

Features

- 10A switching capability
- Contact arrangement: 1A、1C
- Provide high sensitivity type of products, coil power consumption is 200mW
- Breakdown voltage (between coil and contacts):5KV
- Creepage distance and air distance are greater than10mm
- We can provide the product with ambient temperature is 105℃
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (18.6×10.3×13.2) mm
- Main application: Home appliance、Smart home、Electric power meter



TV-5

cULUS

CHARACTERISTICS

Specifications	Item			
Contact Data	Contact arrangement		1A、1B、1C	
	Contact resistance(initial)		≤100mΩ(6VDC 1A)	
	Contact material		AgNi、AgSnO ₂	
Rated value	Rated load(Resistance load)		5A 250VAC/30VDC	
			10A 125VAC	
			10A 250VAC/30VDC	
	Max.switching voltage		277VAC/30VDC	
	Max.switching current		10A	
	Max.switching capacity		2500VA/300W	
Min.allowing load		5VDC 100mA		
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)	
	Dielectric strength (initial)	Between open contacts	1000VAC, 1 min	
		Between coil&contacts	4000VAC, 1 min	
	Operate time		≤10ms	
	Release time		≤5ms	
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 ⁷ ops	
	Electrical		3A 250VAC(PF=0.6)	1×10 ⁵ ops(ON/OFF=1s/9s)
			5A 250VAC/30VDC	1×10 ⁵ ops(ON/OFF=1s/9s)
10A 250VAC/30VDC		5×10 ⁴ ops(ON/OFF=1s/9s)		
Operate condition	Ambient temperature		-40℃~85℃	
	Humidity		5% to 90%	
Termination			PCB	
Unit weight			Approx.5g	
Construction			Plastic sealed、Flux proofed	

COIL DATA(23°C)

Standard Type

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

Sensitive Type

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

ORDERING INFORMATION

W11 -1A 2 S T L E -XXX DC12V

- ① Type
- ② Contact arrangement(1): 1A=1 open contacts, 1B=1 close contacts, 1C=1 switched contacts
- ③ PCB mounting: 1=type 1、2=type 2、3=type 3、4=type 4
- ④ Construction(2): Nil=Flux proofed, S=Plastic sealed
- ⑤ Contact material (3): Nil=AgNi、T=AgSnO₂
- ⑥ Coil power: Nil=Standard、L=Sensitive
- ⑦ Load: Nil=Standard load E=High load (10A)
- ⑧ Customer special code: numbers or letters denote customer's requirements
- ⑨ Coil specification:DC3/5/6/9/12/15/18/24/48V

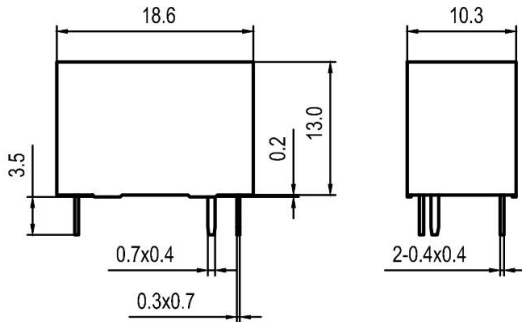
- (1) If need the contact arrangement is 1B, please contact with the salesman to ask for the outline dimensions, wiring diagram and PC board layout.
- (2) When used in clean environment(excluding H₂S、SO₂、NO₂、dust and other pollutants), it is recommended to choose the Flux proofed type; When used in unclean environment(contain H₂S、SO₂、NO₂、dust and other pollutants), it is recommended to choose the Plastic sealed.

ORDERING INFORMATION

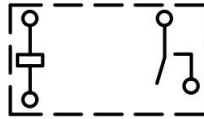
(3) Due to the high surge current of relay connection, we propose to use AgSnO₂ contacts.

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

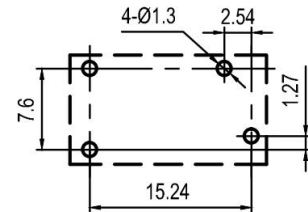
1A1 Outline Dimensions



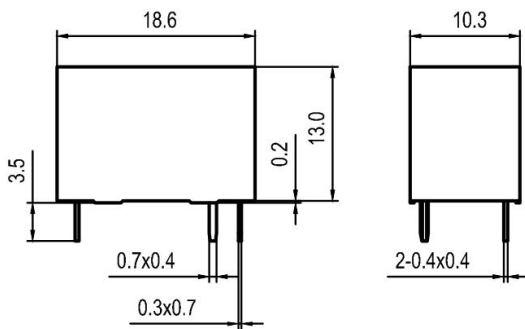
Wiring Diagram
(Bottom view)



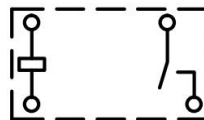
PCB Layout
(Bottom view)



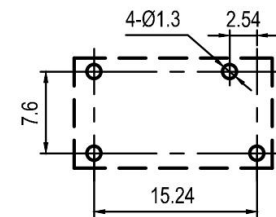
1A2 Outline Dimensions



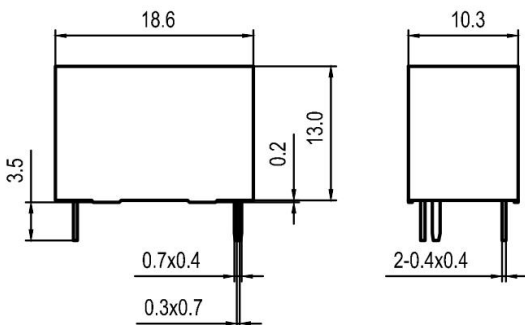
Wiring Diagram
(Bottom view)



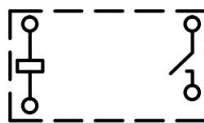
PCB Layout
(Bottom view)



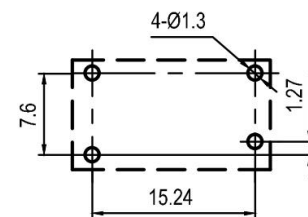
1A3 Outline Dimensions



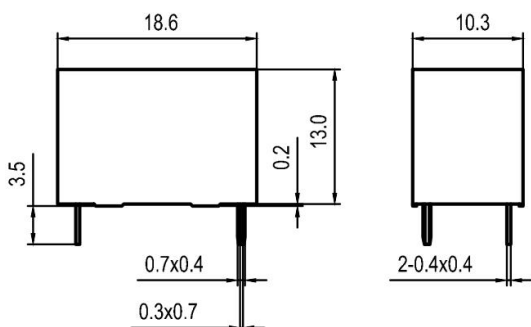
Wiring Diagram
(Bottom view)



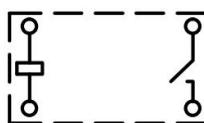
PCB Layout
(Bottom view)



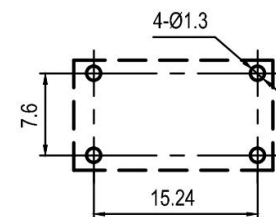
1A4 Outline Dimensions



Wiring Diagram
(Bottom view)

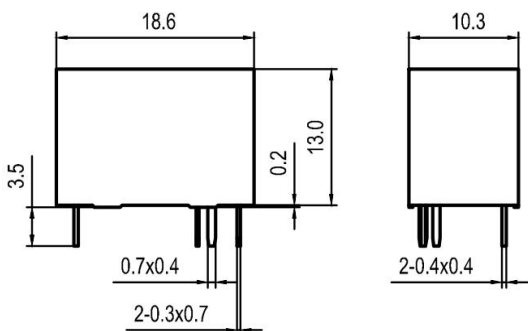


PCB Layout
(Bottom view)

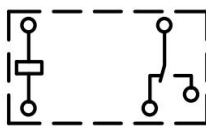


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT (Unit: mm)

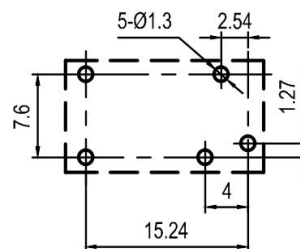
1C1 Outline Dimensions



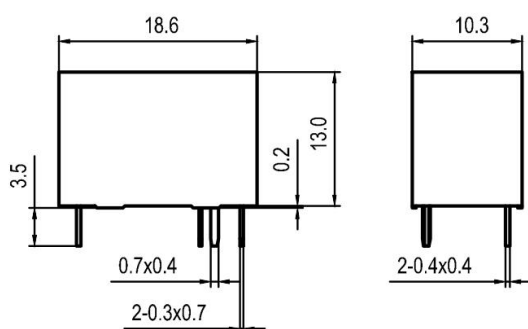
Wiring Diagram (Bottom view)



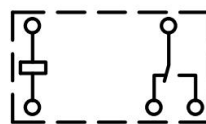
PCB Layout (Bottom view)



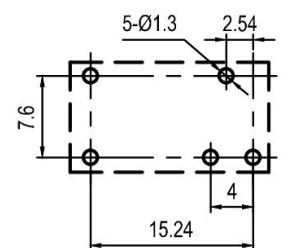
1C2 Outline Dimensions



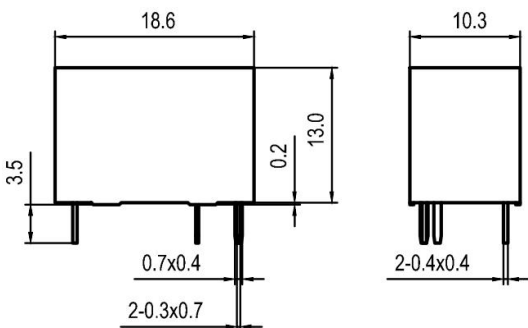
Wiring Diagram (Bottom view)



PCB Layout (Bottom view)



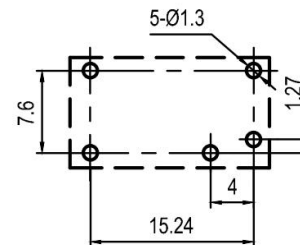
1C3 Outline Dimensions



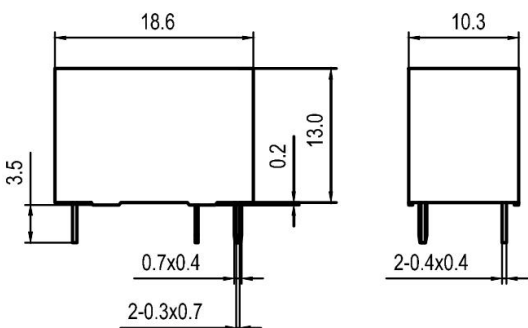
Wiring Diagram (Bottom view)



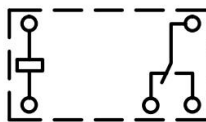
PCB Layout (Bottom view)



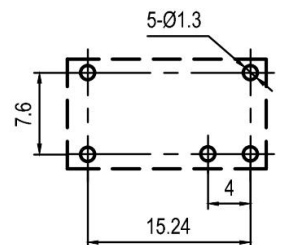
1C4 Outline Dimensions



Wiring Diagram (Bottom view)



PCB Layout (Bottom view)



Remark: (1) In case of no tolerance shown in outline dimension: outline dimension ≤ 1 mm, tolerance should be ± 0.2 mm; outline dimension > 1 mm and < 5 mm, tolerance should be ± 0.3 mm; outline dimension ≥ 5 mm, tolerance should be ± 0.5 mm.

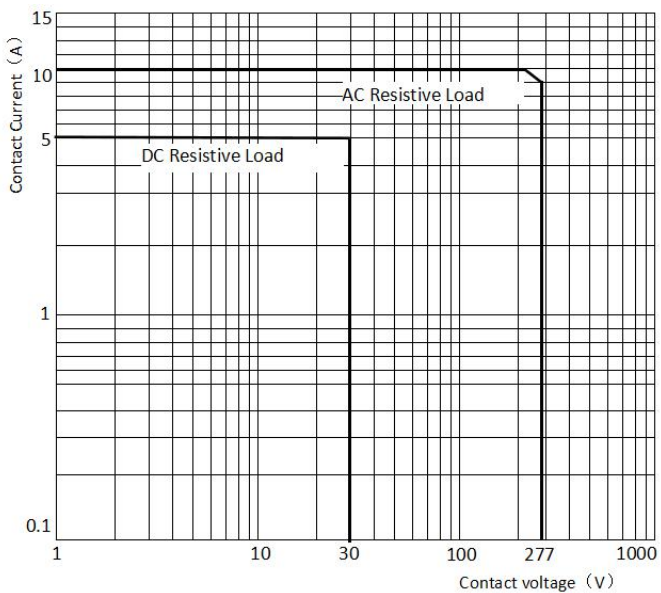
(2) The tolerance without indicating for PCB layout is always ± 0.1 mm.

SAFETY APPROVAL RATINGS

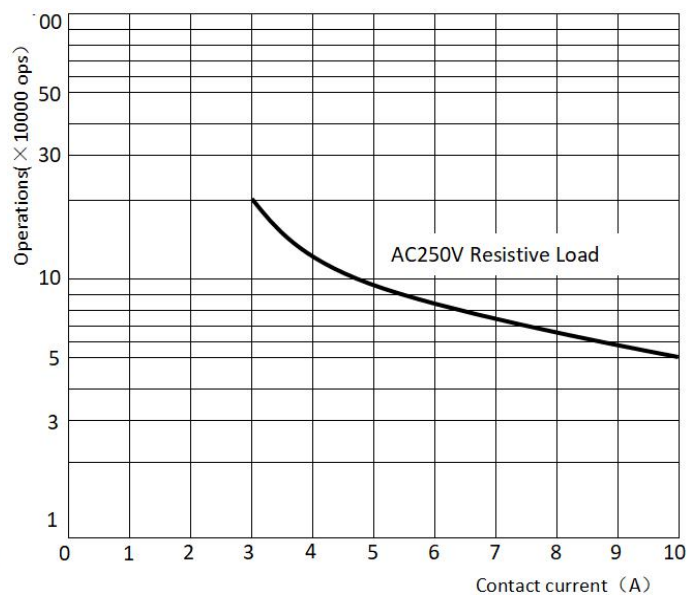
Approval	File No.	Contact arrangement	Contact material	Approved ratings		
UL/C-UL	E475405	1A、1C (NO)	AgNi、AgSnO ₂	10A	250/125VAC/30VDC	85℃
				1/4HP	250VAC	85℃
		1B、1C (NC)	AgSnO ₂	3A	250VAC (PF=0.6)	85℃
				TV-5	125VAC	85℃
TUV	R 50332879	1A、1C (NO)	AgNi、AgSnO ₂	1000W	250VAC(Tungsten)	85℃
				5A	250VAC/30VDC	105℃
		1B、1C (NC)	AgNi、AgSnO ₂	5A	250VAC/30VDC	85℃
				1C (NO/NC)	5A/3A	250VAC/30VDC
CQC	CQC16002154624	1A、1C (NO)	AgNi、AgSnO ₂	10A	250VAC/30VDC	85℃
		1B、1C (NC)		5A	250VAC/30VDC	105℃
				5A	250VAC/30VDC	85℃

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;
- ② The specification is for reference only. Specifications subject to change without notice.