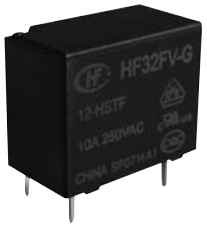
HF32FV-G SUBMINIATURE INTERMEDIATE POWER RELAY

File No.:E134517

File No.:40012204

File No.:CQC14002120720



Features

- 10A switching capability
- Dielectric strength 4kV (between coil and contacts)
- 1 Form A configurations
- Standard PCB layout
- Plastic sealed and flux proofed types available
- UL insulation system: Class F
- Product in accordance to IEC60335-1 available
- Environmental friendly product (RoHS compliant)
- 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		AgNi,AgSnO2, AgCdO	
Contact rating (Res. load)		Standard: 10A 250VAC 10A 30VDC	Sensitive: 8A 250VAC 8A 30VDC
Max. switching voltager		250VAC / 30VDC	
Max. switching current		10A	8A
Max. switching power		2500VA/300W	2000VA / 240W
Mechanical endurance		1 x 10^7OPS	
Electrical endurance	Standard	1 x 10^5OPS (10A 250VAC Resistive load, at room temp., 1s on 9s off) 5 x 10^4OPS (10A 250VAC Resistive load, at 85°C, 1s on 9s off)	
	Sensitive	1 x 10^5OPS (8A 250VAC Resistive load, at room temp., 1s on 9s off) 5 x 10^4OPS (8A 250VAC Resistive load, at 85°C, 1s on 9s off)	

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	1000VAC 1min
Surge withstand voltage		6kV(1.2 / 50μs)
Operate time (at nomi. volt.)		8ms max.
Release time (at nomi. volt.)		5ms max.
Coil temperature rise(at nomi. volt.)		70k max.
Shock * resistance	Functional	98m/s²
	Destructive	980m/s²
Vibration resistance *	Functional	10Hz to 55Hz 1.5mm DA
Humidity		5% to 85% RH
Ambient temperature		-40°C to 85°C
Termination		PCB
Unit weight		Approx. 6g
Construction		Plastic sealed, Flux proofed

Notes: 1) The data shown above are initial values.
2) *Index is not in relay length direction.
3) In order to obtain better electrical endurance, it's better not use this product in the high temperature environment.

COIL

Coil power	Standard: Approx. 450mW; Sensitive: Approx. 200mW

COIL DATA at 23°C

Standard Type

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%)

Sensitive Type

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Voltage VDC *	Coil Resistance Ω
3	2.25	0.15	4.5	45 x (1±10%)
5	3.75	0.25	7.5	125 x (1±10%)
6	4.50	0.30	9.0	180 x (1±10%)
9	6.75	0.45	13.5	400 x (1±10%)
12	9.00	0.60	18.0	720 x (1±10%)
18	13.5	0.90	27.0	1600 x (1±10%)
24	18.0	1.20	36.0	2800 x (1±10%)
48	36.0	2.40	72.0	11520 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	$AgSnO_2$	10A 277VAC /250VAC Resistive at 40˚C 10A 277VAC/250VAC Resistive at 85˚C 8A 277VAC/250VAC General Use (Sensitive) at 85˚C TV-5 120VAC 40˚C TV-3 120VAC(Sensitive) at 40˚C
	AgCdO	10A 277VAC/250VAC General Use at 85˚C 10A 30VDC Resistive at 85˚C 10A 277VAC/250VAC Resistive at 45˚C 8A 277VAC/250VAC Resistive (Sensitive) at 85˚C
VDE	$AgSnO_2$	10A 277VAC/250VAC Resistive at 85˚C 8A 277VAC/250VAC Resistive(Sensitive) at 85˚C
	AgCdO	10A 277VAC/250VAC Resistive at 85˚C
CQC	$AgSnO_2$	10A 277VAC/250VAC Resistive at 85˚C 8A 277VAC/250VAC Resistive (Sensitive) at 85˚C
	AgCdO	10A 277VAC/250VAC Resistive at 85˚C

Notes: 1) Opening the vent hole under contact material $AgSnO_2$ testing.
2) All values unspecified are at room temperature.
3) Only typical loads are listed above. Other load specifications can be available upon request.

ORDERING INFORMATION

HF32FV-G / 12 -H S L T F (XXX)

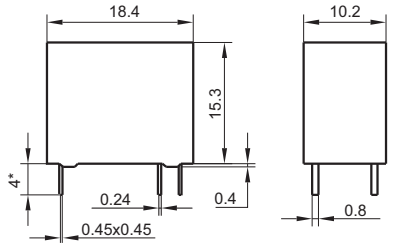
Type				
Coil voltage	3, 5, 6, 9, 12, 18, 24, 48VDC			
Contact arrangement	**H:** 1 Form A			
Construction [1)2)]	**S:** Plastic sealed	**Nil:** Flux proofed		
Coil power	**L:** Sensitive[3)]	**Nil:** Standard		
Contact material	**T:** $AgSnO_2$	**3:** AgNi	**Nil:** AgCdO	
Insulation standard	**F:** Class F			
Special code[5)]	**XXX:** Customer special requirement		**Nil:** Standard	

Notes: 1) We recommend flux proofed types for a clean environment (free from contaminations like H_2S, SO_2, NO_2, 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) Sensitive loading: 8A.
4) 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); (590) stands for product in accordance to TV loading. For srandard type is TV-5, for sentitive type is TV-3.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

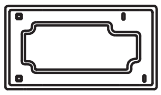
Unit: mm

Outline Dimensions



Wiring Diagram

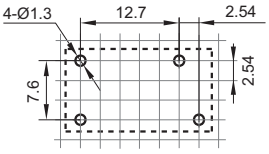
(Bottom view)



(Bottom view)

PCB Layout

(Bottom view)



Remark: 1) * The additional tin top is max. 1mm.

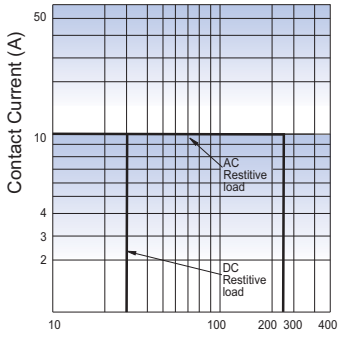
2) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

3) The tolerance without indicating for PCB layout is always ±0.1mm.

4) The width of the gridding is 2.54mm.

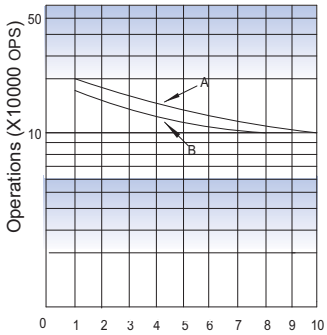
性能曲线图

MAXIMUM SWITCHING POWER



Contact Voltage (V)

ENDURANCE CURVE

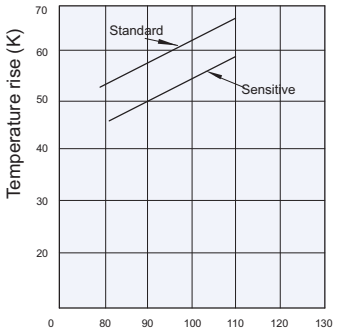


Contact Current(A)

Remark:

1. Carve A: standard
   Carve B: sensitive
2. Testing conditions:
   Standard: flux proofed, resistive load,
   10A/250VAC, at room temp. 1s on 9s off.
   Sensitive: flux proofed, resistive load,
   8A/250VAC, at room temp. 1s on 9s off.

COIL TEMPERATURE RISE



Percentage Of Nominal Coil Voltage

Testing conditions:

Standard: 10A at 85°C.
Sensitive: 8A at 85°C
Mounting distance: 10mm

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.

© Xiamen Hongfa Electroacoustic Co., Ltd. All rights of Hongfa are reserved.