

# HF115FK-T

## MINIATURE HIGH POWER RELAY



File No.:E134517



File No.:116934



File No.: CQC17002176308



### Features

- High temperature: 105°C
- Low height: 15.7 mm
- 16A switching capability
- 5kV dielectric strength (between coil and contacts)
- Creepage distance: 10mm
- Meeting reinforce insulation
- Product in accordance to IEC 60335-1 available
- Sockets available
- UL insulation system: Class F

### CONTACT DATA

Contact arrangement	1A, 1C
Contact resistance <sup>1)</sup>	100mΩ max.(at 1A 6VDC)
Contact material	AgSnO <sub>2</sub> ,AgNi
Contact rating (Res. load)	16A 250VAC
Max. switching voltage	400VAC
Max. switching current	16A
Max. switching power	4000VA
Mechanical endurance	1 x 10 <sup>7</sup> OPS
Electrical endurance	H3T type: 3 x 10 <sup>4</sup> OPS (16A 250VAC, Resistive Load, at 105°C, 1s on 9s off)

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

### CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	5000VAC 1min
	Between open contacts	1000VAC 1min
Surge voltage (between coil & contacts)		10kV (1.2 x 50μs)
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 150Hz 10g/5g
Humidity		5% to 85% RH
Ambient temperature		-40°C to 105°C
Termination		PCB
Unit weight		Approx. 13g
Construction		Flux proofed

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

2) \* Index is not in relay length direction.

### COIL

Coil power	Approx. 400mW
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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
5	3.50	0.5	7.5	62 x (1±10%)
6	4.20	0.6	9.0	90 x (1±10%)
9	6.30	0.9	13.5	202 x (1±10%)
12	8.40	1.2	18	360 x (1±10%)
18	12.60	1.8	27	810 x (1±10%)
24	16.80	2.4	36	1440 x (1±10%)
48	33.60	4.8	72	5760 x (1±15%)

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	16A 250VAC at 105°C
VDE	16A 250VAC at 105°C 10A 250VAC at 105°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.



HONGFA RELAY

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

2023 Rev. 1.00

## ORDERING INFORMATION

Type	HF115FK-T/	12	-H	3	T	(XXX)
Coil voltage	5, 6, 9, 12, 18, 24, 48VDC					
Contact arrangement	H: 1 Form A Z: 1 Form C					
Version	3: 5.0mm 1 pole 16A					
Contact material <sup>1)</sup>	T: AgSnO <sub>2</sub> 3: AgNi					
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.).

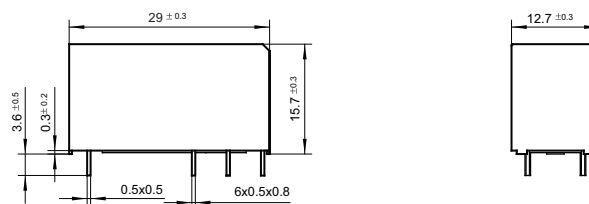
2) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.

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

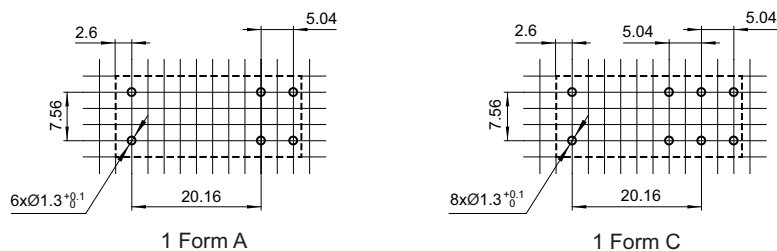
### Outline Dimensions



### Wiring Diagram (Bottom view)



### PCB Layout (Bottom view)

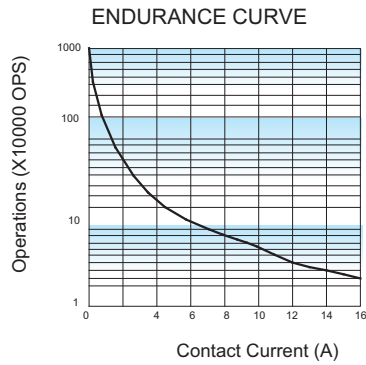


Remark: 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should be  $\pm 0.4\text{mm}$ .

2) The tolerance without indicating for PCB layout is always  $\pm 0.1\text{mm}$ .

3) The width of the gridding is 2.52mm.

## CHARACTERISTIC CURVES

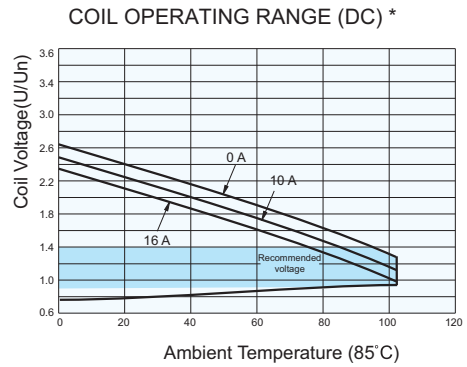


**Notes:**

Curve refers to H3T type, H33 type

**Test conditions:**

NO, resistive load, 250VAC, flux proofed,  
at 105°C, 1s on 9s off



**Notes:** \* The use of a relay with an energising voltage other than the rated coil voltage may lead to reduced electrical life.  
An energising voltage over the abver range may damage the insulation of relay coil.

### 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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