

HF197F-150

MINIATURE HIGH POWER RELAY



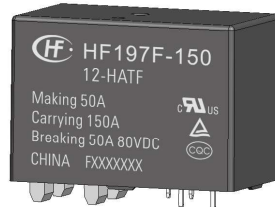
File No.: E133481



File No.: R 50591522



File No.: CQC22002364474



Features

- Latching relay
- 150A switching capability
- No polarity on the load terminal
- Main contact gap $\geq 1.5\text{mm}$
- 3kV dielectric strength (between coil and contacts)

RoHS compliant

CONTACT DATA

Type	HF197F-150	HF197F-150(954)
Contact arrangement	1H/1H+1A	
Contact voltage drop(initial)	Main contact: 20mV max. (6VDC 20A)	
Contact material	AgSnO ₂	
Contact rating(Res. load)	Main contact: Making 50A, Loading 150A, Breaking 50A,80VDC Auxiliary contact: 1A 6VDC	Main contact: Making 50A, Loading 150A, Breaking 50A,277VAC Auxiliary contact: 1A 6VDC
Max.switching voltage	Main contact: 80VDC Auxiliary contact: 6VDC	Main contact: 277VAC Auxiliary contact: 6VDC
Max.Switching current	Main contact: 50A; Auxiliary contact: 1A	
Max. continuous current	150A at 85°C	
Max. Switching power	Main contact: 4000W/ Auxiliary contact: 6W	Main contact: 13850VA Auxiliary contact: 6W
Mechanical endurance	1×10 ⁵ ops	
Electrical endurance	Main contact: $\geq 1 \times 10^4$ ops (85°C,1s on 9s off,Making 50 A loading 150 A breaking 50 A, 80VDC, Resistive)	Main contact: $\geq 1 \times 10^4$ ops (85°C,1s on 9s off,Making 150 A loading 50 A breaking 50 A, 277VAC,Resistive) $\geq 1 \times 10^4$ ops (85°C,1s on 9s off,Making 50 A loading 150 A breaking 50 A, 277VAC,Resistive)

Notes: The data shown above are initial values.

CHARACTERISTICS

Insulation resistance		100MΩ(500VDC)
Dielectric strength	Between open Main contacts	3000VAC 1min
	Between coil & Main contacts	3000VAC 1min
	Between Main contact & Auxiliary contact	3000VAC 1min
	Between coil & Auxiliary contacts	2000VAC 1min
	Surge Voltage (Between coil & Main contacts)	

Notes: The data shown above are initial values.

CHARACTERISTICS

Operate time (at nomi. volt.)		30ms max.
Release time (at nomi. volt.)		30ms max.
Shock resistance	Functional	Main contacts: 5g
	Destructive	Main contacts: 50g
Vibration resistance		10Hz to 55Hz 2g
Humidity		5% to 85%RH
Ambient temperature		-40°C to 85°C
Termination		PCB
Unit weight		Approx. 50g
Construction		Plastic sealed, Flux proofed



HONGFA RELAY

ISO9001, IATF16949, ISO14001, ISO45001, IECQ QC 080000, ISO/IEC 27001 CERTIFIED

2024 Rev. 1.00

COIL

Coil power	Approx. 9.6W
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COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max.	Reset Voltage VDC max.	Pulse Duration ms	Coil Resistance Ω
12	8.4	8.4	200	15 × (1±10%)
24	16.8	16.8	200	60 × (1±10%)
48	33.6	33.6	200	240 × (1±10%)
60	42.0	42.0	200	375 × (1±10%)

Notes: The data shown above are initial values.

SAFETY APPROVAL RATINGS

UL/CUL TÜV CQC	Standard type: Making 50A, carrying 150A, breaking 50A, 80VDC, Resistive, 85°C 150 A, 60VDC, Resistive, 85°C
	(954)type: Making 150A, breaking 50A, 277VAC, Resistive, 85°C

Notes: 1) All values unspecified are at room temperature.

2) Only typical loads are listed above. Other load specifications can be available upon request.

3) Suitable for overvoltage category III, and shall provide protection for a rated impulse withstand voltage peak of 4kV.

ORDERING INFORMATION

Type	HF197F-150	12	-H	A	S	T	F	(XXX)
Coil voltage	9,12,24,48VDC							
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 requirement Nil: Standard							

Notes: 1) Flux-proofed relays cannot be used in the environment with pollutants like H₂S, SO₂, NO₂, dust, etc.

2) Washing or surface cleaning process is not suggested after the flux-proofed relays are assembled on PCB.

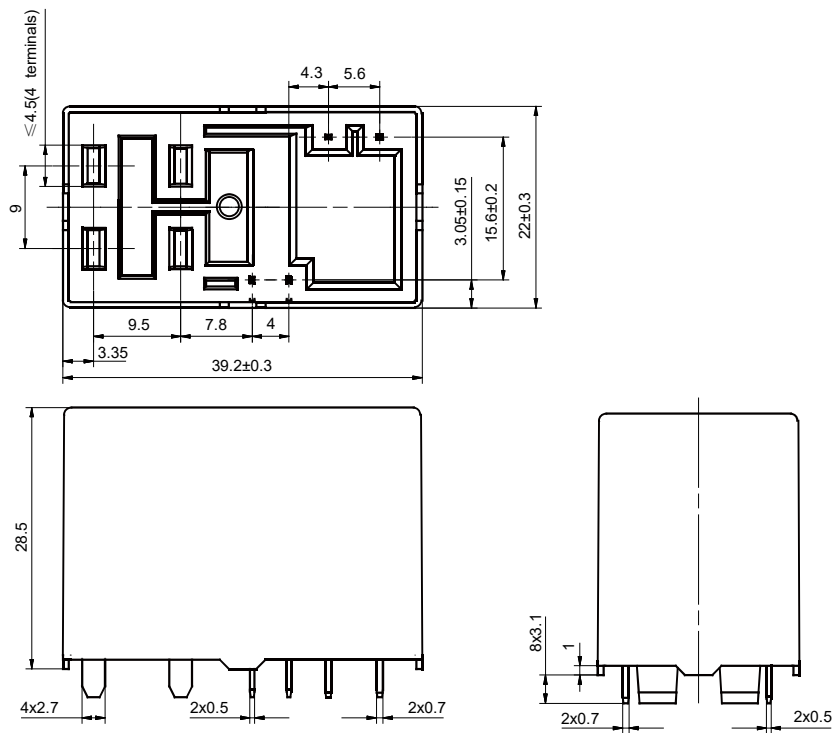
3) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

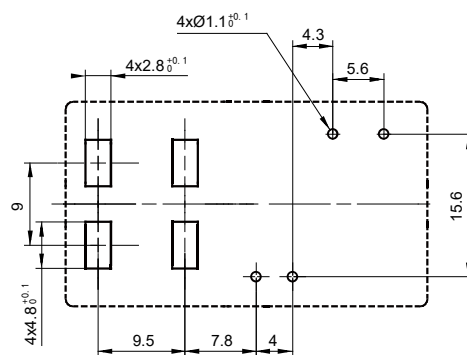
Unit: mm

Outline Dimensions

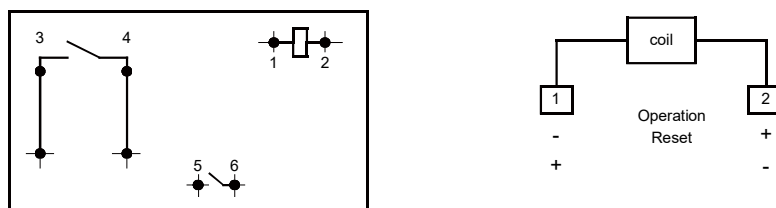
With Auxiliary Contact



PCB Layout (Bottom view)



Wiring Diagram (Bottom view)

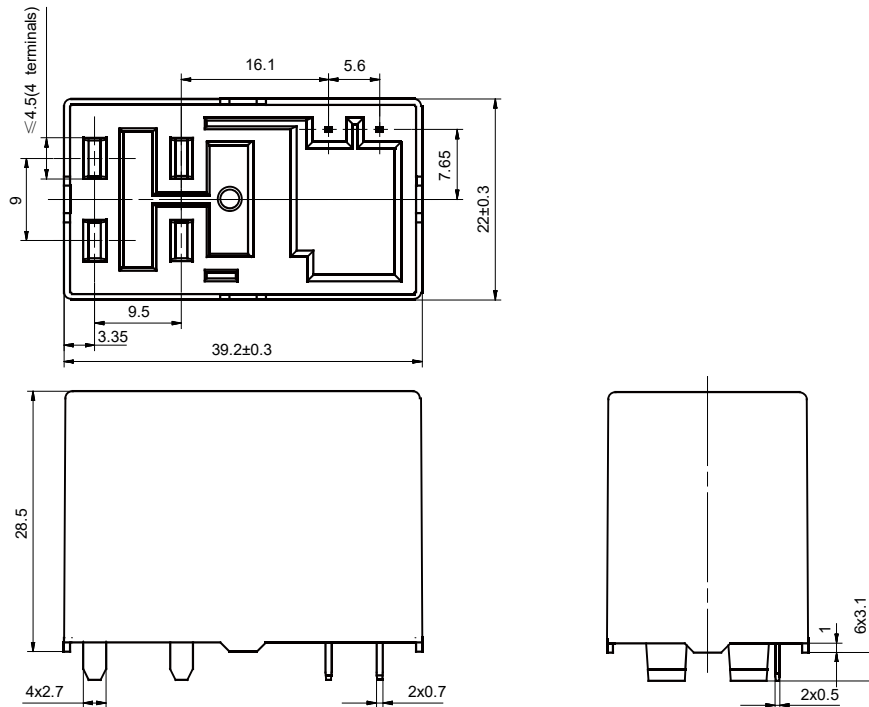


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

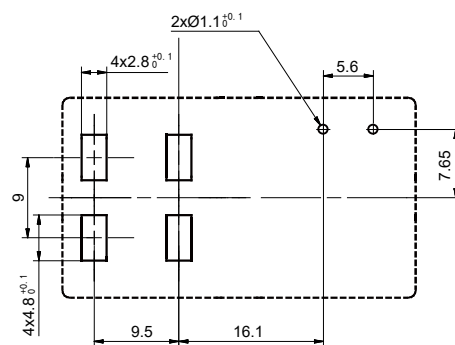
Unit: mm

Outline Dimensions

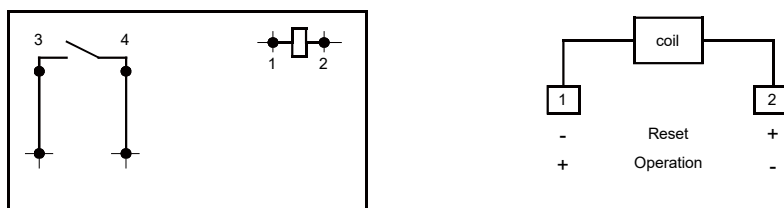
Without Auxiliary Contact



PCB Layout (Bottom view)



Wiring Diagram (Bottom view)



OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Remark: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$;
outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;
2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

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.

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