

# HF3FA-W

## SUBMINIATURE HIGH POWER RELAY



File No.: E134517



File No.: 40023708



File No.:CQC12002076529



### Features

- 10A 36VDC switching capability
- Flammability class according to UL94, V-0
- Product in accordance to IEC 60335-1 available
- Plastic sealed and flux proofed types available
- Subminiature, standard PCB layout
- UL insulation system: Class F

### CONTACT DATA

Contact arrangement	1C	
	NO	NC
Contact resistance	100mΩ max.(at 1A 6VDC)	
Contact material	AgSnO <sub>2</sub>	
Contact rating (Res. load)	8A 277VAC 10A 36VDC	5A 250VAC
Max. switching voltage	277VAC/36VDC	250VAC
Max. switching current	10A	5A
Max. switching power	2770VA /360W	
Mechanical endurance	1 x 10 <sup>7</sup> OPS	
Electrical endurance	NO:1 x 10 <sup>5</sup> OPS (10A 36VDC, Resistive load, Room temp., 1s on 9s off)	

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

### COIL

Coil power	Approx. 800mW
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### COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max. <sup>1)</sup>	Drop-out Voltage VDC min. <sup>1)</sup>	Max. Voltage VDC <sup>2)</sup>	Coil Resistance Ω
12	9	0.6	15.6	180 x (1±10%)
24	18	1.2	31.2	720 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.

### CHARACTERISTICS

Insulation resistance	100MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	2500VAC 1min
	Between open contacts	750VAC 1min
Operate time (at rated. volt.)	10ms max.	
Release time (at rated. volt.)	5ms max.	
Shock resistance	Functional	98m/s <sup>2</sup>
	Destructive	980m/s <sup>2</sup>
Vibration resistance	10Hz to 55Hz 1.5mm DA	
Humidity	5% to 85% RH	
Ambient temperature	-40°C to 85°C	
Termination	PCB	
Unit weight	Approx. 8.0g	
Construction	Plastic sealed, Flux proofed	

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

### SAFETY APPROVAL RATINGS

UL/CUL	Z	NO:8A 277VAC at 85°C NO:10A 24VDC at 45°C NO:10A 36VDC at 40°C
VDE	Z	NO:8A 250VAC at 85°C NO:10A 24VDC at 45°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) For sealed type, the vent-hole cover should be excised.



HONGFA RELAY

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

2025 Rev. 1.00

## ORDERING INFORMATION

	HF3FA-W/	12	-Z	S	T	F	(XXX)
Type	Gap $\geq$ 0.8mm						
Coil voltage	12, 24VDC						
Contact arrangement	Z: 1 Form C						
Construction <sup>1) 2)</sup>	S: Plastic sealed Nil: Flux proofed						
Contact material	T: AgSnO <sub>2</sub>						
Insulation system	F: Class F						
Special code <sup>3)</sup>	XXX: Customer special requirement Nil: Standard						

**Notes:** 1) We recommend flux proofed types for a clean environment (free from contaminations like H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust, etc.). We suggest to choose plastic sealed types and validate it in real application for an unclean environment (with contaminations like H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust, etc).  
2) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.  
3) The customer special requirement express as special code after evaluating by Hongfa. e.g.(335) stands for product in accordance to IEC 60335-1 (GWT).

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

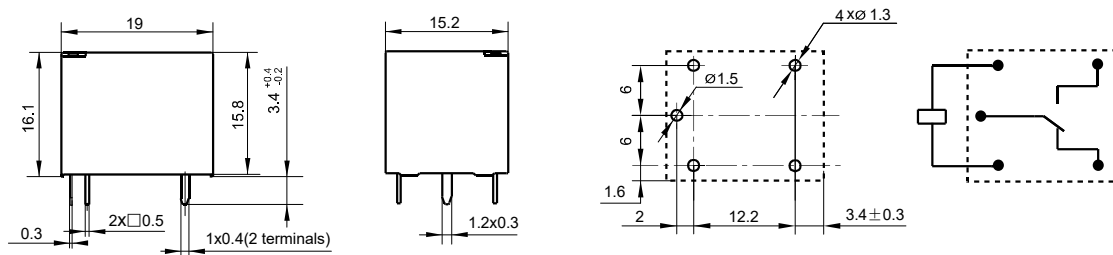
Unit: mm

Outline Dimensions

PCB Layout  
(Bottom view)

Wiring Diagram  
(Bottom view)

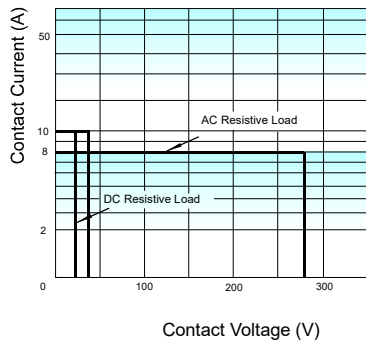
1 Form C



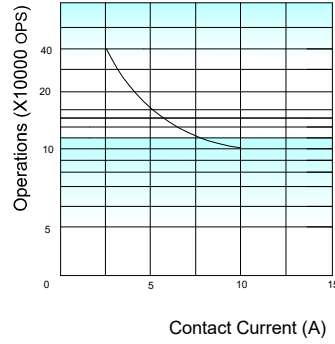
**Remark:** 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq$ 1mm, tolerance should be  $\pm$ 0.2mm; outline dimension  $>$ 1mm and  $\leq$ 5mm, tolerance should be  $\pm$ 0.3mm; outline dimension  $>$ 5mm, tolerance should be  $\pm$ 0.4mm.  
2) The tolerance without indicating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

# CHARACTERISTIC CURVES

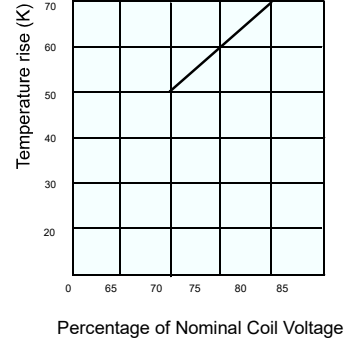
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE



**Test conditions:**

NO: Resistive load, 36VDC, Flux proofed,  
Room temp., 1s on 9s off

**Test conditions:** at 85°C, 8A

**Mounting distance:** 10mm

**Driving voltage:** Coil activated with  
rated voltage, then reduce to 80% of  
rated 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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