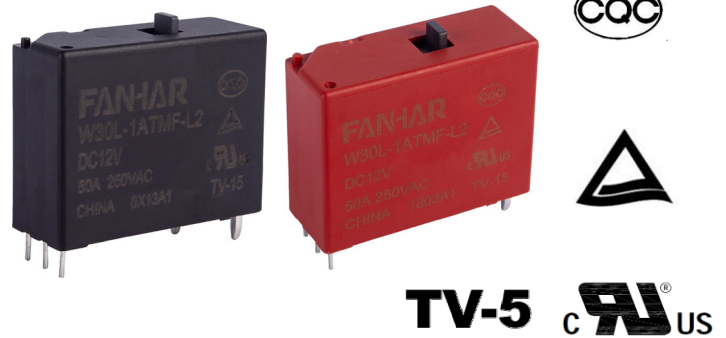


## Features

- 50A contact switching capability
- We can provide the contact gap is  $\geq 1.5\text{mm}$
- Contact arrangement: 1A, 1B, 1C
- Surge voltage(1.2/50 $\mu\text{s}$ ):between contact and coil 12KV
- Contact on and off can be controlled by manual control switch
- UL insulation system:Class F
- Environmental friendly product(RoHS compliant)
- Outline Dimensions:(39.0 $\times$ 15 $\times$ 30.2)mm
- Main application:Smart home,Lighting control



## CHARACTERISTICS

Specifications	Item			
Contact Data	Contact arrangement		1A, 1B	1C
	Contact resistance(initial)		$\leq 2.0\text{m}\Omega(6\text{VDC } 1\text{A})$	
	Contact material		AgSnO <sub>2</sub>	
Rated value	Rated load(Resistance load)		50A 250VAC	40A 250VAC
	Max.switching voltage		440VAC	
	Max.switching current		50A	
	Max.switching capacity		12500VA	10000VA
Electrical performance	Insulation resistance(initial)		1000M $\Omega(500\text{VDC})$	
	Dielectric strength (initial)	Between open contacts	2000VAC, 1min	1500VAC, 1min
		Between coil&contacts	4000VAC 1min	
	Closing time		$\leq 20\text{ms}$	
	Opening time		$\leq 20\text{ms}$	
Surge Voltage (1.2/50 $\mu\text{s}$ )	Between coil&contacts		12KV	
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 $\times 10^6$ ops	
	Electrical	ON/OFF=1S/9S	50A 250VAC	5 $\times 10^4$ ops(COS $\phi$ =1)
	Electrical	ON/OFF=3S/3S	40A 250VAC	3 $\times 10^4$ ops(COS $\phi$ =1)
Operate condition	Ambient temperature		-40 $^{\circ}\text{C}$ ~85 $^{\circ}\text{C}$	
	Humidity		5%~85%RH	
Termination	PCB type			
Unit weight	Approx.31g			
Construction	Plastic sealed,Flux proofed			

## COIL DATA(23°C)

### Single coil latching

Nominal Voltage	Closing Voltage VDC	Opening Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 6V	≤4.50	≤4.50	0.17A	36Ω	1.0 W	DC 9V
DC 9V	≤6.75	≤6.75	0.11A	81Ω		DC 13.5V
DC 12V	≤9.00	≤9.00	0.08A	144Ω		DC 18V
DC 24V	≤18.00	≤18.00	0.04A	576Ω		DC 36V

### Double coils latching

Nominal Voltage	Closing Voltage VDC	Opening Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 6V	≤4.50	≤4.50	0.33/0.33A	18/18Ω	2.0W	DC 9V
DC 9V	≤6.75	≤6.75	0.22/0.22A	40.5/40.5Ω		DC 13.5V
DC 12V	≤9.00	≤9.00	0.17/0.17A	72/72Ω		DC 18V
DC 24V	≤18.00	≤18.00	0.083/0.083A	288/288Ω		DC 36V

## ORDERING INFORMATION

**W30L -1B S T M -L1 R -XXX DC6V**

- ① Type
- ② Contact arrangement::1A=1 open contact  
1B=1 close contact  
1C=1 switched contact
- ③ Construction(1):Nil=Flux proofed  
S=Plastic sealed(No hand control switch)
- ④ Contact material:T=AgSnO<sub>2</sub>
- ⑤ Control type:Nil=No hand control switch  
M=Within Manual Switch(Only flux proofed)
- ⑥ Coil type:L1=1 coil latching , L2=2 coils latching
- ⑦ Polarity:Nil=standard polarity R=reversed polarity
- ⑧ Customer special code:numbers or letters denote customer's requirements
- ⑨ Coil specification:DC6/9/12/24V

- (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.



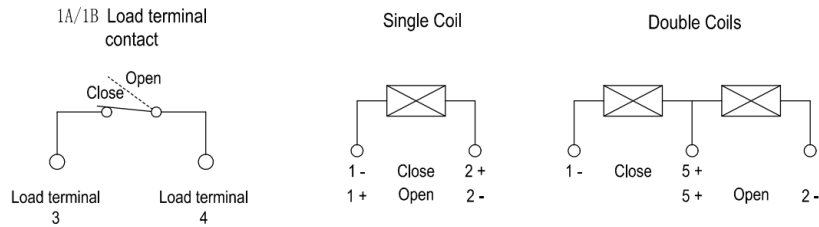
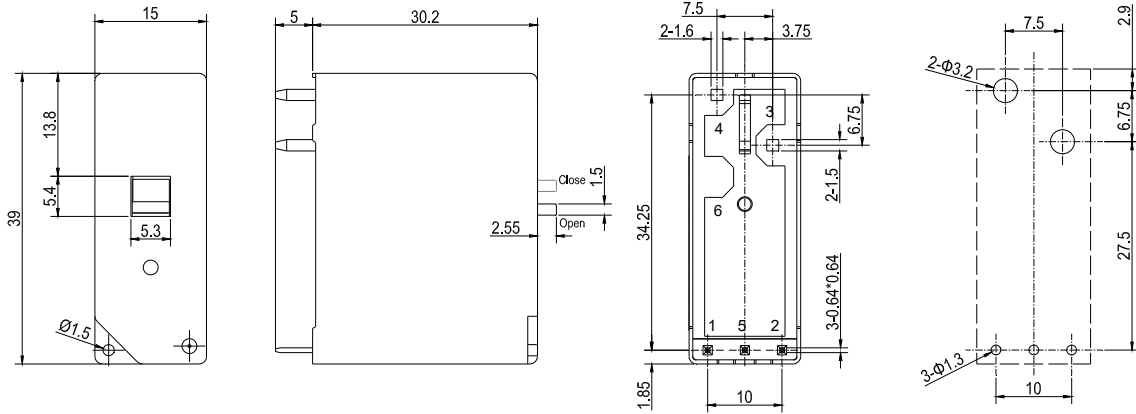
# WIRING DIAGRAM AND PC BOARD LAYOUT(Unit:mm)

Outline Dimensions, Standard polarity wiring diagram

## 1A/1B(Basic type)

Outline Dimensions

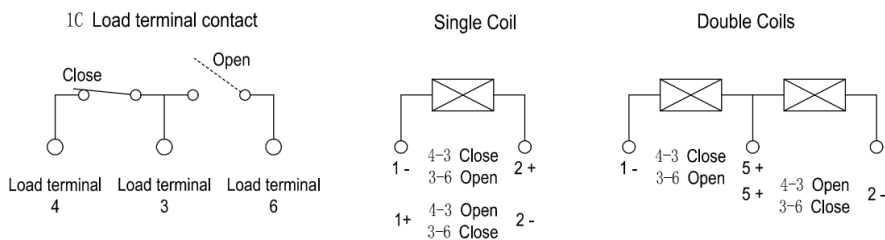
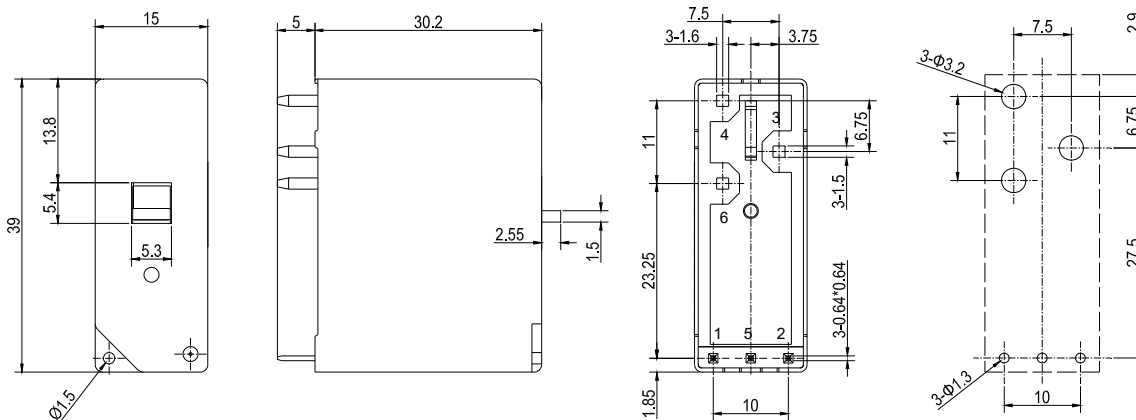
PCB Layout  
(Bottom view)



## 1C(switched type)

Outline Dimensions

PCB Layout  
(Bottom view)



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.



## ■ NOTICE

- ① For the state of latching relay as delivered, If the customer has no special requirements, we default to the closed state before delivery, but due to transportation or relay installation by shock and other factors may change the state, so please reset it to the closed or open state as needed when using;
- ② In order to maintain the initial performance parameters of the relay, please be careful not to drop the product or be affected by external force;
- ③ In order to maintain "opening" or "closing" status, energized voltage applied across the coil should reach the rated voltage, it is recommended that the actual driving voltage be 1~1.5 times the rated voltage, Pulse width  $\geq 50\text{ms}$ , and do not energize to "opening" coil and "closing" coil simultaneously, long energized time (more than 1 min) should also be avoided;
- ④ The soldering temperature of load extraction terminal with copper is  $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ , soldering time is  $10\text{S} \pm 1\text{S}$
- ⑤ Latching relays are customized products, the above cases are only for reference. If you have any questions, please contact Fanhar for more technical support;
- ⑥ The specification is for reference only. Specifications subject to change without notice.

