**特点**

## Features:

- 40A触点切换能力。  
40A high switching capability
- 触点与线圈间介质耐压4KV  
4 kV dielectric between coil and contact
- 负载能力强  
Outstanding load performance
- 具有两组常开触点形式  
Have 2 groups of normal open contacts
- 触点间隔为3.0mm的安全设计  
3mm contacts gap for safety design
- 环保产品 (符合RoHS)

**安规认证**

## Safety Approval

UL/C-UL File No.: E190598

VDE File No.: 40050829

CCC File No.: 2019010304252538

CE File No.: Applying

**触点负载**

## Contact Capacity

型号 Model	SET40
额定负载 (阻性) Nominal switching capacity (res. load)	40A 250V AC
最大切换电流 Max. switching current	40A
最大切换电压 Max. switching voltage	277VAC
最大切换功率 Max. switching power	11080VA

**性能参数**

## Characteristic Data

触点材料 Contact arrangement	银合金 Silver alloy	
接触电阻 contact resistance	100mΩ Max	
吸合时间 Operate time (at nominal volt.)	30msec. Max. (直流型, 不加二极管) 30msec. Max. (DC type, without diode)	
释放时间 Release time (at nominal volt.)	30msec. Max. (直流型, 不加二极管) 30msec. Max. (DC type, without diode)	
绝缘电阻 insulation resistance	1000MΩ Min. (DC 500V) 1,000MΩ Min. (DC 500V)	
介质耐压 Initial dielectric strength	触点与触点间: AC 2000V, 50/60Hz 1min. Between open contacts: AC2,000V, 50/60Hz 1min.	
	触点与线圈间: AC 4000V, 50/60Hz 1min. Between coil and contact: AC5,000V, 50/60Hz 1min	
	断开触点间: AC 2000V, 50/60Hz 1min. Disconnect between contacts: AC2000V, 50/60Hz, 1min.	
抗振动 Vibration resistance	耐久 Functional	10 ~ 55Hz, 双振幅 1.5 mm 10 ~ 55Hz at double amplitude of 1.5 mm
	误动作 Destructive	10 ~ 55Hz, 双振幅 1.5 mm 10 ~ 55Hz at double amplitude of 1.5 mm
抗冲击 Shock resistance	耐久 Functional	100G Min. 100G Min.
	误动作 Destructive	10G Min. 10G Min.
寿命 Endurance	机械寿命 (每小时10800次 室温) Mechanical (at 10800 ops./h 室温)	1000000 次 1000000 cycles
	电气寿命 (每小时360次 室温) electrical life (at 360 ops./h 室温)	3000次 3000 cycles
环境温度 Ambient temperature	-40°C ~ +85°C (不冷凝) -40°C ~ +85°C (no condensation)	
重量 Unit weight	约130g Approx. 130g	

线圈参数 (at 20°C)  
Coil parameters (at 20°C)

额定电压 Nominal voltage (VDC)	额定电流 Nominal operating current ±10% (mA)	线圈电阻 Coil resistance ±10% (Ω)	最大连续外加电压 Maximum continuous applied voltage	吸合电压 Pick-up voltage (Max.)	释放电压 Drop-out voltage (Min.)	额定功率 Nominal operating power
3	638.30	4.7	额定电压的 110 % 110% of rated voltage	额定电压的 80 % 80% of rated voltage	额定电压的 10 % 10% of rated voltage	1.90W
6	319.15	18.8				
12	160.00	75				
24	80.00	300				
48	40.00	1200				
100	19.23	5200				
110	17.46	6300				
200	9.52	21000				

额定电压 Nominal voltage (VAC)	额定电流 Nominal operating current ±10% (mA)	线圈电阻 Coil resistance ±10% (Ω)	最大连续外加电压 Maximum continuous applied voltage	吸合电压 Pick-up voltage (Max.)	释放电压 Drop-out voltage (Min.)	额定功率 Nominal operating power
6	275.00	18.8	额定电压的 110 % 110% of rated voltage	额定电压的 80 % 80% of rated voltage	额定电压的 10 % 10% of rated voltage	1.7~2.5W
12	138.00	75				
24	74.00	300				
48	39.00	1200				
100/120	18.7/22.1	5200				
220/240	9.7/10.8	20800				

安全认证负载 (注: 更多详细的认证负载, 参考安规证书)  
Safety certification load (Note: For more detailed certification load, refer to safety certificate)

认证类别 certification type	CCC	CE	VDE	UL/CUL
认证号码 File No.	2019010304252538	待 staying	40050829	E190598
认证负载 Approved ratings	AC-1 Ie=40 A Ue=250 VAC	40A 250V AC	30A 125/250/277VAC 30A 125/250/277VAC, cosφ=0.4	40A 277/250/125VAC, Resistive&General use  TV-10, 120VAC 1.5HP, 120VAC 3HP, 240VAC

- (1) 上述未注明温度的负载, 均指环境温度为室温。  
(2) 以上仅列出了该产品认证的部分负载, 每个负载的详细测试条件不同, 因此电寿命次数不一样。如需了解详细情况, 请联系三友。

- (1) The above-mentioned unspecified temperature ratings, means that the ambient temperature is room temperature.  
(2) Only some typical ratings are listed above. Each rating is test condition is different, so the electrical endurance will be different. If more details are required, please contact us.

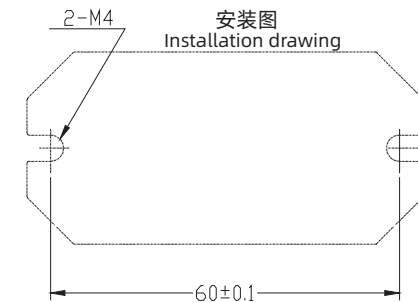
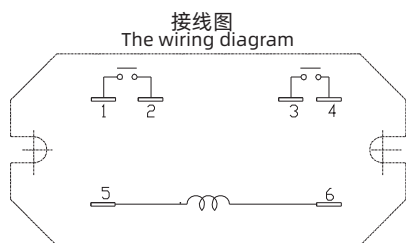
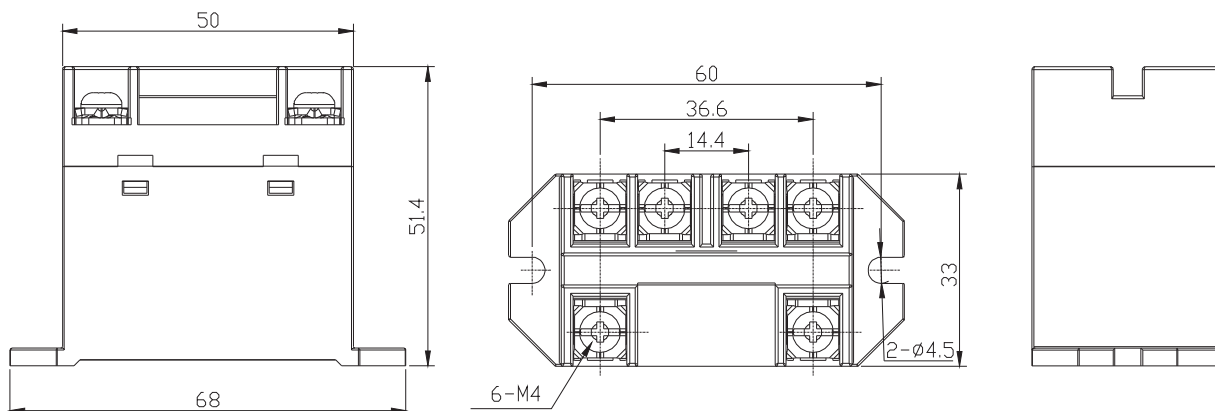
订货标记  
Order information  
型号命名规则  
Nomenclature

SET40 - □ □ □ □ □ □ - □ □	<p>特殊参数: 无-标准型, 字母或数字-特殊要求 Special parameters: None - Standard type, letters or digits - Special requirement</p> <p>无-标准型, S-螺丝端子带微动开关+引出线 S1-螺丝端子带微动开关+连接器 None - Standard, S-screw terminal with micro switch + outlet cable S1-screw terminal with micro switch + connector</p> <p>外壳形式: F-法兰外壳, 无-非法兰外壳 Housing type: F- flanged case, non - flanged housing</p> <p>触点材质: 无-AgSnO2 Contact material: None - AgSnO2</p> <p>端子形式: B-螺丝端子, T-快插端子, P-PCB端子1, W-PCB端子2 Terminal type: B-screw terminal, T-fast plug terminal, P-PCB terminal 1, W-PCB terminal 2</p> <p>线圈功耗: D-直流线圈, A-交流线圈 Coil power: D-DC coil, A-AC coil</p> <p>Coil specifications (VDC): 03, 06, 12, 24, 48, 100, 110, 200 Coil Specifications (VAC): 06, 12, 24, 48, 120, 220/240</p> <p>触点组数: 2-2组 1-1组 Number of contact groups: 2-2 groups 1-1groups</p> <p>基本型号: SET40 Basic model: SET40</p>
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外形尺寸, 接线, 安装孔位图

Dimensions, wiring, mounting hole bitmap

SET40-BF



未标注尺寸公差:

<1mm: ±0.2mm

1-5mm: ±0.3mm

>5mm: ±0.4mm

注: 1、引出脚尺寸为预焊前尺寸

2、安装孔尺寸公差为±0.1mm

Unless otherwise specified:

If dimension < 1mm, tolerance: ±0.2mm;

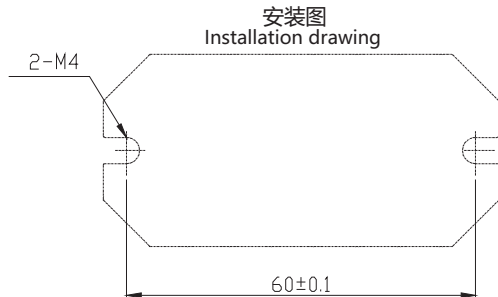
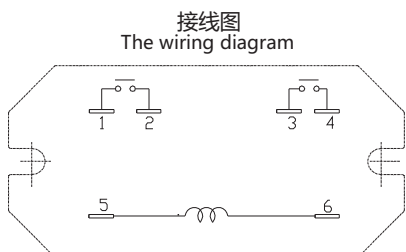
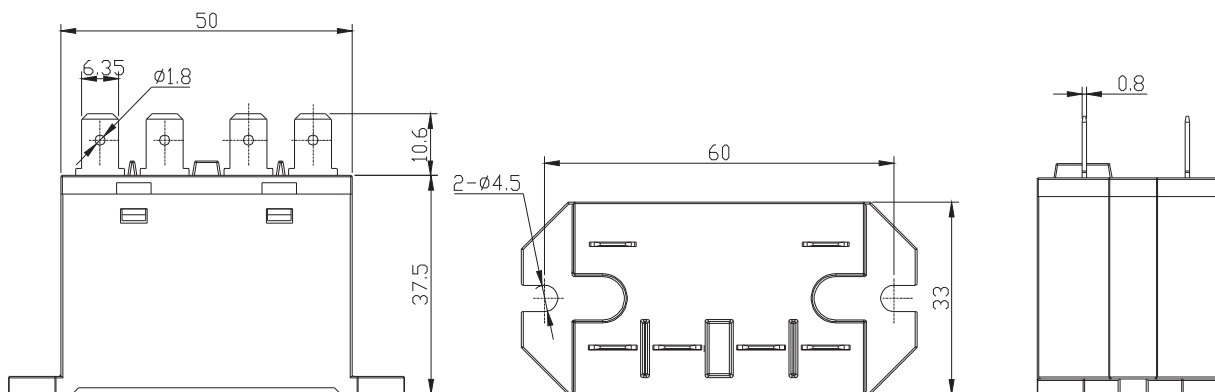
If dimension 1~5mm, tolerance ±0.3mm;

If dimension > 5mm, tolerance: ±0.4mm.

Note: 1. Extended terminal dimension is dimension before soldering.

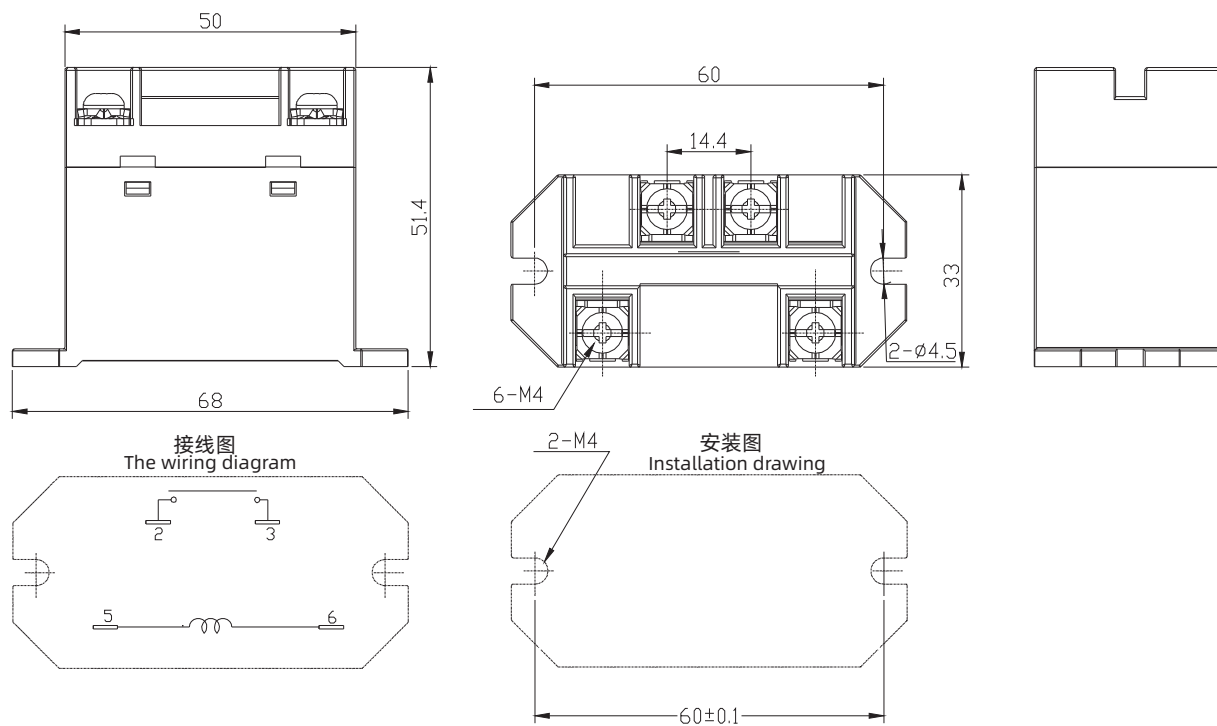
2. Tolerance of P.C.B. layout: ±0.1mm.

SET40-TF

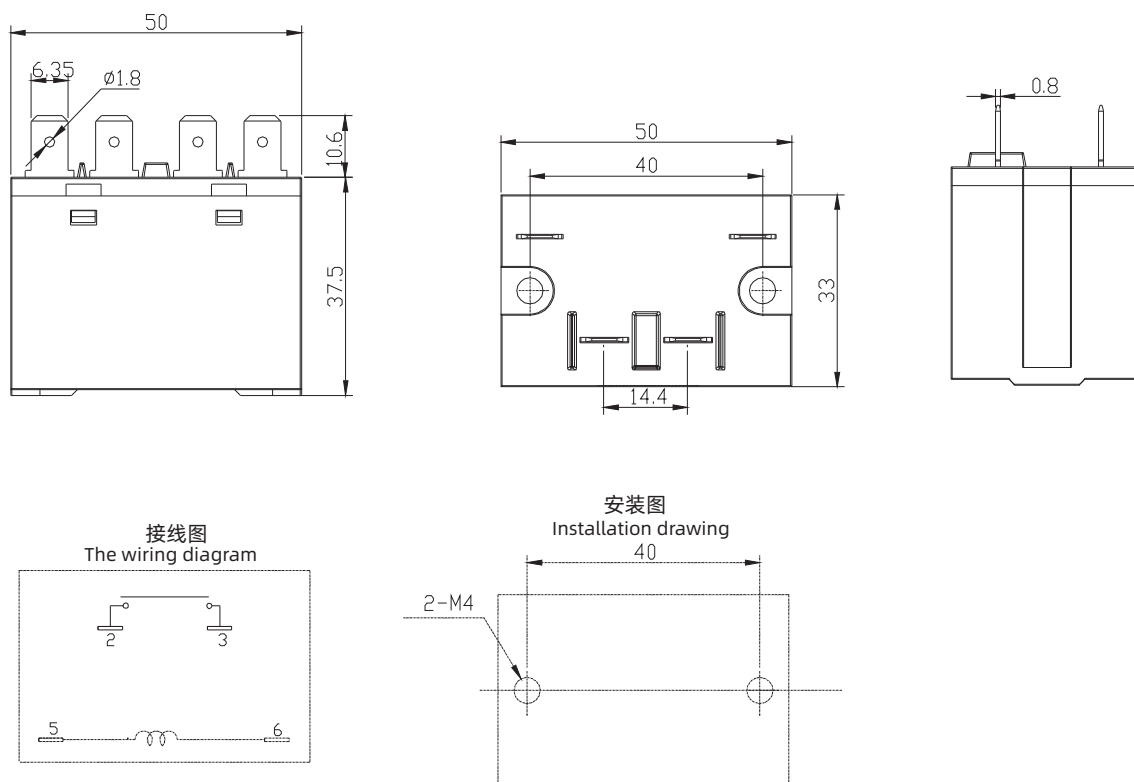


外形尺寸, 接线, 安装孔位图  
Dimensions, wiring, mounting hole bitmap

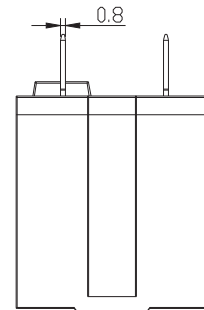
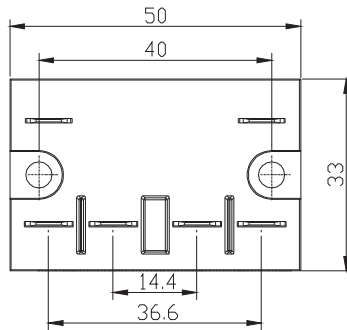
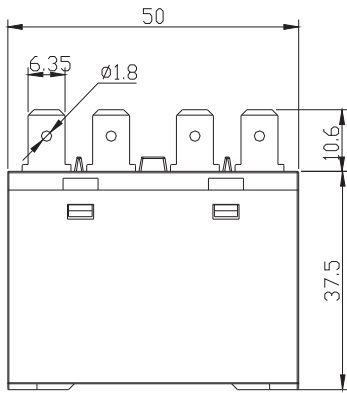
SET40-BF (1A)



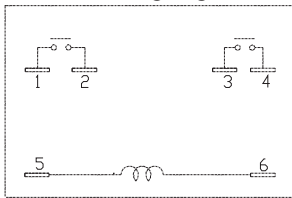
SET40-T (1A)



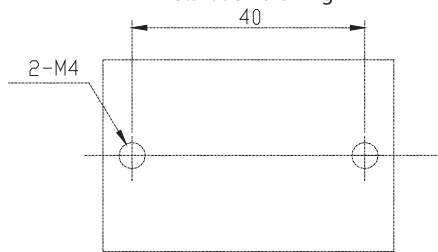
SET40-T



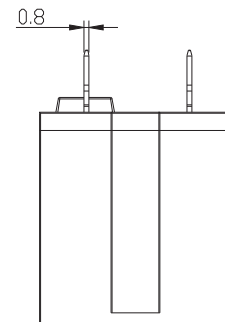
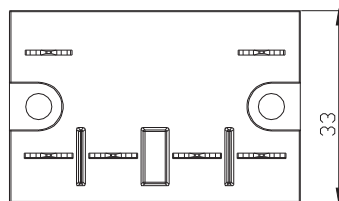
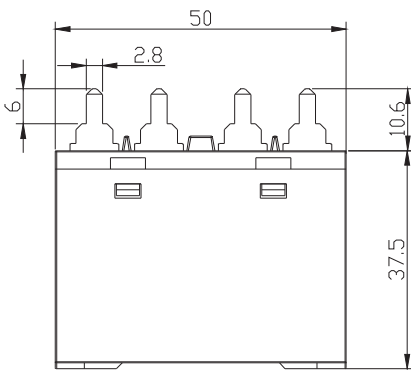
接线图  
The wiring diagram



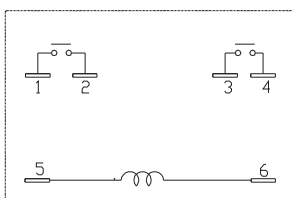
安装图  
Installation drawing



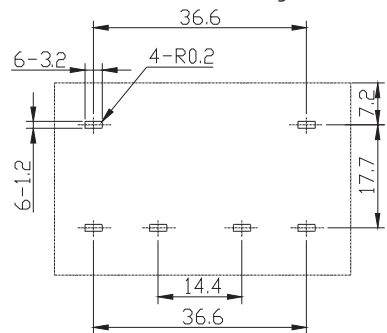
SET40-P



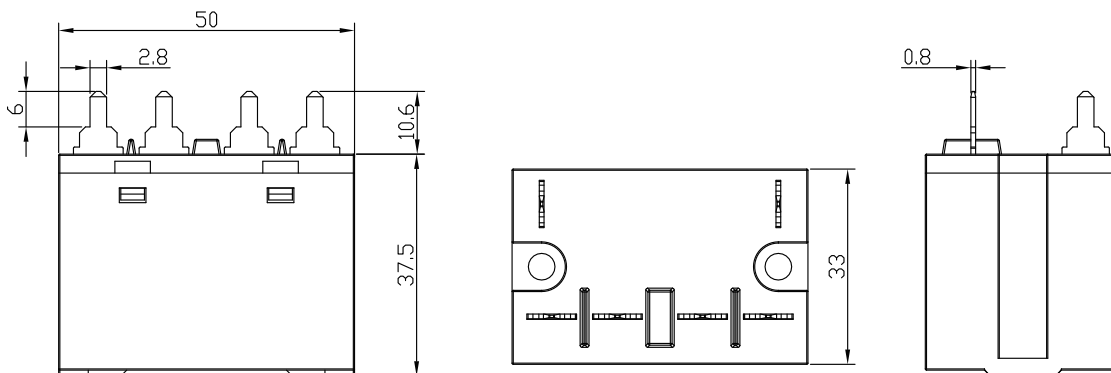
接线图  
The wiring diagram



安装图  
Installation drawing

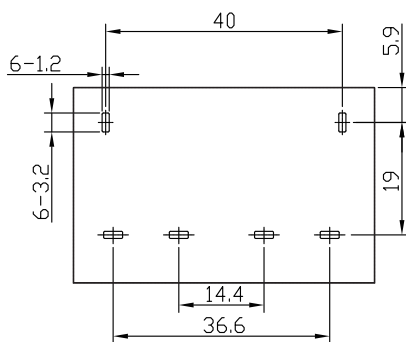
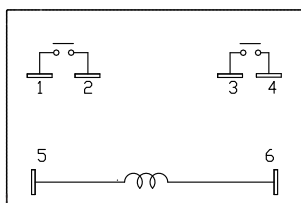


SET40-W



安装图  
Installation drawing

接线图  
The wiring diagram



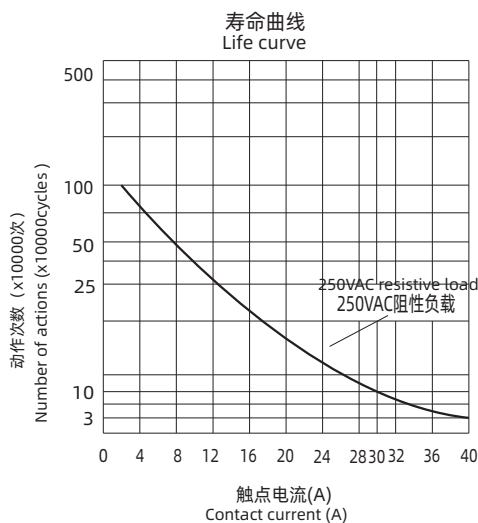
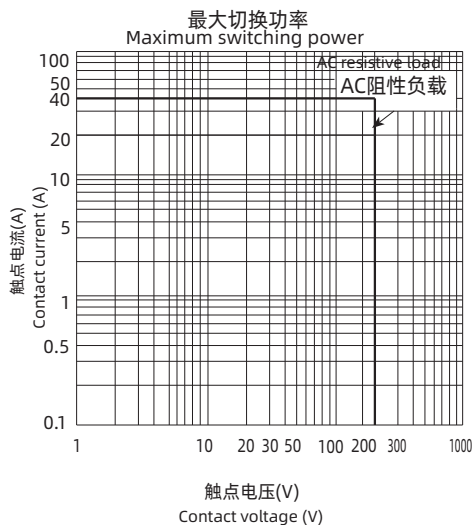
典型用途

Typical application

- 最适用于太阳能光伏发电用逆变器、UPS、充电桩等。
- Most suitable for solar photovoltaic power inverter, UPS, charging pile, etc.

性能曲线图

Performance curve



## 使用注意事项

Precautions for Use

### ●关于安装

●请尽可能选择干燥且尘埃较少的场所进行安装。  
PCB端子产品的质量约为 110g。请注意印刷基板的强度。  
另外，由于热压力会导致焊接裂纹减少，因此请使用两面通孔基板。

#### ● About installation

Install the device in a dry place with less dust.  
The mass of PCB terminal products is about 110G. Note the strength of the printing substrate. In addition, use both sides as heat pressure reduces weld cracks.  
Through-hole substrate.

### ●关于负载的开关

本继电器为马达、变压器、螺线管、压缩机、加热器等功率负载开关用途的功率继电器。请不要用于信号用途等微小负载的开关。

#### ● Switch on load

This relay is the power load switch of motor, transformer, solenoid, compressor, heater and so on Purpose power relay. Do not use the switch for small load such as signal purpose.

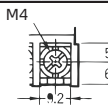
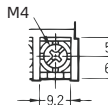
### ●关于印刷基板端子的焊接

·手动焊接，请避免自动焊接。  
·并非密闭结构，因此不能整个清洗继电器。  
● Welding of printing substrate terminal  
· Manual welding, please avoid automatic welding.  
· Not sealed structure, so the whole relay cannot be cleaned.

### ●关于连接

#### ● About connection

●在螺钉端子上使用压接端子时，请以下图的端子部空间作为参考。  
●When using crimping terminals on screw terminals, please refer to the terminal space in the following figure.

螺钉端子测 Screw terminal measurement	
线圈端子测 Coil terminal measurement	
接点端子测 Contact terminal measurement	

●配线时，请在导线上留有的余地，不要在端子上施加过大的力。  
●When wiring, please leave some room on the wire and do not apply excessive force on the terminal.

### ●紧固转矩

#### ● Tighten the torque

线圈端子处: 0.98N·m  
Coil terminal: 0.98·Nm.  
接点端子处: 1.37N·m  
Contact terminal: 1.37·Nm.

· 安装转矩  
· Install torque  
0.98N·m

●在插拔线夹插孔时，请注意不要施加过大的力。此外，要一个一个插拔，避免斜插或同时插拔多个。  
●请避免通过焊接连接到接线片端子上。

●Be careful not to exert excessive force when inserting and removing the wire clip jack. Also, a one. Single insertion and removal, avoid oblique insertion or simultaneous insertion and removal of multiple.  
●Avoid welding to the lug terminals.

### 声明:

本产品规格书仅供客户使用时参考，若有更改，恕不另行通知。  
对三友而言，不可能评定继电器在每个具体应用领域的所有性能参数要求，因而客户应该根据具体的使用条件选择与之相匹配的产品，若有疑问，请与三友联系获取更多的技术支持。但产品选型责任仅由客户负责。

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### Statement:

This product specification is for reference only, subject to change without prior notice.  
For Sanyou, it is impossible to evaluate all the performance parameter requirements of relays in each specific application field, so customers should choose the products that match according to the specific use conditions. If you have any questions, please contact Sanyou for more technical support. However, the responsibility of product selection is solely the responsibility of the customer.

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### ●关于参考数据

#### ● About reference data

·对于额定电压AC100V~120V的额定电压的比例是以AC100V作为标准的值。

· For rated voltage AC100V~120V, the ratio of rated voltage is AC100V as the standard value.

### ●有关操作线圈

#### ● About operating coil

<线圈内部连接图>

Coil internal connection diagram

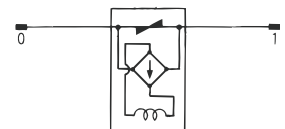
· 直流操作线圈

· DC operation coil



· 交流操作线圈

· AC operation coil



·晶体管驱动等情况下，请确认漏电、电流后根据需要连接泄放电阻。  
· In the case of transistor drive, please confirm leakage and current and connect the discharge resistor as required.

·交流操作线圈内藏全波整流电路。如果使用SSR等三端双向可控硅开关驱动继电器，由于三端双向可控硅开关的特性会引起复位不良。在这种情况下，请在实际设备上确认。

Poor reduction. In this case, check on the actual device.

· Ac operation coil contains a full wave rectifier circuit. If using SSR and other three-terminal two-way. The controlled silicon switch drives the relay due to the characteristics of the three-terminal bi-directional SCR switch.