

## Features

- 16A switching capability
- Provide the product of highly efficient,magnetic circuit for high sensitivity:200mW
- Breakdown voltage (between coil and contacts): 4KV
- Creep age distance and air distance are greater than 6.5mm
- We can provide the product with ambient temperature is 105℃
- UL insulation system:Class F
- Environment-friendly products (RoHS compliant)
- Outline Dimensions:(18.4×10.2×15.3)mm
- Main application:Smart switches, Smart sockets, Home appliance



**TV-8** C  **US**

## ■ CHARACTERISTICS

| Specifications         | Item                           |                       |  |
|------------------------|--------------------------------|-----------------------|--|
| Contact Data           | Contact arrangement            |                       | 1A   |
|                        | Contact resistance(initial)    |                       | ≤100mΩ(6VDC 1A)  |
|                        | Contact material               |                       | AgSnO <sub>2</sub>   |
| Rated value            | Rated load(Resistance load)    |                       | 10A 250VAC<br>16A 250VAC   |
|                        | Max.switching voltage          |                       | 277VAC   |
|                        | Max.switching current          |                       | 16A  |
|                        | Max.switching capacity         |                       | 4000VA   |
|                        | Min.allowing load              |                       | 5VDC 100mA   |
| Electrical performance | Insulation resistance(initial) |                       | 1000MΩ(500VDC)   |
|                        | Dielectric strength (initial)  | Between open contacts | 1000VAC,1min   |
|                        |                                | Between coil&contacts | 4000VAC,1min   |
|                        | Operate time                   |                       | ≤10ms  |
|                        | Release time                   |                       | ≤5ms   |
| Mechanical performance | Shock resistance               | Functional            | 98m/s <sup>2</sup> (10G)   |
|                        |                                | Destructive           | 980m/s <sup>2</sup> (100G)   |
|                        | Vibration resistance           |                       | 10Hz~55Hz 1.5mm DA   |
| Endurance              | Mechanical                     |                       | 1×10 <sup>7</sup> ops  |
|                        | Electrical(Room temperature)   |                       | 10A 250VAC 1×10 <sup>5</sup> ops(ON/OFF=1s/9s)<br>16A 250VAC 5×10 <sup>4</sup> ops(ON/OFF=1s/9s) |
| Operate condition      | Ambient temperature            |                       | -40℃~85/105℃   |
|                        | Humidity                       |                       | 5% to 90%  |
| Termination            |                                |                       | PCB  |
| Unit weight            |                                |                       | Approx.7g  |
| Construction           |                                |                       | Plastic sealed,Flux proofed  |

## ■ COIL DATA(23℃)

### ■ Standard Type

| Nominal Voltage | Operate Voltage VDC | Release Voltage VDC | Rated Current (±10%) | Coil Resistance (±10%) | Nominal Power | Max Voltage |
|-----------------|---------------------|---------------------|----------------------|------------------------|---------------|-------------|
| DC 3V           | ≤2.25               | ≥0.15               | 150 mA               | 20Ω                    | 450mW         | DC 3.9V     |
| DC 5V           | ≤3.75               | ≥0.25               | 90 mA                | 55.5Ω                  |               | DC 6.5V     |
| DC 6V           | ≤4.50               | ≥0.30               | 75 mA                | 80Ω                    |               | DC 7.8V     |
| DC 9V           | ≤6.75               | ≥0.45               | 50 mA                | 180Ω                   |               | DC 11.7V    |
| DC 12V          | ≤9.00               | ≥0.60               | 37.5 mA              | 320Ω                   |               | DC 15.6V    |
| DC 15V          | ≤11.25              | ≥0.75               | 30 mA                | 500Ω                   |               | DC 19.5V    |
| DC 18V          | ≤13.50              | ≥0.90               | 25 mA                | 720Ω                   |               | DC 23.4V    |
| DC 24V          | ≤18.00              | ≥1.20               | 18.8 mA              | 1280Ω                  |               | DC 31.2V    |
| DC 48V          | ≤36.00              | ≥2.40               | 10.4 mA              | 4608Ω                  | 500mW         | DC 62.4V    |

### ■ Sensitive Type

| Nominal Voltage | Operate Voltage VDC | Release Voltage VDC | Rated Current (±10%) | Coil Resistance (±10%) | Nominal Power | Max Voltage |
|-----------------|---------------------|---------------------|----------------------|------------------------|---------------|-------------|
| DC 3V           | ≤2.4                | ≥0.15               | 66.7mA               | 45Ω                    | 200mW         | DC 3.9V     |
| DC 5V           | ≤4.0                | ≥0.25               | 40 mA                | 125Ω                   |               | DC 6.5V     |
| DC 6V           | ≤4.8                | ≥0.30               | 33.3mA               | 180Ω                   |               | DC 7.8V     |
| DC 9V           | ≤7.2                | ≥0.45               | 22.2 mA              | 405Ω                   |               | DC 11.7V    |
| DC 12V          | ≤9.6                | ≥0.60               | 16.7mA               | 720Ω                   |               | DC 15.6V    |
| DC 15V          | ≤12.0               | ≥0.75               | 13.3 mA              | 1128Ω                  |               | DC 19.5V    |
| DC 18V          | ≤14.4               | ≥0.90               | 11.1 mA              | 1620Ω                  |               | DC 23.4V    |
| DC 24V          | ≤19.2               | ≥1.20               | 8.3 mA               | 2880Ω                  |               | DC 31.2V    |

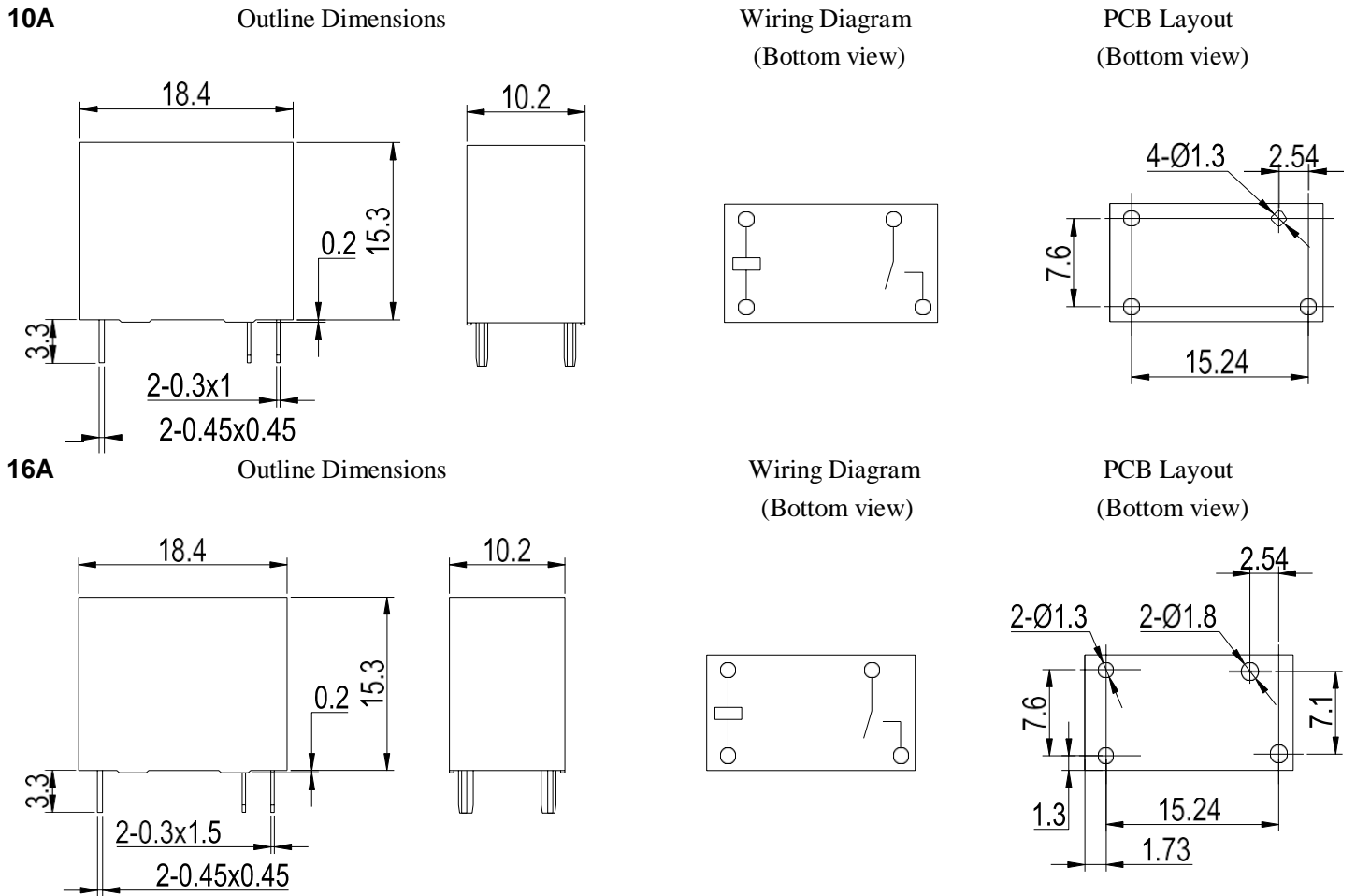
## ■ ORDERING INFORMATION

**FH17 -1A 2 S T L E -XXX DC12V**

- ① Type
- ② Contact arrangement:1A=1 open contacts
- ③ PCB mounting:2=type 2
- ④ Construction(1):Nil=Flux proofed,S=Plastic sealed(High load products with E are not recommended)
- ⑤ Contact material:T=AgSnO<sub>2</sub>
- ⑥ Coil power:Nil=Standard, L=Sensitive
- ⑦ Load:Nil=Standard load E=High load(16A)
- ⑧ Customer special code:numbers or letters denote customer's requirements,for example: WG products can meet IEC60335-1 test
- ⑨ Coil specification:DC3/5/6/9/12/15/18/24/48V

(1) When used in clean environment(excluding H<sub>2</sub>S,SO<sub>2</sub>,NO<sub>2</sub>,dust and other pollutants), it is recommended to choose the Flux proofed type;When used in unclean environment(contain H<sub>2</sub>S,SO<sub>2</sub>,NO<sub>2</sub>,dust and other pollutants), it is recommended to choose the Plastic sealed.

## ■ OUTLINE DIMENSIONS,WIRING DIAGRAM AND PC BOARD LAYOUT(Unit:mm)



Remark:(1)In case of no tolerance shown in outline dimension:outline dimension $\leq$ 1mm,tolerance should be $\pm$ 0.2mm;outline dimension  $>$ 1mm and  $<$ 5mm,tolerance should be  $\pm$ 0.3mm;outline dimension $\geq$ 5mm,tolerance should be  $\pm$ 0.5mm.

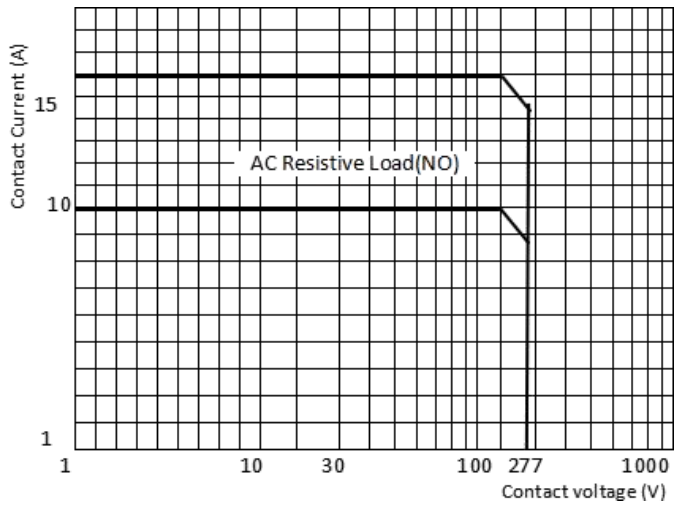
(2) The tolerance without indicating for PCB layout is always  $\pm$ 0.1mm.

## ■ SAFETY APPROVAL RATINGS

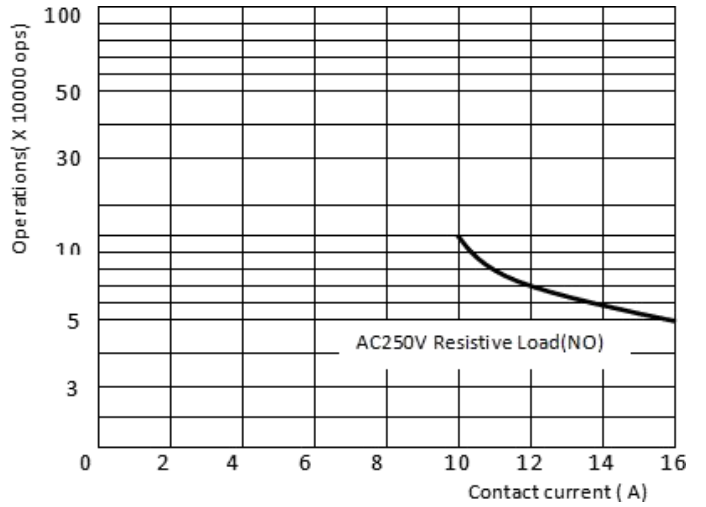
| Approval | File No.       | Contact arrangement | Contact material   | Approved ratings |        |          |
|----------|----------------|---------------------|--------------------|------------------|--------|----------|
| UL/C-UL  | E475405        | 1A                  | AgSnO <sub>2</sub> | 10A              | 250VAC | 85/105°C |
|          |                |                     |                    | 16A              | 250VAC | 85°C     |
|          |                |                     |                    | TV-8             | 250VAC | 85°C     |
| TUV      | R 50501023     | 1A                  | AgSnO <sub>2</sub> | 10A              | 250VAC | 85°C     |
|          |                |                     |                    | 16A              | 250VAC | 85°C     |
|          |                |                     |                    | 20A              | 250VAC | 85°C     |
| CQC      | CQC20002239134 | 1A                  | AgSnO <sub>2</sub> | 10A              | 250VAC | 85°C     |
|          |                |                     |                    | 16A              | 250VAC | 85°C     |

## ■ PERFORMANCE CURVES

### MAXIMUM SWITCHING POWER



### ENDURANCE CURVE



## ■ NOTICE

- ① In order to maintain the initial performance parameters of the relay, please be careful not to drop the product; The
- ② specification is for reference only. Specifications subject to change without notice.