

## Features

- 2 sets of 20A switching capability
- Single coil and double coil are all available
- We can provide the product with ambient temperature is 105°C
- The height of the product is 10mm, it is suit for flat mounting
- Breakdown voltage (between contact and coil): 4KV
- The contact can withstand 750A 10ms short-circuit impulse current
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (30.0×20.0×10.0) mm
- Main application: Smart home



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

## CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		2A、2B
	Contact resistance(initial)		20mΩ(6VDC 1A)
	Contact material		AgSnO <sub>2</sub>
Rated value	Rated load(Resistance load)		16A 250VAC 20A 250VAC
	Max.switching voltage		277VAC
	Max.switching current		20A
	Max.switching capacity		4000VA
	Min.allowing load		5VDC 100mA
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)
	Dielectric strength (initial)	Between open contacts	1000VAC,1min
		Between contact sets	2000VAC,1min
		Between coil&contacts	4000VAC,1min
	Operate time		≤15ms
Release time		≤15ms	
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	16A 250VAC	1×10 <sup>5</sup> ops (ON/OFF=1s/9s)
		20A 250VAC	5×10 <sup>4</sup> ops (ON/OFF=1s/9s)
		1.5HP 250VAC(motor)	5×10 <sup>4</sup> ops (ON/OFF=1s/9s)
Operate condition	Ambient temperature		-40℃~85℃
	Humidity		5% to 85%
Termination		PCB	
Unit weight		Approx.12g	
Construction		Plastic sealed、Flux proofed	

## ■ COIL DATA(23°C)

### ■ Single coil latching

Nominal Voltage	Pick-up Voltage VDC	Drop-out Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 5V	≤3.75	≤3.75	200mA	25Ω	1000mW	150%Nominal Voltage
DC 6V	≤4.50	≤4.50	166.7mA	36Ω		
DC 9V	≤6.75	≤6.75	111.1mA	81Ω		
DC 12V	≤9.00	≤9.00	83.3mA	144Ω		
DC 24V	≤18.00	≤18.00	41.7mA	576Ω		

### ■ Double coils latching

Nominal Voltage	Pick-up Voltage VDC	Drop-out Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 5V	≤3.75	≤3.75	400/400mA	12.5/12.5Ω	2000mW	150%Nominal Voltage
DC 6V	≤4.50	≤4.50	333//333mA	18/18Ω		
DC 9V	≤6.75	≤6.75	222/222mA	40.5/40.5Ω		
DC 12V	≤9.00	≤9.00	167/167mA	72/72Ω		
DC 24V	≤18.00	≤18.00	83.4/83.4mA	288/288Ω		

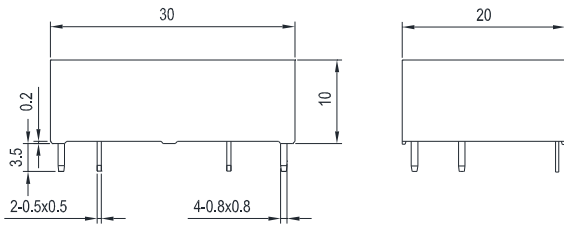
## ■ ORDERING INFORMATION

**W35L -2A S T -L1 R -XXX DC12V**

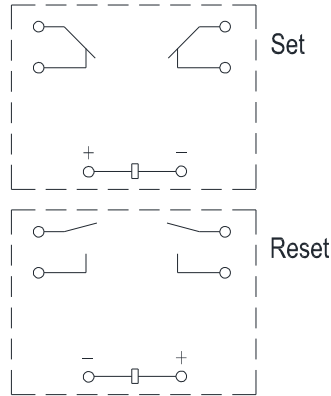
- ① Type
- ② Contact arrangement: 2A=2 open contacts, 2B=2 close contacts
- ③ Construction: Nil=Flux proofed, S=Plastic sealed
- ④ Contact material: T=AgSnO<sub>2</sub>
- ⑤ Coil type: L1=1 coil latching L2=2 coils latching
- ⑥ Operation polarity: Nil=standard polarity R=reversed polarity
- ⑦ Customer special code: numbers or letters denote customer's requirements
- ⑧ Coil specification: DC5/6/9/12/24V

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

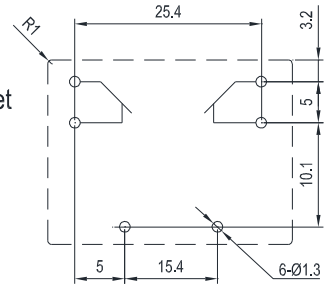
**2A/2B** Outline Dimensions  
(single coil latching)



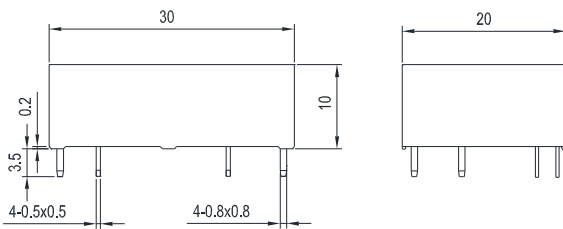
Wiring Diagram  
(Bottom view)



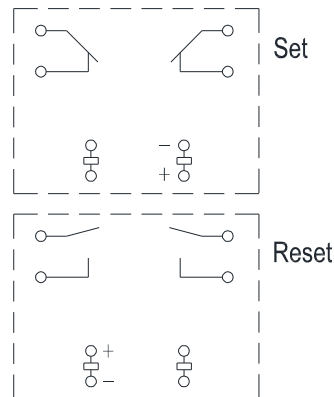
PCB Layout  
(Bottom view)



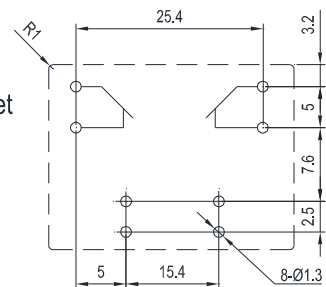
**2A/2B** Outline Dimensions  
(double coils latching)



Wiring Diagram  
(Bottom view)



PCB Layout  
(Bottom view)

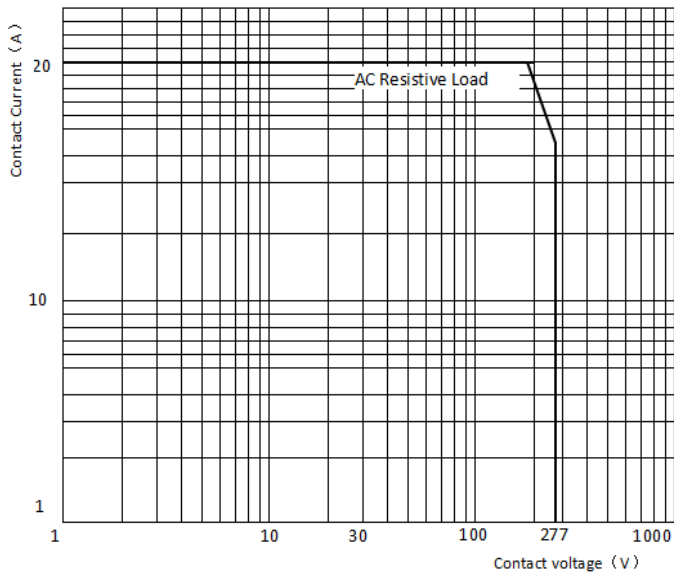


Notes: (1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $< 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $\geq 5\text{mm}$ , tolerance should be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

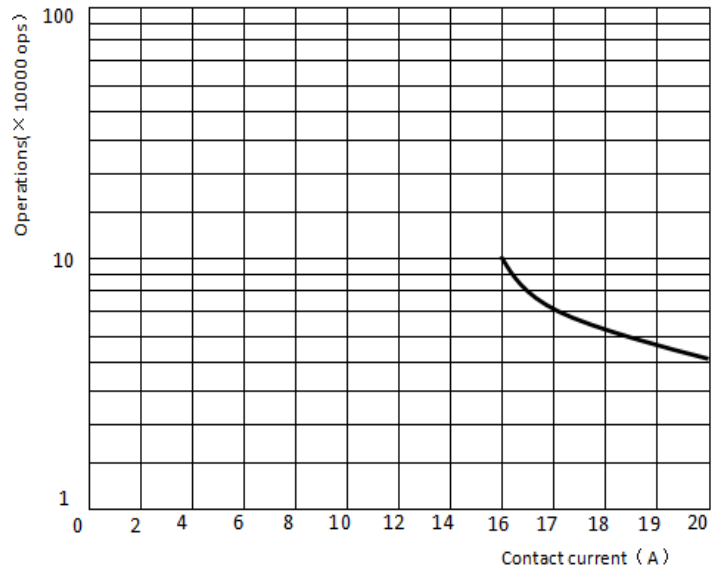
(2) The tolerance without indicating for PCB layout is always  $\pm 0.1\text{mm}$ .

## ■ PERFORMANCE CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



## ■ SAFETY APPROVAL RATINGS

Approval	File No.	Contact arrangement	Contact material	Approved ratings		
UL/C-UL	E475405	2A(NO) 2B(NC)	AgSnO <sub>2</sub>	20A/16A	250VAC	85°C
				TV-8	250VAC	85°C
				1.5HP	250VAC	85°C
				10A	250VAC(LED lamp)	85°C
TUV	R 50407003	2A(NO) 2B(NC)	AgSnO <sub>2</sub>	20A /16A	250VAC	85°C
				20A /16A	250VAC	85°C
CQC	CQC18002188988	2A、2B	AgSnO <sub>2</sub>	20A /16A	250VAC	85°C

## ■ NOTICE

- ① If the relay needs to be cleaned or used in bad environment(e.g.dust or organic gas),we recommend plastic sealed type.
- ② The specification is for reference only,specifications subject to change without notice.
- ③ 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.