Contact arrangement	1H/1H+1A
Contact voltage drop (1)	20mV max. (6Vd.c. 20A)
Contact material	$AgSnO_2$
Contact rating(Res. load)	Main contact:Making 135A Breaking 50A,277VAC 125A,24VDC Auxiliary contact:1A 6VDC
Max.Swtiching voltage	Main contact:24VDC/277VAC Auxiliary contact:6VDC
Max.Switching current	Main contact:135A Auxiliary contact:1A
Max. continuous current	135A at 85℃
Max. Switching power	Main contact:3000W/37395VA Auxiliary contact:6W
Mechanical endurance	1×10^5 ops
Electrical endurance	Main contact:1×10^4 ops min.(85℃,1s on 9s off,Making 135A,Breaking 50A,277VAC,Resistive load) 6×10^3 ops min.(85℃,1s on 9s off,125A,24VDC,Resistive load)

Notes: 1) The data shown above are initial values.

COIL

Coil power	Approx. 2.5W

COIL DATA 23℃

Nominal Voltage VDC	Pick-up Voltage[1] VDC max.	Drop-out Voltage[1] VDC max.	Pulse Duration ms	Coil Resistance Ω
12	8.4	8.4	200	57.6 × (1±10%)
24	16.8	16.8	200	230.4 × (1±10%)
48	33.6	33.6	200	921.6 × (1±10%)
60	42.0	42.0	200	1440 × (1±10%)

CHARACTERISTICS

Insulation resistance		100MΩ(500VDC)
Dielectric strength	Between open Main contacts	2500VAC 1min
	Between coil & Main contacts	4000VAC 1min
	Between Main contact & Auxiliary contact	3000VAC 1min
	Between coil & Auxiliary contacts	2000VAC 1min
Surge Voltage (Between coil & Main contacts)		6kV(1.2/50μs)
Operate time (at nomi. volt.)		20ms max.
Release time (at nomi. volt.)		20ms max.
Shock resistance	Functional	Main contacts: 10g
	Destructive	Main contacts: 100g
Vibration resistance		10Hz to 55Hz 1.0mm DA
Humidity		5% to 85%RH
Ambient temperature		-40℃ to 85℃
Termination		PCB
Unit weight		Approx. 50g
Construction		Plastic sealed, Flux proofed

Notes: 1) The data shown above are initial values.

SAFETY APPROVAL RATINGS

CQC	1NO: 1×10^4ops max.(85℃,1s on 9s off,Making 135A,Breaking 50A,277VAC,Resistive load) 6×10^3ops max.(85℃,1s on 9s off, 125A,24VDC,Resistive load)

Notes: 1) All values unspecified are at room temperature.
2) Only typical loads are listed above.Other load specifications can be available upon request.

ORDERING INFORMATION

	HF197F-135	12	-H	A	S	T	F	(XXX)
Type								
Coil voltage	12,24,48,60VDC							
Main contact arrangement	**H:** 1 Form A							
Auxiliary contact arrangement	**A:** 1 Form A **Nil:** Without auxiliary contact							
Construction	**S:** Plastic sealed	**Nil:** Flux proofed						
Contact material	**T:** $AgSnO_2$							
Insulation standard	**F:** Class F							
Special code	**XXX:** Customer special requiremen	**Nil:** Standard						

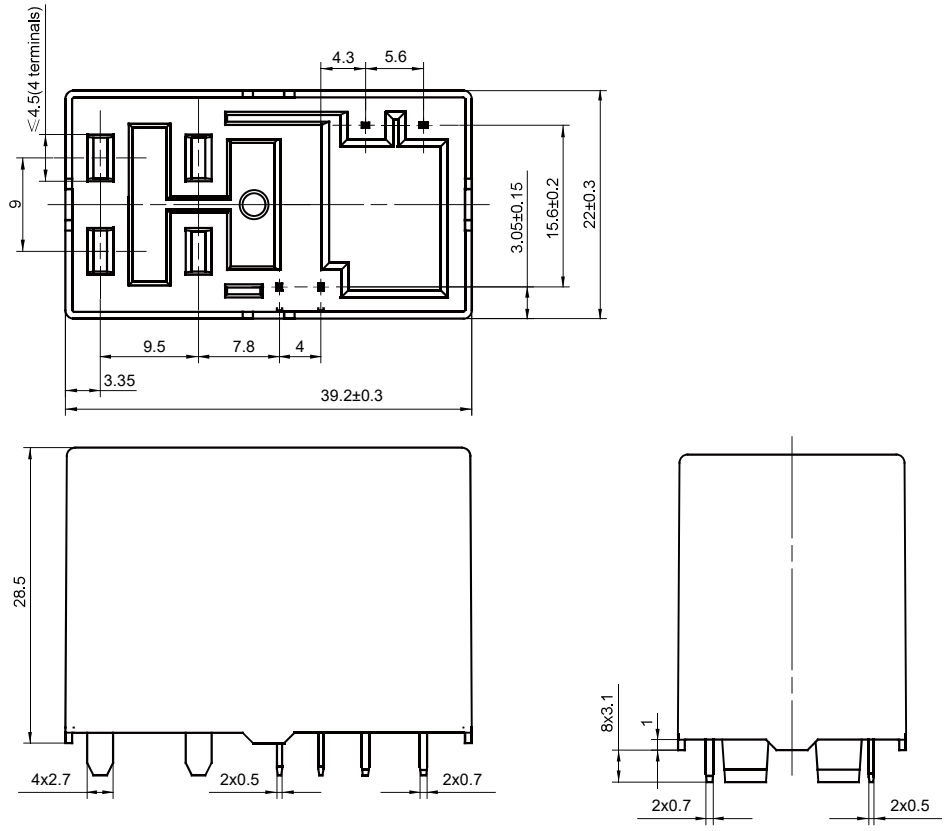
Notes: 1) Please avoid using the relay in an environment containing organic silicon,otherwise the entry of organic silicon into the relay may acceleration contact failure.If there are harmful substances and elements such as water vapor,H2S,SO2,NO2,Cl,P,etc.In the use of environment gases,it may lead to increased contact resistance and poor contact during the use of relays.In the above situations, please control the materials or use plastic sealed type and arrange relevant tests to confirm.
2) Water cleaning or surface process is not suggested after the fiux-proofed relays are assembled on PCB.
3) The customer special requirement express as special code after evaluating by Hongfa.e.g.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions

With Auxiliary Contact

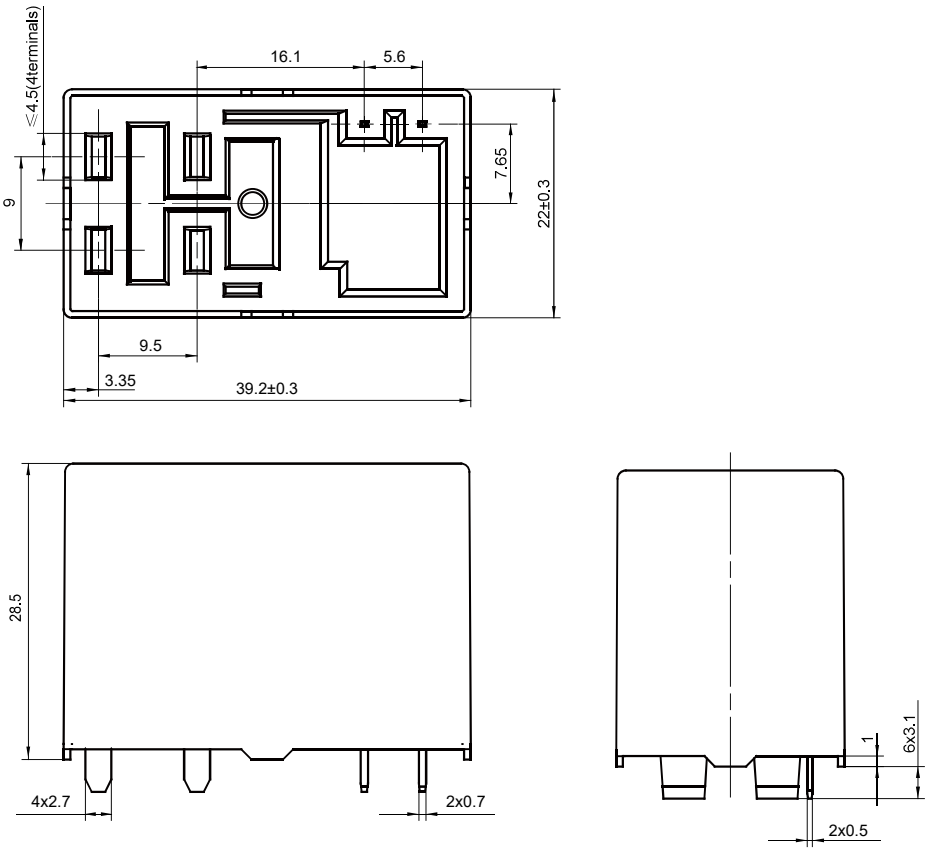


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions

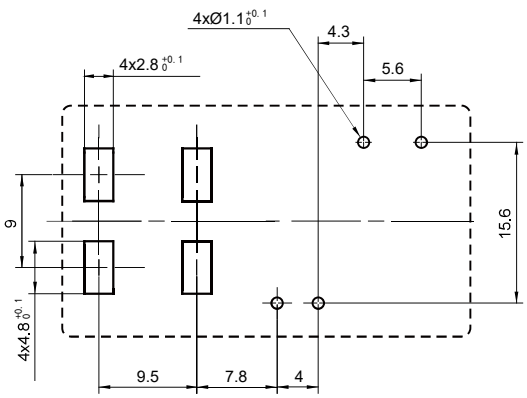
Without Auxiliary Contact



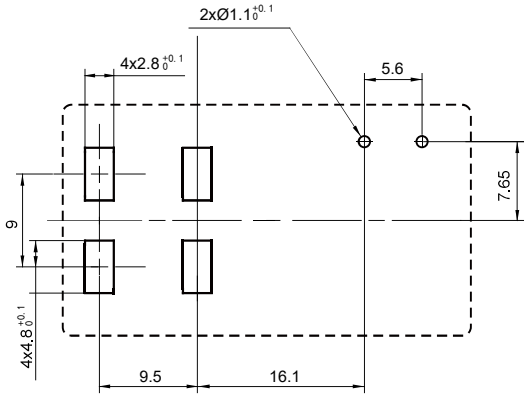
PCB Layout

(Bottom view)

(With Auxiliary Contact)



(Without Auxiliary Contact)

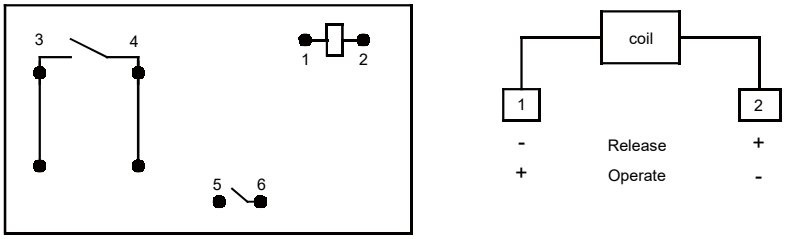


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

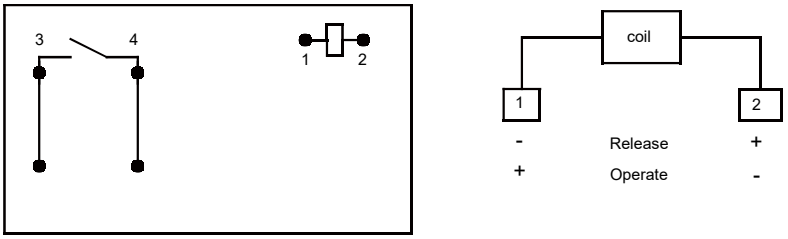
Unit: mm

Wiring Diagram(Bottom view)

(With Auxiliary Contact)



(Without Auxiliary Contact)



Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm;
outline dimension＞1mm and≤5mm,tolerance should be ±0.3mm; outline dimension＞5mm, tolerance should be ±0.4mm;
2) The tolerance without indicating for PCB layout is always ±0.1mm.

Notice:

1) Relay is on the “reset” status when being released from stock,with the consideration of shock risen from transit and relay mounting, relay would be changed to “set” or “reset” status,therefore,when application (connecting the power supply),please reset the relay to “set” or “reset” status on request.
2) In order to maintain “set” or “reset” status, energized voltage to coil should reach the rated voltage. Do not energize voltage to “set” coil and “reset” coil simultaneously. And also long energized time(more than 1 min) should be avoided.
3)Keep the product away from strong magnetic field during transportation, storage and application, to avoid change of set/reset voltage.

Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications subject to change without notice. We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact Hongfa for the technical service. However, it is the user’s responsibility to determine which product should be used only.