

HF232F-72

MINIATURE HIGH POWER RELAY



File No.:E133481



File No.:R 50688723



Features

- 1 Form A Configurations
- contact gap: 6.3mm, 3.0mm, 7.6mm are available
- 5KV dielectric strength (between coil and contacts)
- UL insulation system: Class F
- Meet the 5kA short-circuit current test
- Outline Dimensions: (35.0×25.0×29.8)mm

RoHS compliant

CONTACT DATA

Contact arrangement	1A
Contact resistance	10mΩ max.(20A 6VDC)
Contact material	AgSnO ₂
Contact rating (Res.Load)	Making 24A,carrying 72A, Breaking 24A,480VAC
Max.switching voltage	480VAC
Max.switching current	72A
Max.switching power	34560VA
Mechanical endurance	1×10 ⁶ OPS
Electrical endurance	1×10 ⁴ OPS(90°C,1s on 9s off, Making 24A,carrying 72A, breaking 24A,480VA,Resistive load)

CHARACTERISTICS

Insulation resistance	1000MΩ(500VDC)	
Dielectric strength	Between coil & contacts	2500VAC 1min
	Between open contacts	5000VAC 1min
Surge Voltage (Between coil & Main contacts)	10kV(1.2/50μs)	
Operate time (at rated. volt.)	30ms max.	
Release time (at rated. volt.)	10ms max.	
Shock resistance	Functional	98m/s ²
	Destructive	980m/s ²
Vibration resistance*	10Hz to 55Hz 1.0mm DA	
Humidity	5% to 85%RH	
Ambient temperature	-40°C to 90°C	
Termination	PCB	
Unit weight	Approx. 55g	
Construction	Flux proofed	

Notes: 1) The data shown above are initial values.
2) *Index means the vibration resistance does not apply for relay length direction.

COIL DATA

at 23°C

Standard type :

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Voltage VDC ²⁾	COil Resistance Ω
5	3.75	0.25	6.0	6.9 × (1±10%)
6	4.5	0.3	7.2	10 × (1±10%)
9	6.75	0.45	10.8	22.5 × (1±10%)
12	9.0	0.6	14.4	40 × (1±10%)
18	13.5	0.9	21.6	90 × (1±10%)
24	18.0	1.2	28.8	160 × (1±10%)
48	36.0	2.4	57.6	640 × (1±15%)

High sensitive type :

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Voltage VDC ²⁾	COil Resistance Ω
5	3.75	0.25	6.0	10.4 × (1±10%)
6	4.5	0.3	7.2	15 × (1±10%)
9	6.75	0.45	10.8	33.7 × (1±10%)
12	9.0	0.6	14.4	60 × (1±10%)
18	13.5	0.9	21.6	135 × (1±10%)
24	18.0	1.2	28.8	240 × (1±10%)
48	36.0	2.4	57.6	960 × (1±15%)

Notes: 1) The date shown above are initial values.
2) Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

COIL

Coil power	Standard: Approx. 3.6 W High sensitive: Approx. 2.4 W
Holding voltage	40% to 70%U _N (at 23°C) 50% to 60%U _N (at 90°C)

Notes: 1) The coil voltage is the voltage applied to coil 100ms after the rated voltage.
2) To avoid overheating and burning,the coil can not be consistently applied to with voltage larger than maximum holding voltage.

SAFETY APPROVAL RATINGS

UL/CUL	Making 24A, carrying 72A, breaking 24A, 277/480VAC, Resistive, 90°C
TÜV	



HONGFA RELAY

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

2025 Rev. 1.00

ORDERING INFORMATION

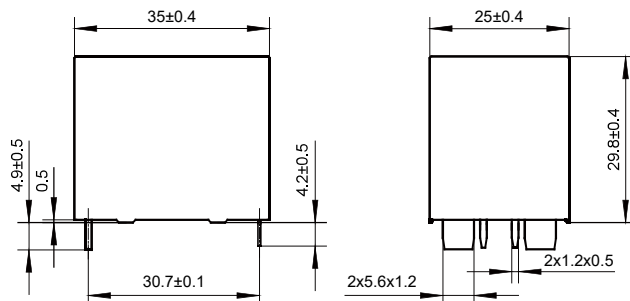
HF232F-72/ 12 -H H T F (XXX)	
Type	HF232F-72: Short-circuit capability of 5KA HF232FD-72: N/A
Coil voltage	5, 6, 9, 12, 18, 24, 48VDC
Contact arrangement	H: 1 Form A
Coil type	Nil: Standard (Only for Standard gap or (B62)) H: High sensitive (Only for (763))
Contact material	T: AgSnO ₂
Insulation standard	F: Class F
Customer Special code ³⁾	Nil: Stands for the coil power and contact gap ≥ 6.3 mm. (B62): Stands for the coil power and contact gap ≥ 7.6 mm, only for HF232FD-72. (763): High sensitive for the coil power and contact gap ≥ 3.0 mm. (XXX): Customer special requirement

- Notes:** 1) Flux-proofed relays can not be used in the environment with pollutants like H₂S, SO₂, NO₂, dust, etc.
 2) Water cleaning or surface 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.

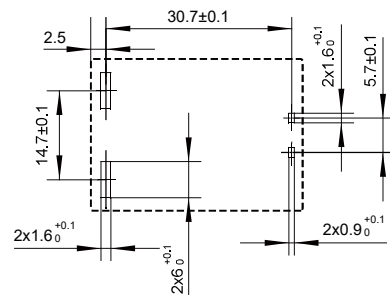
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

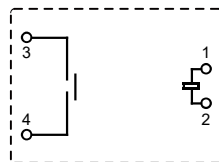
Outline Dimensions



PCB Layout
(Bottom view)



Wiring Diagram
(Bottom view)



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

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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