

# 40A Single Phase Power Relay

## IM-SP401A

**Making Electricity safer by IVY METERING**

### 40A SINGLE PHASE POWER RELAY

- Single phase small and large capacity power relay
- 40A contact switching capability
- Withstand surge voltage 6KV
- UL insulation class: F class
- Typical application: new energy AC charging pile
- Encapsulation method: Plastic sealed



### Contact Parameter

Contact Material	AgSnO <sub>2</sub>
Contact Resistance(initial value)	50mΩ. Max.(1A 6VDC)
Contact Form	1A(1 pole, normal open)
Contact Load	40A 277VAC(resistive)
Max. switching current	40A
Max. Continuous Current	32A
Max. Switching Voltage	277VAC
Max. Switching Power	11080VA
Withstand Surge Voltage	6000VAC (1.2/50μs)
Mechanical Endurance (7200 ops per hour, room temperature)	1×10 <sup>7</sup> ops
Electrical Endurance (360 ops per hour, room temperature)	5×10 <sup>4</sup> (32A 230VAC resistive load, room temperature on-off ratio :1s:9s)

Note: If electrical endurance should be done, the shell hump should be cut off, means opening the ventilation hole. In addition, it is not recommended that customers use 40A full load for a long time.

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### Performance Parameter

Insulation Resistance	1000MΩ, at 500VDC, 50%RH	
Dielectric Withstanding Voltage	Coil to Contact	AC 4000VAC, 50/60Hz 1min
	Across Open Contact	AC 1500VAC, 50/60Hz 1min
Pick-up & Release Time(at rated voltage)	15ms. Max./10ms. Max.(without diode)	
Dielectric Strength	500Vrms, 1 min	
Shock Resistance	Functional:98m/s <sup>2</sup> Destructive: 980m/s <sup>2</sup>	
Vibration	1.5mm(DA),10-55Hz	
Humidity	5%~85%RH	
Environment Temperature	-40°C~75°C (non-condensing)	
Terminal Form	PCB board type	
Weight	≈25g	

### Coil Data

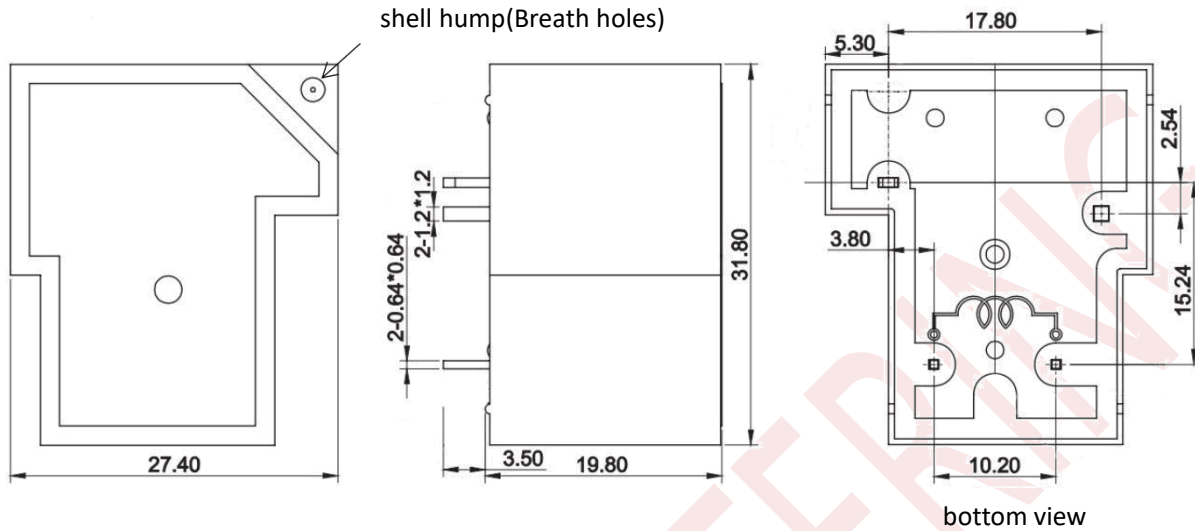
Rated Voltage	Rated Current (±10%)	Coil Resistance ±10%	Max Continuous Applied Voltage (130% of rated voltage)	Pick-up Voltage (75% of Max. rated voltage)	Release Voltage (10% of Min. rated voltage)	Rated Power
12VDC	75mA	160Ω	15.6VDC	≤9VDC	≥1.2VDC	0.9W

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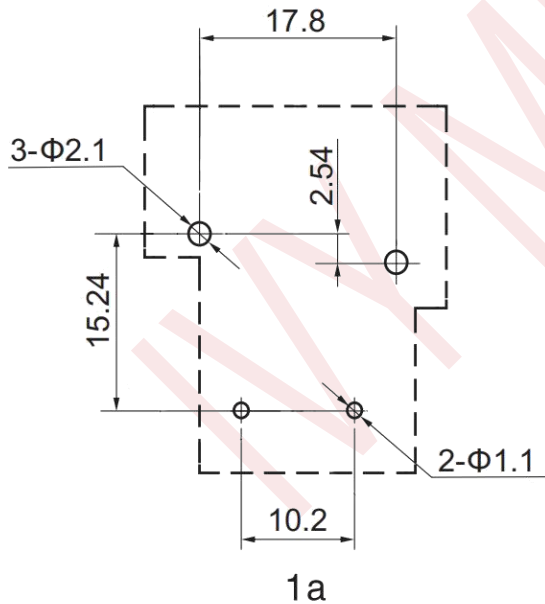
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### Dimensional Drawing

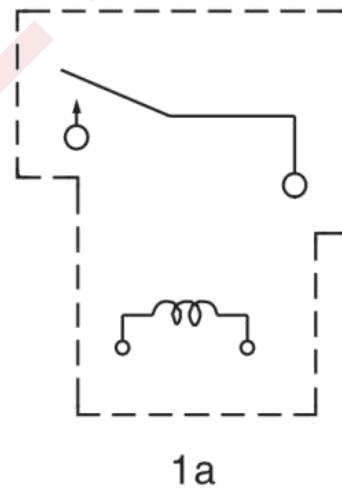
All dimension in mm unless otherwise noted ,For more information, please contact IVY Metering.  
(Unit:mm)



### Hole Dimension & Wiring Diagram



Hole Dimension



Wiring Diagram

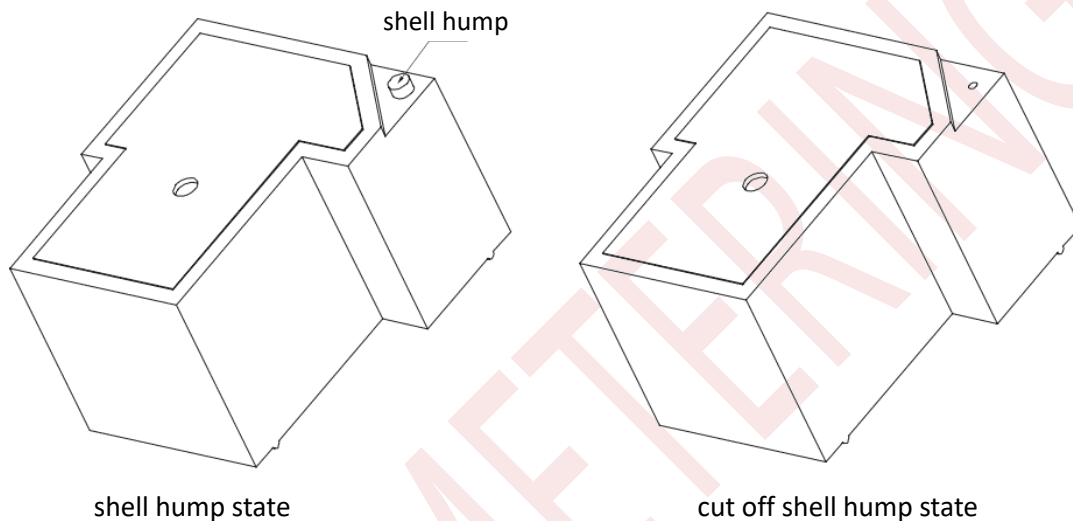
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### Application Notes

After the PCB board work is completed, it is recommended that the customer cut off the shell hump before use to ensure the normal performance of the relay.

As shown in the diagram below:



**Disclaimer:** This data sheet is for reference only .All specifications are subject to change without prior notice.IVY Metering cannot predict every possible application for our relays. While we do our best to make our relays as versatile as possible, we highly recommend contacting our engineering team if you have any questions.IVY Metering is not responsible for malfunctioning relays when operated outside the specified parameters given in this data sheet.