

# HF36FD

# SUBMINIATURE INTERMEDIATE POWER RELAY



File No.:E134517



File No.:R50356444



File No.:CQC18002199980



## Features

- 10A switching capability
- TV-8 125VAC approved by UL standard (118A inrush current)
- Ideal for device power reduction

RoHS compliant

## CONTACT DATA

Contact arrangement	1A
Contact resistance <sup>1)</sup>	100mΩ max.(at 1A 6VDC)
Contact material	AgSnO <sub>2</sub>
Contact rating	10A 250VAC 5A 250VAC 5A 30VDC TV-8 125VAC
Max. switching voltage	250VAC / 30VDC
Max. switching current	10A
Max. switching power	2500VA / 150W
Mechanical endurance	1 x 10 <sup>6</sup> OPS 5 x 10 <sup>4</sup> OPS
Electrical endurance	(10A 250VAC, Resistive load, Room temp., 1s on 9s off)

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

## CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	1000VAC 1min
Surge voltage	10kV (1.2 / 50μs)	
Operate time (at rated. volt.)	15ms max.	
Release time (at rated. volt.)	5ms max.	
Humidity	5% to 85% RH	
Ambient temperature	-40°C to 70°C	
Shock resistance	Functional	196m/s <sup>2</sup>
	Destructive	980m/s <sup>2</sup>
Vibration resistance	10Hz to 55Hz 1.5mm DA	
Termination	PCB	
Unit weight	Approx.12g	
Construction	Flux proofed	

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

2) Please find coil temperature curve in the characteristic curves below.

3) UL insulation system: Class A

## COIL

Coil power	Standard: Approx. 530mW; Sensitive: Approx. 250mW
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## COIL DATA

at 23°C

### Standard type

Nominal Voltage VDC	Pick-up Voltage VDC max. <sup>1)</sup>	Drop-out Voltage VDC min. <sup>1)</sup>	Max. Voltage VDC *2)	Coil Resistance Ω
5	3.75	0.25	6.5	47 x (1±10%)
6	4.50	0.30	7.8	68 x (1±10%)
9	6.75	0.45	11.7	155 x (1±10%)
12	9.00	0.60	15.6	270 x (1±10%)
18	13.5	0.90	23.4	620 x (1±10%)
24	18.0	1.20	31.2	1080 x (1±10%)
48	36.0	2.40	62.4	4400 x (1±10%)

### Sensitive type

Nominal Voltage VDC	Pick-up Voltage VDC max. <sup>1)</sup>	Drop-out Voltage VDC min. <sup>1)</sup>	Max. Voltage VDC *2)	Coil Resistance Ω
5	4.00	0.25	6.5	100 x (1±10%)
6	4.80	0.30	7.8	145 x (1±10%)
9	7.20	0.45	11.7	325 x (1±10%)
12	9.60	0.60	15.6	575 x (1±10%)
18	14.4	0.90	23.4	1300 x (1±10%)
24	19.2	1.20	31.2	2310 x (1±10%)

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

2)\*Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

## SAFETY APPROVAL RATINGS

UL/CUL	10A 250VAC 5A 250VAC TV-8 125VAC
TÜV	10A 250VAC 5A 250VAC/30VDC

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

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



HONGFA RELAY

ISO9001, ISO/TS16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

2020 Rev. 1.01

## ORDERING INFORMATION

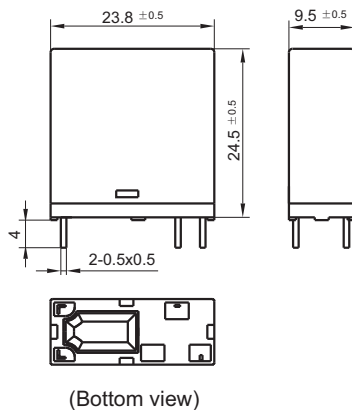
Type	HF36FD / 012 -H L T (XXX)
Coil voltage	5, 6, 9, 12, 18, 24, 48VDC
Contact arrangement	H: 1 Form A
Coil power	L: Sensitive Nil: Standard
Contact material	T: AgSnO <sub>2</sub>
Special code <sup>3)</sup>	XXX: Customer special requirement Nil: Standard

- Notes: 1) Water cleaning or surface process is not suggested after the flux-proofed relays are assembled on PCB.  
 2) Flux-proofed relays can not be used in the environment with pollutants like H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust, etc.  
 3) The customer special requirement express as special code after evaluating by Hongfa.

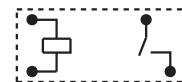
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

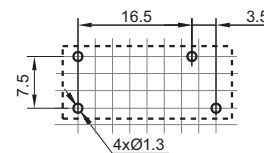
### Outline Dimensions



### Wiring Diagram (Bottom view)



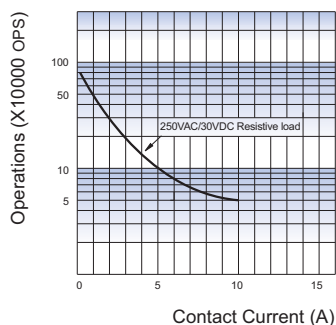
### PCB Layout (Bottom view)



- Remark: 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1$ mm, tolerance should be  $\pm 0.2$ mm; outline dimension  $> 1$ mm and  $\leq 5$ mm, tolerance should be  $\pm 0.3$ mm; outline dimension  $> 5$ mm, tolerance should be  $\pm 0.4$ mm.  
 2) The tolerance without indicating for PCB layout is always  $\pm 0.1$ mm.  
 3) The width of the gridding is 2.5mm.

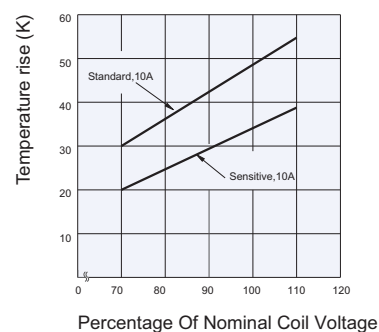
## CHARACTERISTIC CURVES

### ENDURANCE CURVE



**Test conditions:**  
 10A 250VAC, Resistive load,  
 Room temp., 1s on 9s off.

### COIL TEMPERATURE RISE



### 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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