

## Features

- 16A switching capability
- Single coil and double coils are all available
- Highly sensitive product, coil power consumption is 200mW
- More lower height (the height is 15.5mm)
- Breakdown voltage (between coil and contacts): 4KV
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (20.2×10×15.5) mm
- Outline Dimensions: Home appliance、Smart home



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

## CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		1A、1B
	Contact resistance(initial)		≤50mΩ(6VDC 1A)
	Contact material		AgSnO <sub>2</sub>
Rated value	Rated load(Resistance load)		10A 250VAC 16A 250VAC (Standards)
	Max.switching voltage		277VAC
	Max.switching current		16A
	Max.switching capacity		4000VA
	Min.allowing load		5VDC 100mA
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)
	Insulation resistance (initial)	Between open contacts	1000VAC,1min
		Between coil&contacts	4000VAC,1min
	Operate time		≤10ms
	Release time		≤10ms
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>6</sup> ops
	Electrical	10A 250VAC	1×10 <sup>5</sup> ops (ON/OFF=1s/9s)
		16A 250VAC	5×10 <sup>4</sup> ops (ON/OFF=1s/9s)
Operate condition	Ambient temperature		-40℃~85℃
	Humidity		5% to 90%
Termination			PCB
Unit weight			Approx.7g
Construction			Plastic sealed、Flux proofed

## ■ COIL DATA(23°C)

### ■ Single coil standard

Nominal Voltage	Pick-up Voltage VDC	Drop-out Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 3V	≤2.25	≤2.25	83.3mA	36Ω	250mW	DC 4.5V
DC 5V	≤3.75	≤3.75	50.0 mA	100Ω		DC 7.5V
DC 12V	≤9.00	≤9.00	20.8 mA	576Ω		DC 18V
DC 24V	≤18.00	≤18.00	10.4 mA	2304Ω		DC 36V

### ■ Double coils standard

Nominal Voltage	Pick-up Voltage VDC	Drop-out Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 3V	≤2.25	≤2.25	166.7/166.7mA	18/18Ω	500mW	DC 4.5V
DC 5V	≤3.75	≤3.75	100/100mA	50/50Ω		DC 7.5V
DC 12V	≤9.00	≤9.00	41.7/41.7mA	288/288Ω		DC 18V
DC 24V	≤18.00	≤18.00	20.8/20.8mA	1152/1152Ω		DC 36V

### ■ Single coil sensitive

Nominal Voltage	Pick-up Voltage VDC	Drop-out Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 3V	≤2.25	≤2.25	66.7mA	45Ω	200mW	DC 4.5V
DC 5V	≤3.75	≤3.75	40mA	125Ω		DC 7.5V
DC 12V	≤9.0	≤9.0	16.7mA	720Ω		DC 18V
DC 24V	≤18.0	≤18.0	8.3mA	2880Ω		DC 36V

### ■ Double coils sensitive

Nominal Voltage	Pick-up Voltage VDC	Drop-out Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 3V	≤2.25	≤2.25	133.3/133.3mA	22.5/22.5Ω	400mW	DC 4.5V
DC 5V	≤3.75	≤3.75	80/80mA	62.5/62.5Ω		DC 7.5V
DC 12V	≤9.0	≤9.0	33.3/33.3mA	360/360Ω		DC 18V
DC 24V	≤18.0	≤18.0	16.7/16.7mA	1440/1440Ω		DC 36V

## ■ ORDERING INFORMATION

**FH44L -1A S T L -L1 R -XXX DC12V**

① Type

② Contact arrangement: 1A=1open contacts  
1B=1close contacts

③ Construction(1): Nil=Flux proofed, S=Plastic sealed

④ Contact material: T=AgSnO<sub>2</sub>

⑤ Coil power: Nil=Standard、L=Sensitive

⑥ Coil type: L1=coil latching、L2=coils latching

⑦ Operation polarity: Nil=standard polarity R=reversed polarity

⑧ Customer special code: numbers or letters denote customer's requirements

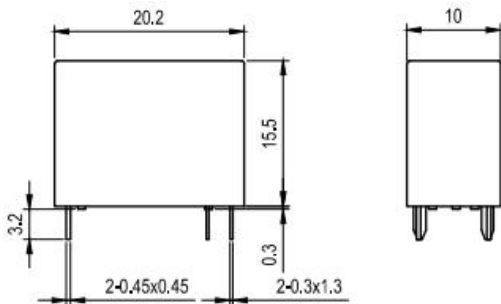
⑨ Coil specification: DC3/5/6/9/12/24V

## ORDERING INFORMATION

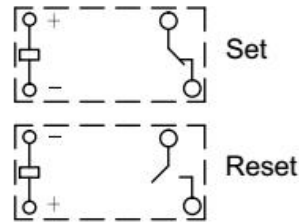
- (1) When used in clean environment(excluding H<sub>2</sub>S、SO<sub>2</sub>、NO<sub>2</sub>、dust and other pollutants), it is recommended to choose the Flux proofed type;When used in unclean environment(contain H<sub>2</sub>S、SO<sub>2</sub>、NO<sub>2</sub>、dust and other pollutants), it is recommended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

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

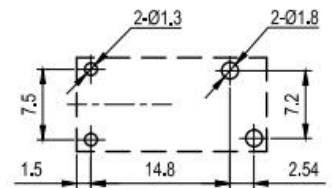
**1A/1B** Outline Dimensions  
(Single coil latching)



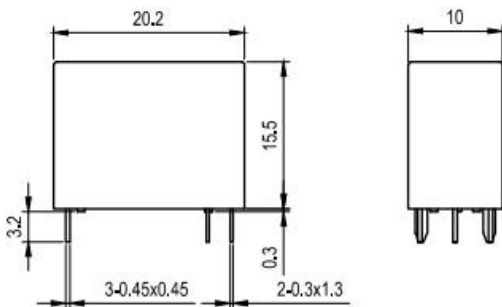
Wiring Diagram  
(Bottom view)



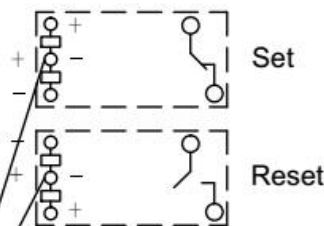
PCB Layout  
(Bottom view)



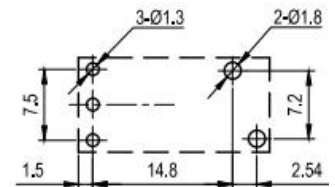
**1A/1B** Outline Dimensions  
(Double coil latching)



Wiring Diagram  
(Bottom view)



PCB Layout  
(Bottom view)



The common terminal, positive and negative poles are optional

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(NO) 1B(NC)	AgSnO <sub>2</sub>	16A/10A	250VAC	85°C
				20A	250VAC	85°C
				5A	120VAC(LED lamp)	85°C
				TV-8	125VAC	85°C
TUV	/	/	/	/	/	/
CQC	CQC20002266915	1A(NO)	AgSnO <sub>2</sub>	16A/10A	250VAC	85°C
				20A	250VAC	85°C

## ■ NOTICE

- ① With the consideration of shock risen from transit and relay mounting,relay's initial state might be changed ,please impose pulse voltage to reset the relay before using(rated coil voltage,impulse width $\geq$ 5 times operation time.
- ② In order to maintain the initial performance parameters of the relay, please be careful not to drop the product;
- ③ The specification is for reference only.Specifications subject to change without notice.