FH44LS

Latching Relay

Features

- 12A switching capability
- Single coil and double coils are all available
- Small size，the height of the product is only 12mm
- UL insulation system:Class F
- Environmental friendly product(RoHS compliant)
- Outline Dimensions:(20.0×10.0×11.8)mm
- Main application:Home appliance、Smart home

CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		1A
	Contact resistance		≤50mΩ(6VDC 1A)
	Contact material		$AgSnO_2$
Rated value	Rated load(Resistance load)		10A 250VAC
	Max.switching voltage		277VAC
	Max.switching current		12A
	Max.switching capacity		3000VA
	Min.allowing load		5VDC 100mA
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)
	Dielectric strength (initial))	Between open contacts	1000VAC,1min
		Between coil&contacts	3000VAC,1min
	Set time		≤10ms
	Reset time		≤10ms
Mechanical performance	Shock resistance	Functional	98m/s²(10g)
		Destructive	980m/s²(100g)
	Vibration resistance		10Hz~55Hz 1.5mm DA
Endurance	Mechanical		1×10^6ops
	Electrical(Room temperature)		8A 250VAC 1×10^5ops(ON/OFF=1s/9s，Resistive Load) 10A 250VAC 5×10^4ops(ON/OFF=1s/9s，Resistive Load) 12A 250VAC 3×10^4ops(ON/OFF=1s/9s，Resistive Load)
Operate condition	Ambient temperature		-40℃～85℃
	Humidity		5% to 85%
Termination			PCB
Unit weight			Approx.4.5g
Construction			Plastic sealed、Flux proofed

COIL DATA(23℃)

■ Single coil latching

Nominal Voltage	Set Voltage VDC	Reset Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 3V	≤2.40	≤2.40	66.7mA	45Ω	0.2W	DC 4.5V
DC 5V	≤3.75	≤3.75	40mA	125Ω		DC 7.5V
DC 9V	≤6.75	≤6.75	22.2mA	405Ω		DC 13.5V
DC 12V	≤9.00	≤9.00	16.7mA	720Ω		DC 18V
DC 24V	≤18.0	≤18.0	8.33mA	2880Ω		DC 36V

■ Double coils latching

Nominal Voltage	Set Voltage VDC	Reset Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 3V	≤2.40	≤2.40	133.3/133.3mA	22.5/22.5Ω	0.4W	DC 4.5V
DC 5V	≤3.75	≤3.75	80/80mA	62.5/62.5Ω		DC 7.5V
DC 9V	≤6.75	≤6.75	44.4/44.4mA	202.5/202.5Ω		DC 13.5V
DC 12V	≤9.00	≤9.00	33.3/33.3mA	360/360Ω		DC 18V
DC 24V	≤18.0	≤18.0	16.7/16.7mA	1440/1440Ω		DC 36V

ORDERING INFORMATION

FH44LS -1A S T -L1 R -XXX DC12V

① Type

② Contact arrangement:1A=1open contacts

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

④ Contact material:T=$AgSnO_2$

⑤ Coil type:L1=Single coil latching、L2=Double coils latching

⑥ Operation polarity:Nil=standard polarity R=reversed polarity

⑦ Customer special code:numbers or letters denote customer's requirements

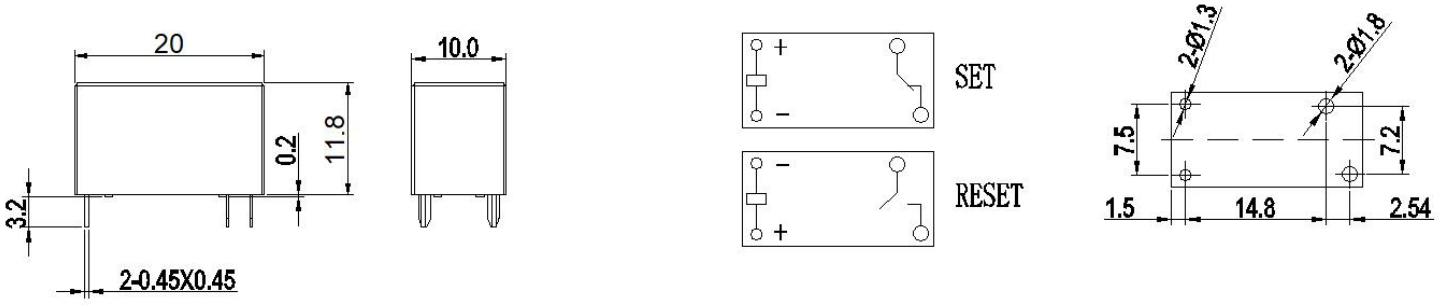
⑧ Coil specification:DC5/6/9/12/24V

(1) When used in clean environment(excluding H_2S,SO_2,NO_2,dust and other pollutants), it is recommended to choose the Flux proofed type;When used in unclean environment(contain H_2S,SO_2,NO_2,dust and other pollutants), it is recommended to choose the Plastic sealed.

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

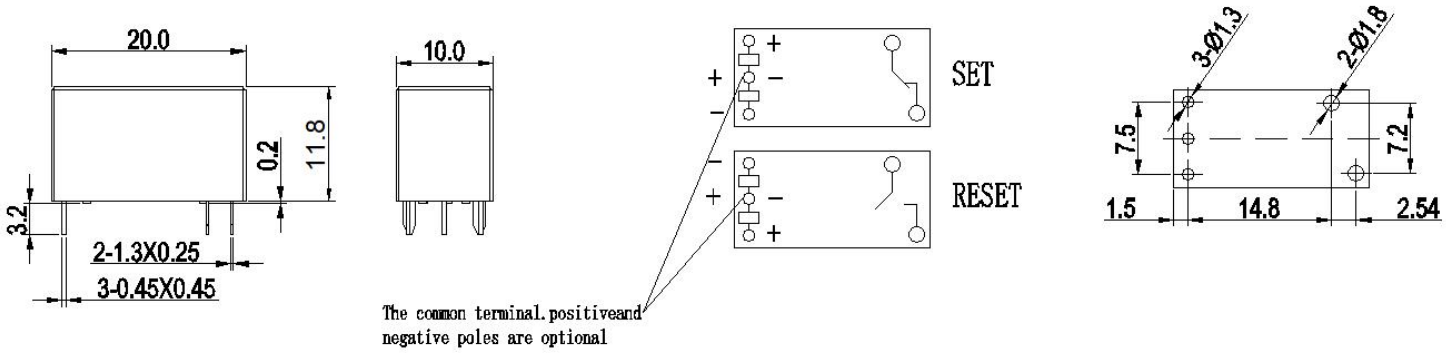
1A Outline Dimensions Wiring Diagram PCB Layout

(Single coil latching) (Bottom view) (Bottom view)



1A Outline Dimensions Wiring Diagram PCB Layout

(Double coils latching) (Bottom view) (Bottom view)



Remark:(1)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 ±0.5mm.

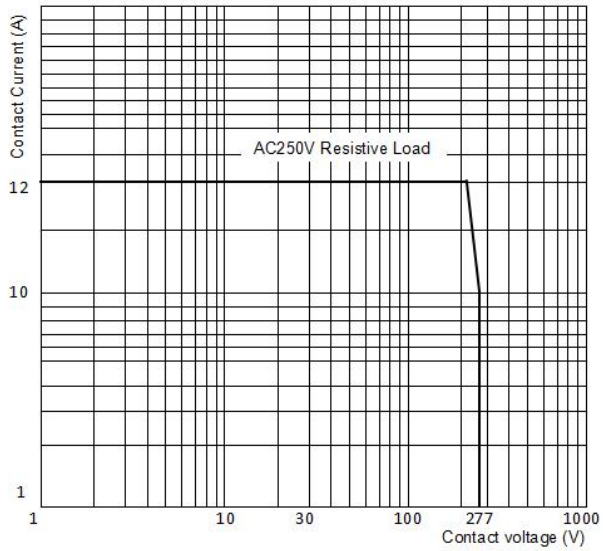
(2) The tolerance without indicating for PCB layout is always ±0.1mm.

SAFETY APPROVAL RATINGS

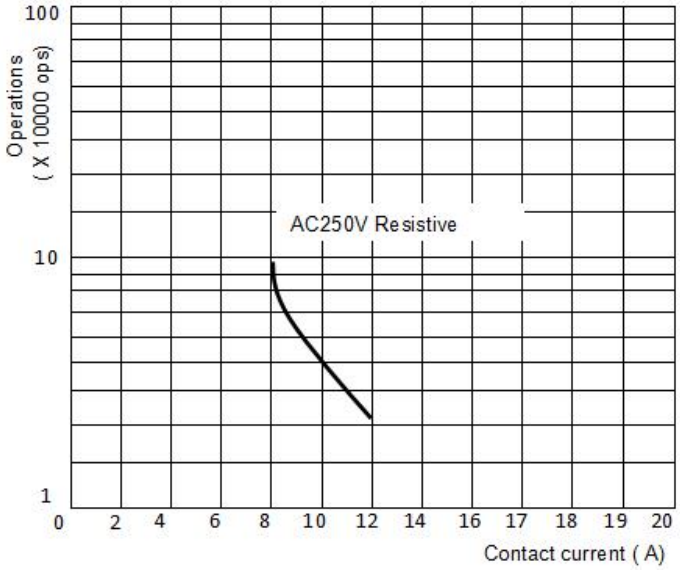
Approval	File No.	Contact arrangement	Contact material	Approved ratings		
UL/C-UL	E475405	1A	AgSnO2	Standard		
				10A 277/250VAC	5×104(ON/OFF=1s/9s)	85℃
				16A 277/250VAC	2×104(ON/OFF=1s/9s)	85℃
				TV-5 125VAC	2.5×104(ON/OFF=1s/9s)	85℃
TUV	R50654293	1A	AgSnO2	Standard		
				10A 277/250VAC	5×104(ON/OFF=1s/9s)	85℃
				16A 277/250VAC	2×104(ON/OFF=1s/9s)	85℃
CQC	CQC24002455512	1A	AgSnO2	Standard		
				10A 277/250VAC	5×104(ON/OFF=1s/9s)	85℃
				16A 277/250VAC	2×104(ON/OFF=1s/9s)	85℃

PERFORMANCE CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



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≥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 In order to maintain the "set" or "reset" status, energized voltage to coil should reach the rated voltage, impulse width should be 5 times more than “set” or “reset” time. Do not energize the voltage to "set" coil and "reset" coil simultaneously.

④ The specification is for reference only.Specifications subject to change without notice.