

Features

- 50A contact switching capability
- We can provide the contact gap is $\geq 1.5\text{mm}$
- Magnetic Blowout Latching Relay is available
- Surge voltage(1.2/50 μs):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:W30L: (39.0×15×30.2)mm、
W30LD: (39.0×21.4×30.2)mm
- Main application:Smart home,Lighting control



CHARACTERISTICS

Specifications	Item		W30L		W30LD
Contact Data	Contact arrangement		1A、1B	1C	1A、1B
	Contact resistance(initial)		$\leq 20\text{m}\Omega(6\text{VDC } 1\text{A})$		$\leq 10\text{m}\Omega(50\text{A})$
	Contact material		AgSnO ₂		
Rated value	Rated load(Resistance load)		50A 250VAC	40A 250VAC	50A 60VDC
	Max.switching voltage		440VAC		60VDC
	Max.switching current		50A	40A	50A
	Max.switching capacity		12500VA	10000VA	3000W
Electrical performance	Insulation resistance(initial)		1000M $\Omega(500\text{VDC})$		
	Dielectric strength (initial)	Between open contacts	2000VAC 1min	1500VAC 1min	2000VAC 1min
		Between coil&contacts	4000VAC 1min		
	Closing time		$\leq 20\text{ms}$		
	Opening time		$\leq 20\text{ms}$		
Surge Voltage (1.2/50 μs)	Between coil&contacts		12KV		
Mechanical performance	Shock resistance	Functional	98m/s ² (10g)		
		Destructive	980m/s ² (100g)		
	Vibration resistance		10Hz~55Hz 1.5mm DA		
Endurance	Mechanical		1×10 ⁶ ops		1×10 ⁵ ops
	Electrical		50A 250VAC 5×10 ⁴ ops(COS ϕ =1) ON/OFF=1S/9S	40A 250VAC 3×10 ⁴ ops(COS ϕ =1) ON/OFF=3S/3S	50A 60VDC(DC Load) 5×10 ⁴ ops ON/OFF=1S/9S
	Electrical		50A 30VDC(DC Load) 5×10 ⁴ ops ON/OFF=1S/9S Only for the contact gap 1.5 mm	/	/

■ CHARACTERISTICS

Operate condition	Ambient temperature	-40℃~85℃
	Humidity	5%~85%RH
Termination		PCB type
Unit weight		Approx.40g
Construction		Plastic sealed,Flux proofed

■ COIL DATA(23℃)

■ 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 F -L1 R -XXX DC6V

① Type:W30L=AC Load、
W30LD=DC Load

② Contact arrangement:1A=1 open contacts、1B=1 close contacts
1C=1 switched contacts (Only for W30L)

③ Construction(1):Nil=Flux proofed、S=Plastic sealed(No hand control switch)

④ Contact material:T=AgSnO₂

⑤ Control type:Nil=No hand control switch、M=Within Manual Switch(Only flux proofed)

⑥ Insulation standard:Nil=Blank F=Class F

⑦ Coil type:L1=1 coil latching ,L2=2 coils latching

⑧ Polarity:Nil=standard polarity R=reversed polarity

⑨ Customer special code:numbers or letters denote customer's requirements

⑩ Coil specification:DC6/9/12/24V

(1) When used in clean environment(excluding H₂S,SO₂,NO₂,dust and other pollutants), it is recommended to choose the Flux proofed type;When used in unclean environment(contain H₂S,SO₂,NO₂,dust and other pollutants), it is recommended to choose the Plastic sealed.

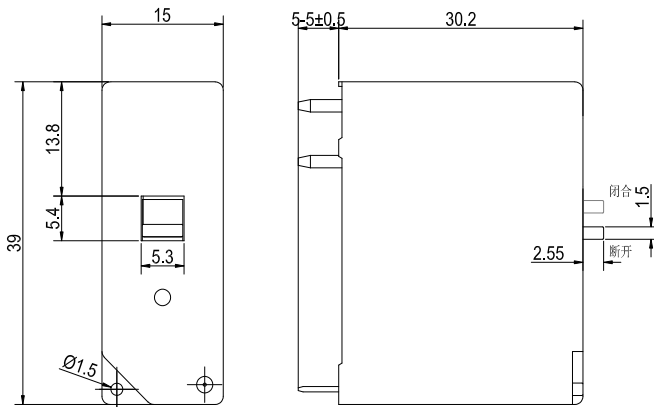


■ WIRING DIAGRAM AND PC BOARD LAYOUT(Unit:mm)

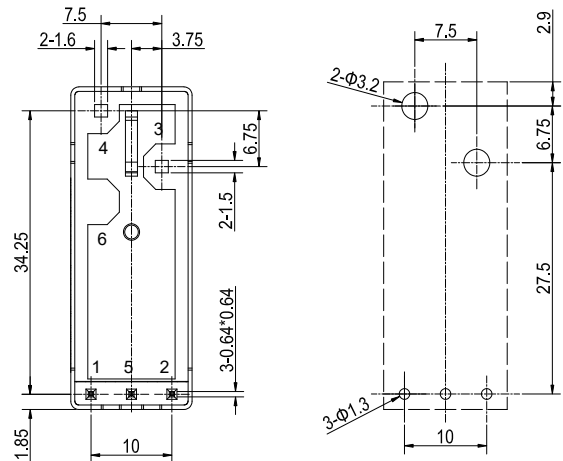
Outline Dimensions, Standard polarity wiring diagram
W30L

1A/1B(Basic type)

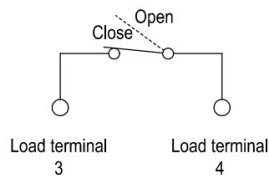
Outline Dimensions



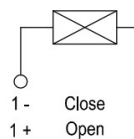
PCB Layout
(Bottom view)



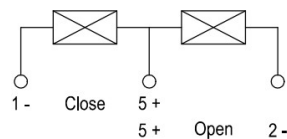
1A/1B Load terminal contact



Single Coil

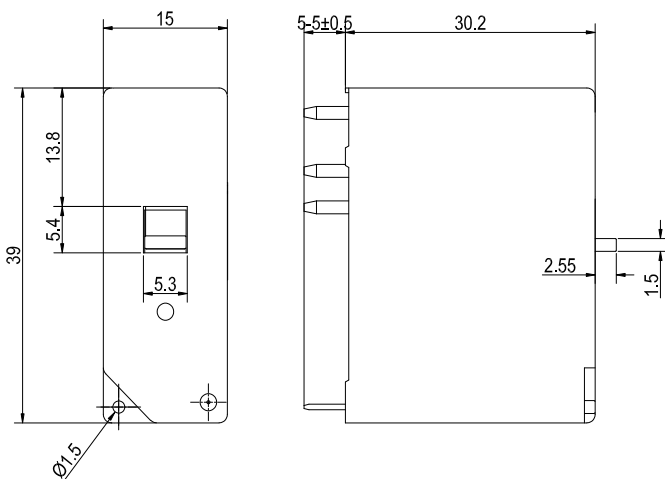


Double Coils

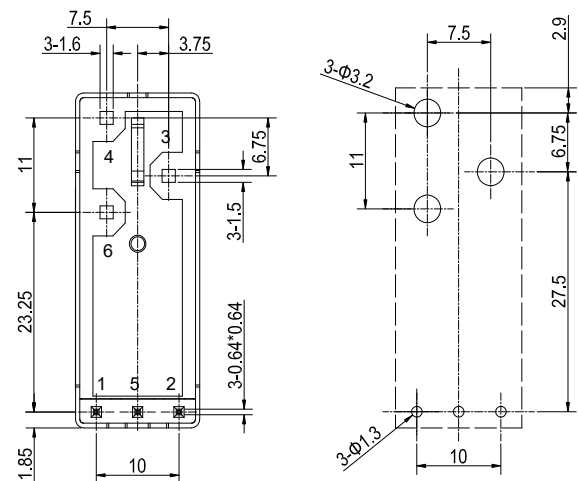


1C(switched type)

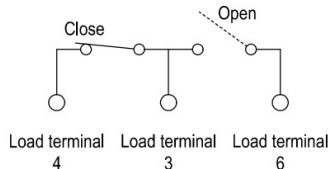
Outline Dimensions



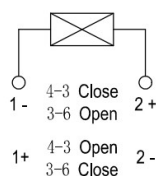
PCB Layout
(Bottom view)



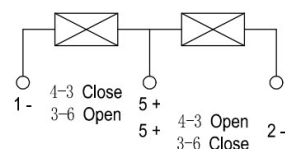
1C Load terminal contact



Single Coil



Double Coils



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

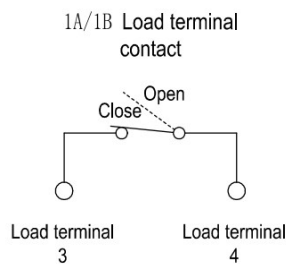
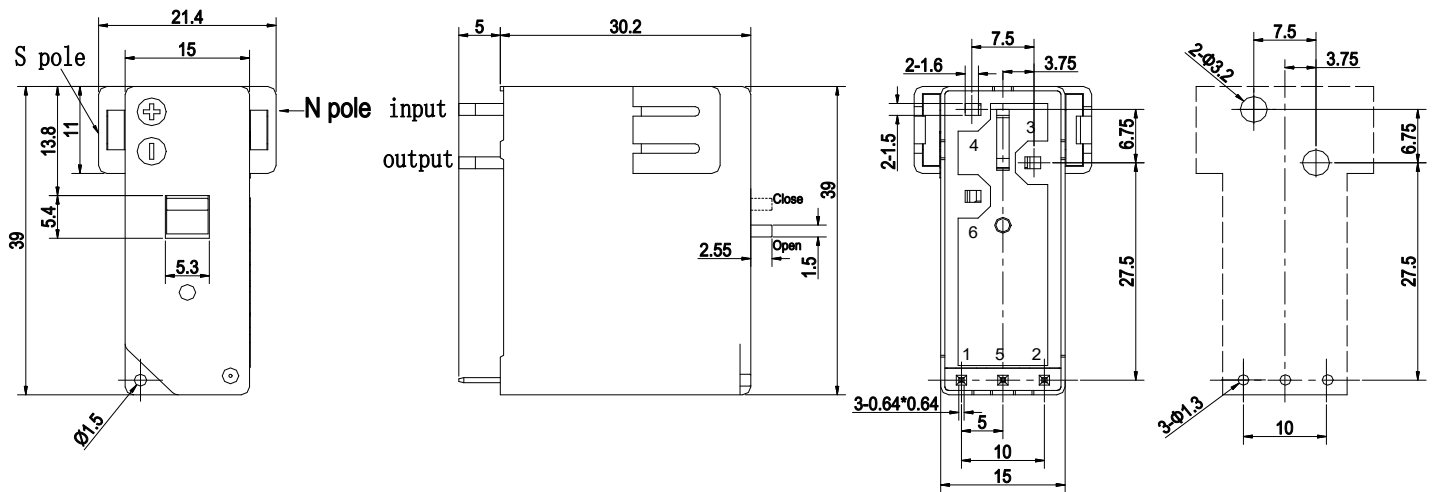
Outline Dimensions, Standard polarity wiring diagram

W30LD

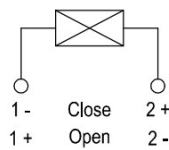
1A/1B(Basic type)

Outline Dimensions

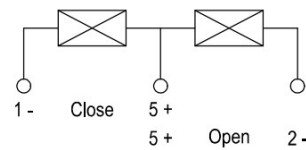
PCB Layout
(Bottom view)



Single Coil



Double Coils



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

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

■ 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.

