

# HF32F-G

## SUBMINIATURE INTERMEDIATE POWER RELAY



File No.: E134517



File No.: 40012204



File No.: CQC12002076528



### Features

- 10A switching capability
- 1 Form A configuration
- Subminiature, standard PCB layout
- Plastic sealed and flux proofed types
- Product in accordance to IEC 60335-1 available
- UL insulation system: Class F
- Outline Dimensions: (18.4 x 10.2 x 15.3) mm

### CONTACT DATA

Contact arrangement	1A
Contact resistance	100mΩ max.(at 1A 6VDC)
Contact material	AgSnO <sub>2</sub> , AgNi, AgCdO
Contact rating (Res. load)	10A 250VAC 10A 30VDC
Max. switching voltage	250VAC / 30VDC
Max. switching current	10A
Max. switching power	2500VA / 300W
Mechanical endurance	1 x 10 <sup>6</sup> OPS
Electrical endurance	1 x 10 <sup>5</sup> OPS ( 10A 250VAC, Resistive load, Room temp., 1s on 9s off)

### CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	2500VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at nomi. volt.)	8ms max.	
Release time (at nomi. volt.)	5ms max.	
Humidity	5% to 85% RH	
Ambient temperature	-40°C to 85°C	
Shock resistance	Functional	98m/s <sup>2</sup>
	Destructive	980m/s <sup>2</sup>
Vibration resistance	10Hz to 55Hz 1.5mm DA	
Termination	PCB	
Unit weight	Approx. 6g	
Construction	Plastic sealed, Flux proofed	

**Notes:** 1) The data shown above are initial values.  
2) In order to secure better electrical endurance, we recommend not to use this relay under high temperature.

### COIL

Coil power	Approx. 450mW
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### COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Voltage VDC *	Coil Resistance Ω
3	2.25	0.15	3.9	20 x (1±10%)
5	3.75	0.25	6.5	55 x (1±10%)
6	4.50	0.30	7.8	80 x (1±10%)
9	6.75	0.45	11.7	180 x (1±10%)
12	9.00	0.60	15.6	320 x (1±10%)
18	13.5	0.90	23.4	720 x (1±10%)
24	18.0	1.20	31.2	1280 x (1±10%)
48	36.0	2.40	62.4	5120 x (1±10%)

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

### SAFETY APPROVAL RATINGS

UL/CUL	10A 277VAC / 250VAC / 30VDC at 85°C
	12A 125VAC at 85°C
VDE	10A 250VAC at 85°C
	4A 400VAC at 85°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, ISO/TS16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

2014 Rev. 1.01

## ORDERING INFORMATION

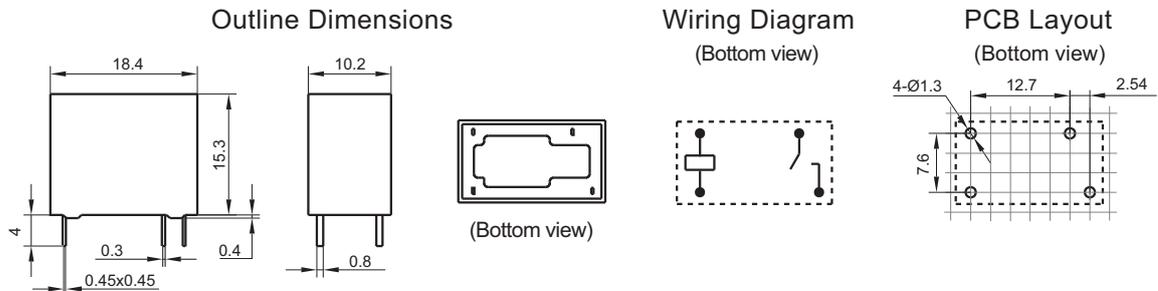
Type	HF32F-G /	012	-H	S	3	(XXX)
Coil voltage	3, 5, 6, 9, 12, 18, 24, 48VDC					
Contact arrangement	H: 1 Form A					
Construction <sup>1)</sup>	S: Plastic sealed		Nil: Flux proofed			
Contact material	T: AgSnO <sub>2</sub>	3: AgNi	Nil: AgCdO			
Customer special code	e.g. (335) stands for product in accordance to IEC 60335-1(GWT)					

**Notes:** 1) Under the ambience with dangerous gas like H<sub>2</sub>S, SO<sub>2</sub> or NO<sub>2</sub>, plastic sealed type is recommended; please test the relay in real applications. If the ambience allows, flux proofed is preferentially recommended.

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

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm



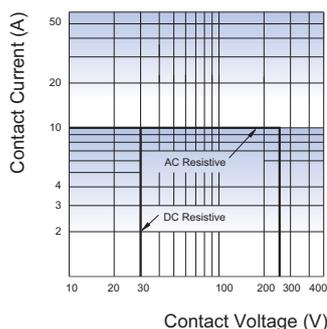
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1$ mm, tolerance should be  $\pm 0.2$ mm; outline dimension  $> 1$ mm and  $\leq 5$ mm, tolerance should be  $\pm 0.3$ mm; outline dimension  $> 5$ mm, tolerance should be  $\pm 0.4$ mm.

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

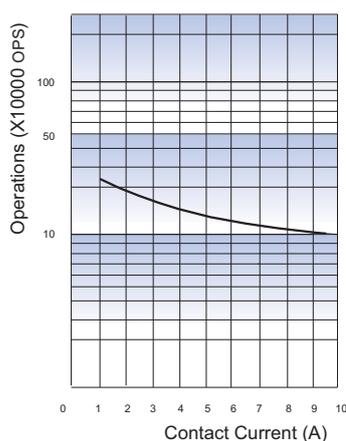
3) The width of the gridding is 2.54mm.

## CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER

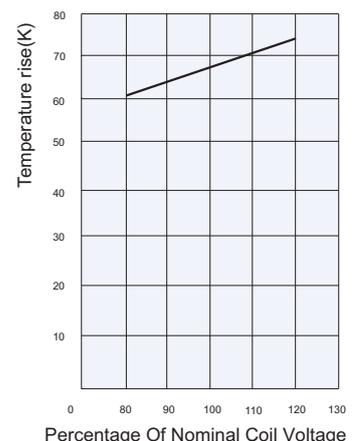


EDURANCE CURVE



**Test conditions:**  
Resistive load, Room temp., 1s on 9s off

COIL TEMPERATURE RISE



**Test conditions:** 10A at 85°C

### 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.