

# HF152F

## SUBMINIATURE HIGH POWER RELAY



File No.: E134517



Pending



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### Features

- 20A switching capability
- Surge voltage up to 6000VAC (between coil and contacts)
- 1 Form C & 1 Form A configurations available
- PCB terminals
- Sealed IP67 and flux proof types available
- Environmental friendly product available (RoHS compliant)
- Outline Dimensions: 21.0 x 16.0 x 20.6 mm

### CONTACT DATA

Contact arrangement	1A	1C
Initial contact resistance Max.	100mΩ (at 1A 24VDC)	
Contact material	AgNi, AgSnO <sub>2</sub>	
Contact rating (Res. load)	20A 125VAC 17A 277VAC	NO: 16A 250VAC NC: 10A 250VAC
Max. switching voltage	277VAC	250VAC
Max. switching current	20A	16A
Max. switching power	4700VA	4000VA
Mechanical life	1 x 10 <sup>7</sup> OPS	
Electrical life	1 x 10 <sup>5</sup> OPS	5 x 10 <sup>4</sup> OPS

### CHARACTERISTICS

Initial insulation resistance	100MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	3000VAC, 1 min.
	Between open contacts	1000VAC, 1 min.
Surge voltage (between coil & contacts)	6000VAC	
Operate time (at nomi. volt.)	Max. 10ms	
Release time (at nomi. volt.)	Max. 5ms	
Temperature rise (at nomi. volt.)	Max. 60°C	
Shock resistance	Functional	98m/s <sup>2</sup> (10g)
	Destructive	980m/s <sup>2</sup> (100g)
Vibration resistance	10 to 55Hz 1.5mm	
Humidity	35 to 85% RH	
Ambient temperature	-40°C to +105°C	
Termination	PCB	
Unit weight	Approx. 14g	
Construction	Sealed IP67, Flux proof	

### COIL

Coil power	360mW
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### COIL DATA

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max. Allowable Voltage (VDC) 20°C	Coil Resistance (Ω)
5	3.80	0.5	6.0	70 ± 10%
6	4.50	0.6	7.2	100 ± 10%
9	6.80	0.9	10.8	225 ± 10%
12	9.00	1.2	14.4	400 ± 10%
18	13.5	1.8	21.6	900 ± 10%
24	18.0	2.4	28.8	1600 ± 10%
48	36.0	4.8	57.6	6400 ± 10%

### SAFETY APPROVAL RATINGS

UL&CUR	1 Form A	20A 125VAC 17A 277VAC 1HP 250VAC 1HP 125VAC
	1 Form A	16A 250VAC 20A 125VAC at 85°C
TÜV (pending)	1 Form C	NO: 16A 250VAC NC: 10A 250VAC at 85°C



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2005 Rev. 1.02

## ORDERING INFORMATION

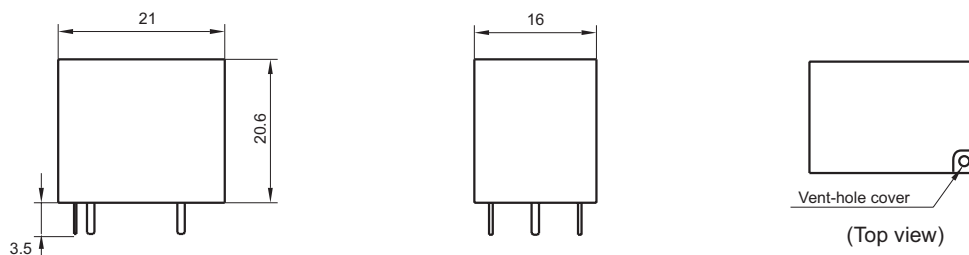
Type	HF152F /	012	1Z	S	T	G	XXX
Coil voltage	5, 6, 9, 12, 18, 24, 48VDC						
Contact arrangement	1H: 1 Form A 1Z: 1 Form C						
Construction	S: Sealed IP67 Nil: Flux proof						
Contact material	T: AgSnO <sub>2</sub> Nil: AgNi10						
Contact plating	G: Gold plated Nil: No gold plated						
Customer special code	( Only for special requirements, e.g. 551 stands for lead-free, 555 stands for RoHS compliant )						

**Notes:** Flux proof type is recommended. If sealed type is selected for cleaning purpose, the vent-hole cover should be excised after cleaning.

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

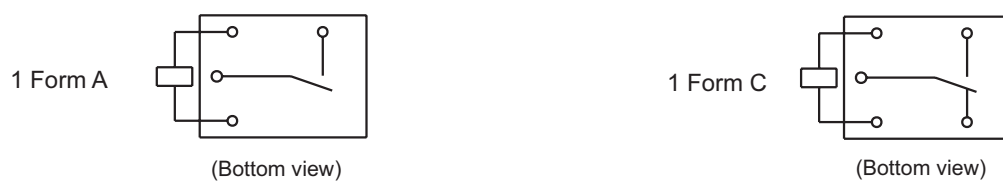
### Outline Dimensions



### PCB Layout



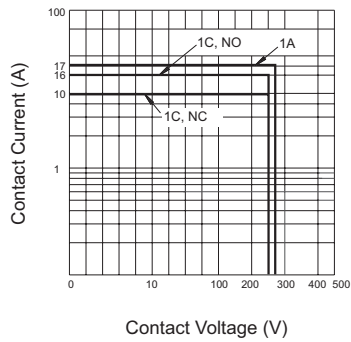
### Wiring Diagram



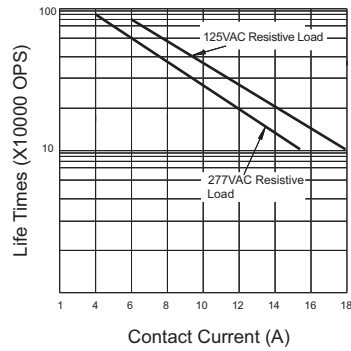
Remark: General tolerance is  $\pm 0.3$ mm.

## CHARACTERISTIC CURVES

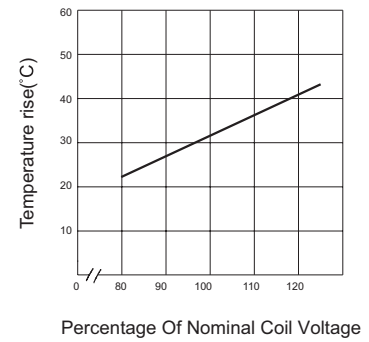
MAX. SWITCHING POWER



LIFE CURVE



COIL TEMPERATURE RISE



### 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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