

# JT32FV

# SUBMINIATURE HIGH POWER RELAY



## Features

- 5A switching capability
- Creepage distance is over 6.5mm (between coil and contacts)
- Dielectric strength 4kV (between coil and contacts)
- 1From A configurations
- Standard PCB layout
- Plastic sealed and flux proofed types available
- UL insulation system: Class F
- product in accordance to IEC 60335-1 available
- Environmental friendly product (RoHS compliant)
- UL insulation system: Class F available
- Outline Dimensions: (18.4 x 10.2 x 15.3)mm

## CONTACT DATA

Contact arrangement	1A	
Contact resistance <sup>1)</sup>	100mΩ max. (at 1A 6VDC)	
Contact material	AgSnO <sub>2</sub>	
Contact rating (Res. load)	Standard	Sensitive
	5A 250VAC 5A 30VDC	3A 250VAC 3A 30VDC
Max. switching voltage	277VAC/30VDC	
Max. switching current	5A	3A
Max. switching power	1385VA/150W	831VA/90W
Mechanical endurance	1 x 10 <sup>6</sup> ops	
Electrical endurance	Standard	1 x 10 <sup>5</sup> ops (5A 250VAC, Resistive load, Room temp, 1s on 9s off) 5 x 10 <sup>4</sup> ops (5A 250VAC, Resistive load, at 85°C, 1s on 9s off)
	Sensitive	1 x 10 <sup>5</sup> ops (3A 250VAC, Resistive load, Room temp, 1s on 9s off) 5 x 10 <sup>4</sup> ops (3A 250VAC, Resistive load, at 85°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	4000VAC 1min
	Between open contacts	1000VAC 1min
Surge withstand voltage	6kV (1.2/50 μs)	
Operate time (at nomi. volt.)	8ms max.	
Release time (at nomi. volt.)	5ms max.	
Coil temperature rise (at nomi. volt.)	70K	
Shock resistance <sup>2)</sup>	Functional	98m/s <sup>2</sup>
	Destructive	980m/s <sup>2</sup>
Vibration resistance <sup>2)</sup>	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.

## COIL

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

## COIL DATA

at 23°C

### Standard type

Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Voltage VDC <sup>*)</sup>	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	Drop-out Voltage VDC	Max. Voltage VDC <sup>*)</sup>	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: 1) \*Maximum Voltage refers to the maximum voltage which relay coil could endure in a short period of time.  
2) In order to obtain better electrical endurance, it's better not use this product in the high temperature environment.



JINTIAN RELAY

ISO9001, ISO14001, OHSAS18001 CERTIFIED

## ORDERING INFORMATION

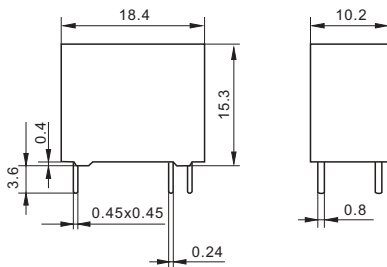
Type	JT32FV 012 -H S L T F (XXX)					
Coil voltage	3, 5, 6, 9, 12, 18, 24, 48VDC					
Contact arrangement	H: 1 Form A					
Construction <sup>1)2)</sup>	S: Plastic sealed Nil: Flux proofed					
Contact power	L: Sensitive <sup>3)</sup> Nil: Standard					
Contact material	T: AgSnO <sub>2</sub>					
Insulation standard	F: Class F					
Special code <sup>4)</sup>	XXX: Customer special requirement Nil: Standrad					

- 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.  
 2) If the ambience allows, flux proofed type is preferentially recommended.  
 3) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.  
 4) Sensitive loading: 3A.  
 5) The customer special requirement express as special code after evaluating by JINTIAN.

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

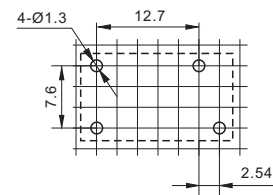
Outline Dimensions



Wiring Diagram  
(Bottom view)



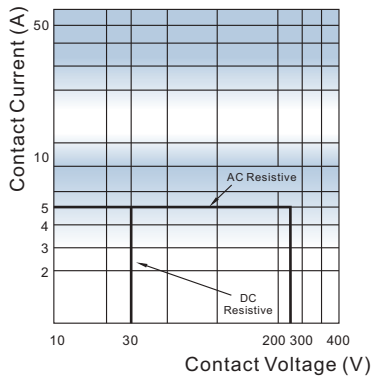
PCB Layout  
(Bottom view)



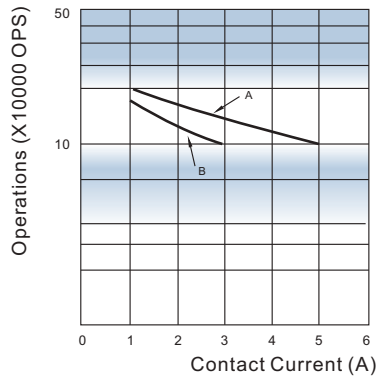
- Remark:** 1) The pin dimension of the product outline drawing is the size before tinning (it will become larger after tinning), and the mounting hole size is the recommended design size of the PCB board hole. The specific PCB board hole design size can be mapped and adjusted according to the actual product.  
 2) 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.  
 3) The tolerance without indicating for PCB layout is always  $\pm 0.1$ mm.  
 4) The width of the gridding is 2.54mm.

# CHARACTERISTIC CURVES

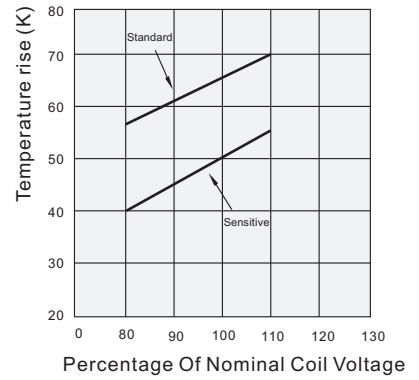
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE



**Remark:**

- 1. Curve A: standard
- Curve B: sensitive

**Test conditions:**

Standard: flux proofed, resistive load, 5A 250VAC, at room temp., 1s on 9s off.  
 Sensitive: flux proofed, resistive load, 3A 250VAC, at room temp., 1s on 9s off.

**Test conditions:**

Standard: 5A at 85°C  
 Sensitive: 3A at 85°C  
 Mounting distance: 5mm

**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 JINTIAN for the technical service. However, it is the user's responsibility to determine which product should be used only.