

Features

- 16A switching capability
- Single coil and double coil are all available
- High sensitive, coil power is 250mW
- More lower product height (the height is 15.8mm)
- Breakdown voltage: 5KV (between contact and coil)
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (24.0×10.0×15.8) mm
- Main application: Smart home、Lighting control、Electric power meter



CHARACTERISTICS

| Specifications | Item | | |
|------------------------|--------------------------------|-----------------------|--|
| Contact Data | Contact arrangement | | 1A、1B |
| | Contact resistance | | ≤50mΩ(6VDC 1A) |
| | Contact material | | AgSnO ₂ |
| Rated value | Rated load(Resistance load) | | 16A 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,1 min |
| | | Between coil&contacts | 4000VAC,1 min |
| | Operate time | | ≤15ms |
| | Release time | | ≤15ms |
| Mechanical performance | Shock resistance | Functional | 98m/s ² |
| | | Destructive | 980m/s ² |
| | Vibration resistance | | 10Hz~55Hz 1.5mm DA |
| Endurance | Mechanical | | 1×10 ⁶ ops |
| | Electrical | | 16A 250VAC 5×10 ⁴ ops(ON/OFF=1s/9s) 600W 120VAC(LED lamp load) 1.5×10 ⁴ ops(ON/OFF=1s/9s) |
| Operate condition | Ambient temperature | | -40℃~85℃ |
| | Humidity | | 5% to 90% |
| Termination | | | PCB |
| Unit weight | | | Approx.8g |
| 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 3V | ≤2.25 | ≤2.25 | 83.3mA | 36Ω | 250mW | 150%Nominal Voltage |
| DC 5V | ≤3.75 | ≤3.75 | 50.0 mA | 100Ω | | |
| DC 6V | ≤4.50 | ≤4.50 | 41.7 mA | 144Ω | | |
| DC 9V | ≤6.75 | ≤6.75 | 27.8mA | 324Ω | | |
| DC 12V | ≤9.00 | ≤9.00 | 20.8 mA | 576Ω | | |
| DC 24V | ≤18.00 | ≤18.00 | 10.4 mA | 2304Ω | | |

Double coils latching

| Nominal Voltage | Pick-up Voltage VDC | Drop-out Voltage VDC | Rated Current (±10%) | Coil Resistance (±10%) | Nominal Power | Max Voltage |
|-----------------|---------------------|----------------------|----------------------|------------------------|---------------|---------------------|
| DC 3V | ≤2.25 | ≤2.25 | 166.7mA | 18/18Ω | 500mW | 150%Nominal Voltage |
| DC 5V | ≤3.75 | ≤3.75 | 100mA | 50/50Ω | | |
| DC 6V | ≤4.50 | ≤4.50 | 83.3 mA | 72/72Ω | | |
| DC 9V | ≤6.75 | ≤6.75 | 55.6 mA | 162/162Ω | | |
| DC 12V | ≤9.00 | ≤9.00 | 41.7 mA | 288/288Ω | | |
| DC 24V | ≤18.00 | ≤18.00 | 20.8mA | 1152/1152Ω | | |

ORDERING INFORMATION

W42L -1A S T -L1 R -XXX DC12V

① Type

② Contact arrangement: 1A=1 open contacts 1B=1 close contacts

③ Construction: Nil=Flux proofed, S=Plastic sealed

④ Contact material: T=AgSnO₂

⑤ Sort: L1=1 coil latching L2=2 coils latching

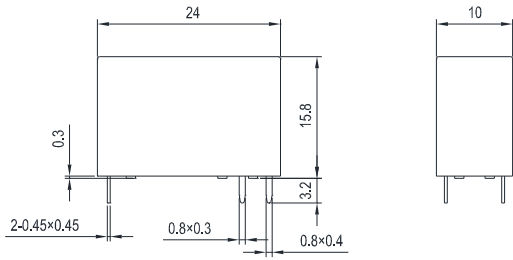
⑥ Operation polarity: Nil=standard polarity R=reversed polarity

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

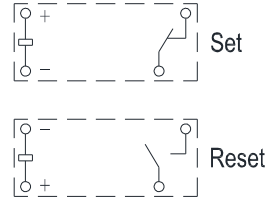
⑧ Coil specification: DC3/5/6/9/12/24V

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

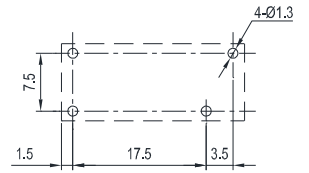
1A/1B Outline Dimensions (single coil latching)



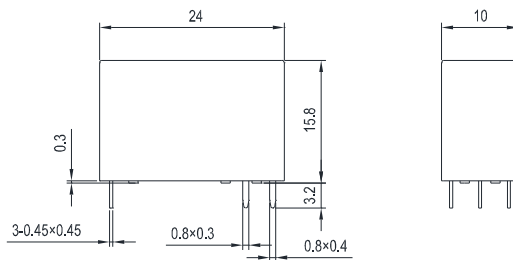
Wiring Diagram (Bottom view)



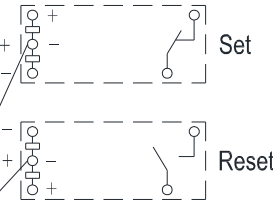
PCB Layout (Bottom view)



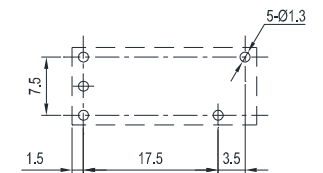
1A/1B Outline Dimensions (double coils latching)



Wiring Diagram (Bottom view)



PCB Layout (Bottom view)



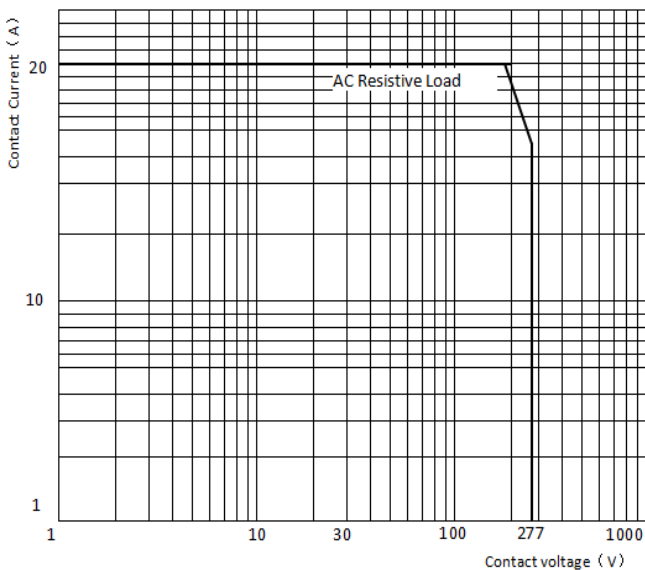
The common terminal, positive and negative poles are optional

Notes: (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.

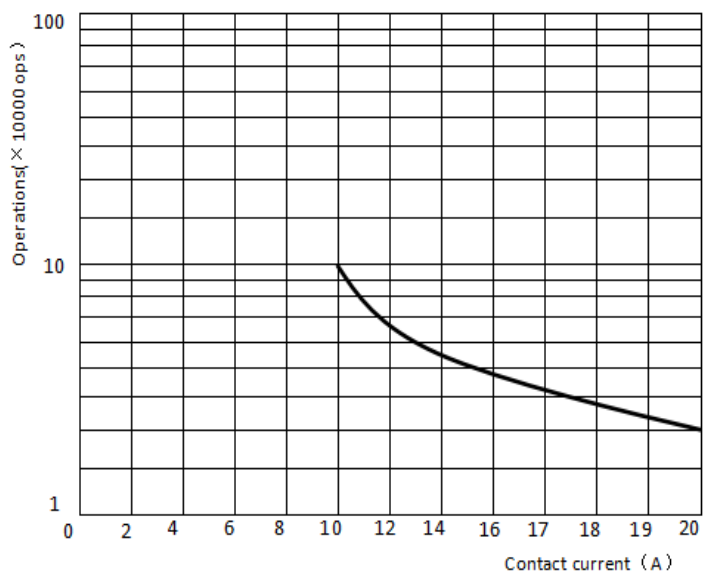
(2) The tolerance without indicating for PCB layout is always ± 0.1 mm.

PERFORMANCE CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



■ 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 \geq 3 times operation time).