

# HF18FF (JZX-18FF)

# MINIATURE INTERMEDIATE POWER RELAY



File No.:E133481



File No.:R50029721



File No.:CQC02001001940



### Features

- 7A switching capability
- 1.5kV dielectric strength (between coil and contacts)
- Various terminals, test button available
- Gold plated contact available
- Conform to the CE low voltage directive
- Sockets available
- 2 to 4 pole configurations
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (28.0 x 21.5 x 35.0) mm

### CONTACT DATA

Contact arrangement	2C, 3C	4C
Contact resistance	100mΩ (at 1A 6VDC)	
Contact material	Silver alloy, Silver alloy+Au plated	
Contact rating (Res. load)	7A 250VAC/30VDC	5A 250VAC/30VDC
Max. switching voltage	250VAC / 30VDC	
Max. switching current	7A	5A
Max. switching power	210W 1750VA	150W 1250VA
Mechanical endurance	2 x 10 <sup>7</sup> OPS	
Electrical endurance	1 x 10 <sup>5</sup> OPS (See approval reports for more details)	

### CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VAC)	
Dielectric strength	Between coil & contacts	1500VAC 1min
	Between open contacts	1000VAC 1min
	Between contact sets	1500VAC 1min
Operate time (at nomi. volt.)	25ms max.	
Release time (at nomi. volt.)	25ms max.	
Temperature rise (no-load, at nomi.volt.)	60K max.	
Shock resistance	Functional	100m/s <sup>2</sup> (10g)
	Destructive	1000m/s <sup>2</sup> (100g)
Vibration resistance	10Hz to 55Hz 1mm DA	
Humidity	98% RH, 40°C	
Ambient temperature	-40°C to 70°C	
Termination	PCB, Plug-in	
Unit weight	Approx. 37g	
Construction	Dust protected	

Notes: The data shown above are initial values.

### COIL

Coil power	DC type: 0.9 to 1.1W; AC type: 1.2 to 1.8VA
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### COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ω
5	4.0	0.50	5.5	27.5 x (1±10%)
6	4.8	0.60	6.6	40 x (1±10%)
12	9.6	1.20	13.2	160 x (1±10%)
24	19.2	2.40	26.4	650 x (1±10%)
48	38.4	4.80	52.8	2600 x (1±15%)
110	88.0	11.0	121	11000 x (1±15%)

Nominal Voltage VAC	Pick-up Voltage VAC	Drop-out Voltage VAC	Max. Allowable Voltage VDC	Coil Resistance Ω
6	4.80	1.80	6.6	11.5 x (1±10%)
12	9.60	3.60	13.2	46 x (1±10%)
24	19.2	7.20	26.4	184 x (1±10%)
48	38.4	14.4	52.8	735 x (1±10%)
120	96.0	36.0	132	4550 x (1±15%)
220/240	176.0	72.0	264	14400 x (1±15%)

### SAFETY APPROVAL RATINGS

UL&CUR	2C: 7A 250VAC/30VDC 3C,4C: 5A 250VAC/30VDC
	2C,3C: 7A 250VAC/30VDC 4C: 5A 250VAC/30VDC
TÜV	

Notes: Only some typical ratings are listed above. If more details are required, please contact us.



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2007 Rev. 2.00

## ORDERING INFORMATION

<b>HF18FF / A 012 -2Z 1 G D (XXX)</b>	
<b>Type</b> <sup>1)</sup>	HF18FF JZX-18FF (Old type)
<b>Coil voltage form</b>	A: AC Nil: DC
<b>Coil voltage</b>	DC: 5 to 110VDC AC: 6 to 240VAC
<b>Contact arrangement</b>	2Z: 2 Form C 3Z: 3 Form C 4Z: 4 Form C
<b>Mounting Termination</b> ( See the Following )	1: Socket 2: PCB 5: Flange-Mounting
<b>Contact material</b>	G: Silver alloy + Au plated Nil: Silver alloy
<b>LED</b>	D: With LED Nil: Without LED

**Customer special code** <sup>2)</sup> Only for special requirements, e.g. (555) stands for RoHS compliant

**Notes:** 1) We have now gradually updated our ordering information. We suggest new type should be selected. If necessary, old type can be kept for some period for the old customers.

2) HF18FF is an environmental friendly product. Please mark a special code (555) when ordering.

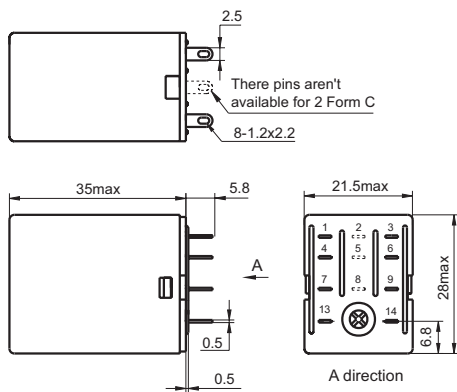
3) We also can supply the special type with terminals numbered 1,4,5,8,9,12,13,14 for 2 poles.

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

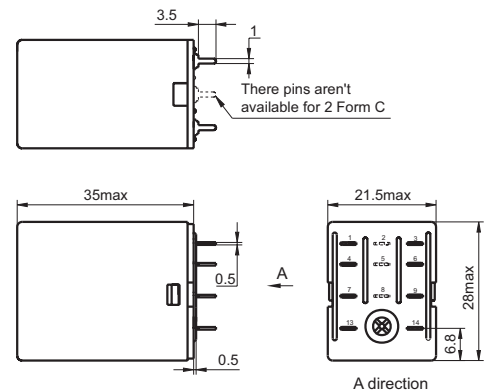
Unit: mm

### Outline Dimensions

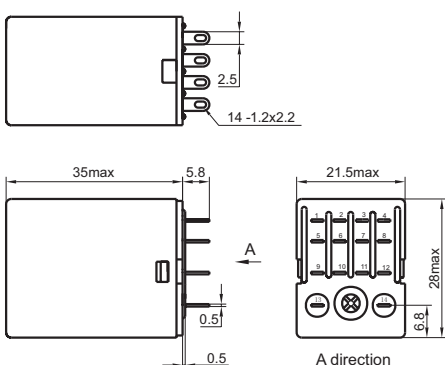
HF18FF/ □□□□ -2Z1□□ / 3Z1□□



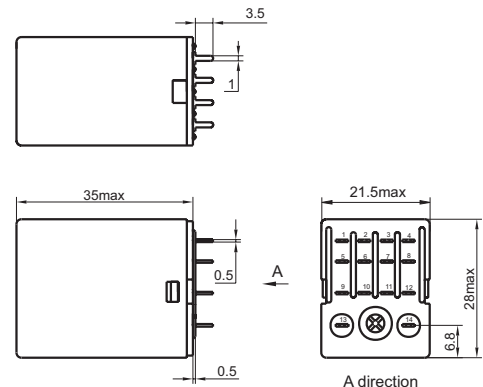
HF18FF/ □□□□ -2Z2□□ / 3Z2□□



HF18FF/ □□□□ -4Z1□□



HF18FF/ □□□□ -4Z2□□

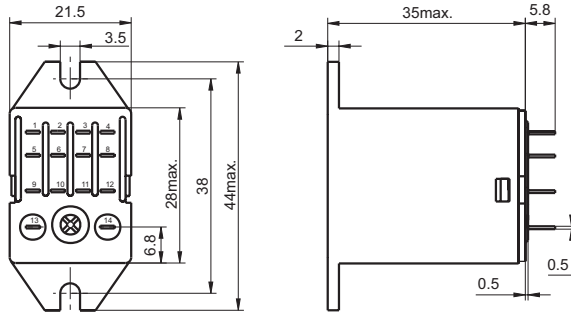


# OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

HF18FF/□□□□ - 4Z5□□

## Outline Dimensions

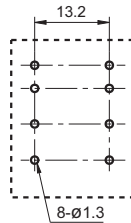


## Mounting Holes

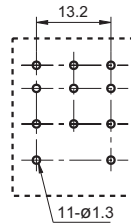


## PCB Layout (Bottom view)

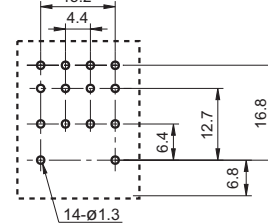
2 Form C



3 Form C

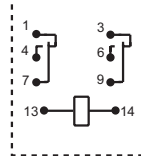


4 Form C

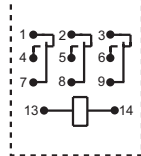


## Wiring Diagram (Bottom view)

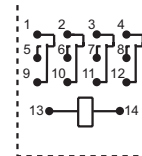
2 Form C



3 Form C



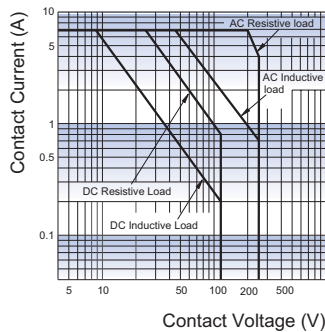
4 Form C



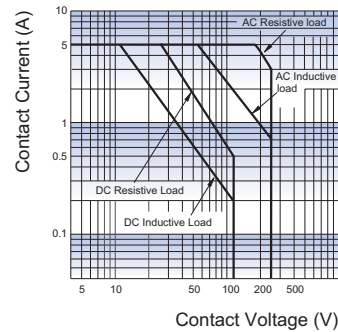
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should be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

## CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER  
(2, 3 Form C)



MAXIMUM SWITCHING POWER  
(4 Form C)



## Disclaimer

This datasheet is for the customers' reference. All the specifications are 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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