

**特点**

## Features:

- 16A触点切换能力
- 16A high switching capability
- 2.0mm触点间隙
- 2mm contact gap
- 外形尺寸: 29mmx12.8mmx26.2mm
- boundary dimension:29mmx12.8mmx26.2mm

**安规认证**

## Safety Approval

UL/CUL 认证号: E179745-1-30

UL/C-UL File No : E179745-1-30

TUV 认证号: R50540860

TUV File No: R50540860

CQC 认证号: CQC22002336811

CQC File No: CQC22002336811

**触点负载**

## Contact Capacity

型号 Model	SMIA
额定负载 (阻性) Nominal switching capacity (res. load)	16A 250VAC
最大切换电流 Max. switching current	16A
最大切换电压 Max. switching voltage	277VAC
最大切换功率 Max. switching power	4432 VA
最小切换负载 Min. switching load	6V 1A

**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.(at 1A 24VDC)	
吸合时间 Operate time (at nominal volt.)	25msec. Max. (不加二极管) 25msec. Max. (No diode)	
释放时间 Release time (at nominal volt.)	15msec. Max. (不加二极管) 15msec. Max. (No diode)	
绝缘电阻 insulation resistance	1,000MΩ Min.(DC500V)	
介质耐压 Initial dielectric strength	断开触点间: AC2500V, 50/60Hz 1min. Disconnect Between contact groups:AC2500V, 50/60Hz 1min.	
	触点组间: AC3000V, 50/60Hz 1min. Contact Between groups:AC3000V, 50/60Hz 1min.	
抗振动 Vibration resistance	耐久 Functional	10Hz ~ 55Hz, 双振幅1.5 mm 10 ~ 55Hz at double amplitude of 1.5 mm
	误动作 Destructive	10Hz ~ 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.
	误动作 Destructive	10G Min.
寿命 Endurance	机械寿命 (每小时18000次) Mechanical (at 18000 ops./h)	100,000 次 100,000 cycles
	电气寿命 (每小时360次) electrical endurance (at 360 ops./h)	30,000 次(NC侧6,000次) 30,000 cycles(NC:6,000cycles)
环境温度 Ambient temperature	-40°C ~ +85°C(不冷凝) -40°C ~ +85°C (no condensation)	
环境湿度 ambient humidity	5% ~ 85%RH	
重量 Unit weight	约19g Approx 19g	

(1) 上述值为初始值。

(1)The above values are initial values

(2) 以上仅列出该产品认证部分典型负载, 而每个负载详细测试条件不同因此电寿命耐久性不一样。如需了解详细信息, 请与我司技术部门联络。

(2)Only the typical load of the product certification is listed above,the electrical life and durability of each load are different due to different detailed test conditions.For further information,please contact our technical department.

(3) 以上耐久性电寿命测试, 条件均为开孔品状态。

(3)The above durability electrical life test conditions are open hole product state

## 线圈参数(at 20°C)

Coil Data (at 20°C)

额定电压 Nominal voltage (VDC)	额定电流 Nominal operating current ±10% (A)	线圈电阻 Coil resistance ±10% (Ω)	最大外加电压 Maximum applied voltage (VDC)	吸合电压 Pick-up voltage (Max.)	释放电压 Drop-out voltage (Min.)	额定功率 Nominal operating power
5	0.28	18	额定电压的 Nominal voltage 110%	额定电压的 Nominal voltage 80%	额定电压的 Nominal voltage 5%	约1.4W Approx 1.4W
6	0.23	26				
9	0.16	58				
12	0.12	102				
24	0.06	410				
48	0.03	1650				

(1) 上述值为初始值；请勿在产品上连续施加最大电压 > 10min，以免线圈过度发热。

(1) The above value is the initial value. Do not apply the maximum voltage on the product continuously for more than 10min to avoid coil heating.

(2) 转换型产品动作电压 ≤ 85% 额定电压，线圈电阻公差为 (1±15%)

(2) Operation voltage of conversion product ≤ 85% rated voltage, coil tolerance of (1±15%)

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### 安规认证负载 (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)

认证类型 certification type	CQC	TUV	UL/CUL
认证号码 File No.	CQC22002336811	R50540860	E179745
认证负载 Approved ratings	16A 125/250/277VAC	16A 125/250/277VAC	16A 125/250/277VAC

(1) 上述未注明温度的负载，均指环境温度为室温。

(1) The load without temperature indicated above refers to ambient temperature of room temperature.

(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。  
(2) The above is only a partial list of the loads for which the product is certified. The detailed test conditions for each load are different, so the number of electrical lives varies. For further information, please contact Sanyou.

(3) 对于塑封式、防水式产品试验时，应打开外壳的透气孔。

(3) When testing seal type & waterproof type products, should open up the heat emission hole of the case.

### 订货标记

Ordering Information

SMIA	-□	-□	□	□	□	□	□	-□	□
□ 特殊参数：空-标准型，XX-客户要求类型 Special parameters: None-Standard type, letters or digits-Special requirement									
绝缘等级：空-Class F, F-Class F Insulation grade: Nil-class F, F-class F									
负载能力：G-16A Nominal Load: G-16A									
触点材质：空-AgSnO2 Contact material: AgSnO2									
触点形式：空-FormC, M-FormA Contact form: Nil-FormC, M-formA									
线圈功耗：D-1.4W The power consumption of the coil: D-1.4W									
线圈规格：05, 06, 09, 12, 24, 48 (VDC) Coil specification									
触点组数：2-2组 Number of contact groups: 2-2 groups									
封装形式：S-塑封式, SH-防水式 Package type: S- Flux type, SH- waterproof									
基本型号：SMIA Basic model: SMIA									

(1) 塑封式不能在污染环境 (含有H2S、SO2、NO2、粉尘等污染物) 中使用。

(1) Plastic sealing type can not be used in polluted environment (containing H2S, SO2, NO2, dust and other pollutants).

(2) 塑封式装入PCB焊接后，不能进行整体清洗或表面处理。

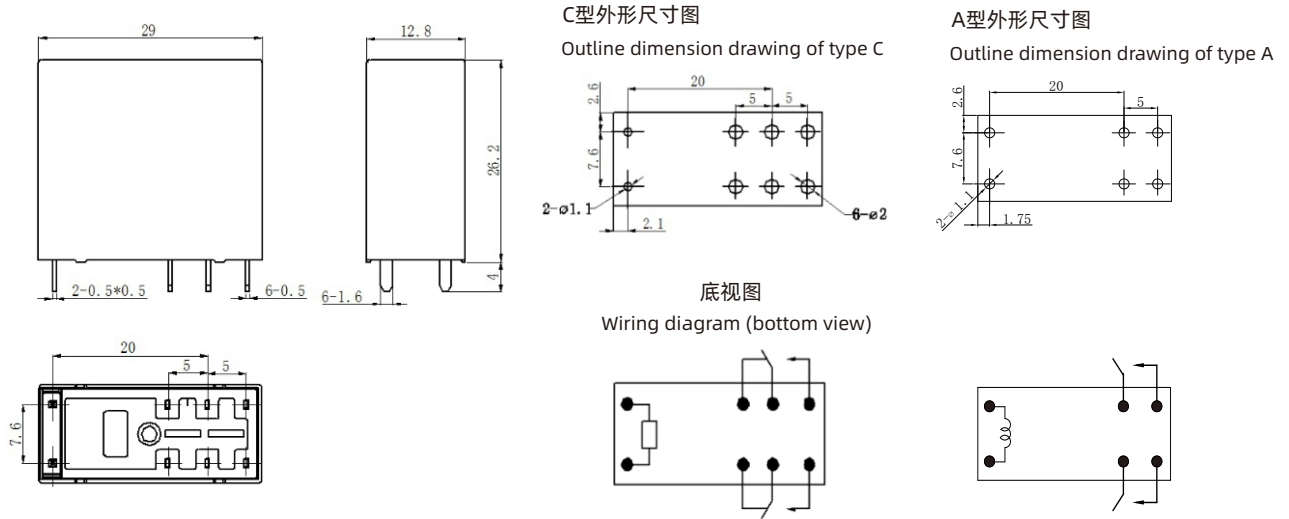
(2) The plastic seal type can not be cleaned or treated as a whole after PCB welding.

(3) 客户特殊要求 (XX)，由我司评估后，按特性符号标识。

(3) Customer special requirements (XX) shall be evaluated by our company and marked by characteristic symbols.

## 外形尺寸图、接线图、安装孔位图 (单位: mm)

Outline dimension drawing, wiring diagram, mounting hole bitmap (unit:mm)



未标注尺寸公差:

< 1mm:  $\pm 0.2\text{mm}$

1-5mm:  $\pm 0.3\text{mm}$

> 5mm:  $\pm 0.4\text{mm}$

注: 1、引出脚尺寸为预焊前尺寸

2、安装孔尺寸公差:  $\pm 0.1\text{mm}$

Unless otherwise specified:

If dimension < 1mm, tolerance:  $\pm 0.2\text{mm}$ ;

If dimension 1~5mm, tolerance:  $\pm 0.3\text{mm}$ ;

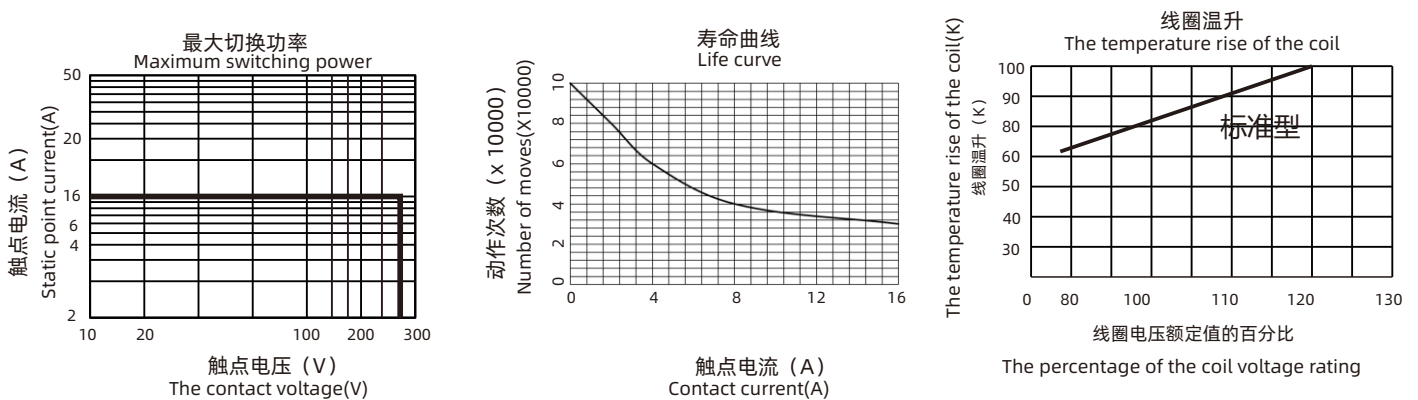
If dimension > 5mm, tolerance:  $\pm 0.4\text{mm}$ .

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

2. Tolerance of P.C.B. layout:  $\pm 0.1\text{mm}$ .

## 性能曲线图

Performance curve



## 注意事项:

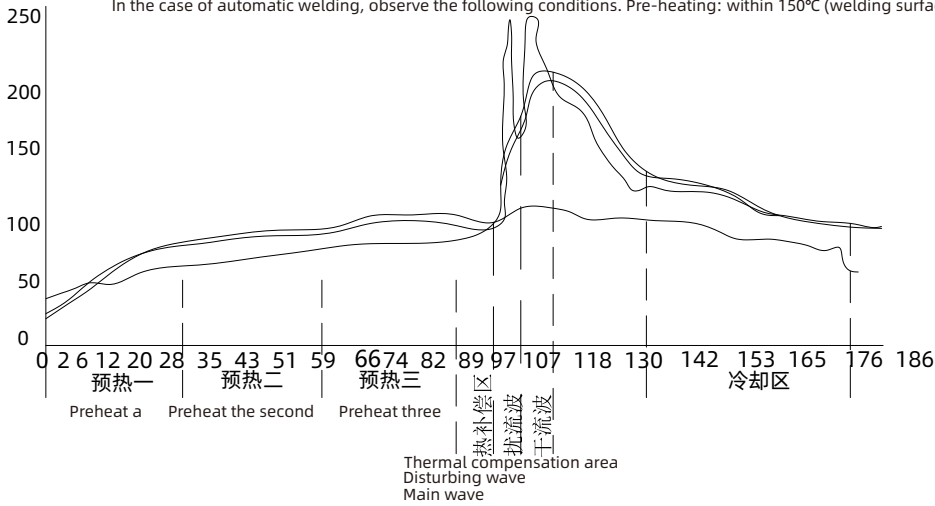
Matters needing attention:

### (1) 波峰焊安装条件

Wave soldering installation conditions

在自动焊接的情况下, 请遵守以下条件。预加热: 150°C以内 (焊接面端子部) 150 秒以内。

In the case of automatic welding, observe the following conditions. Pre-heating: within 150°C (welding surface terminal) within 150 seconds.



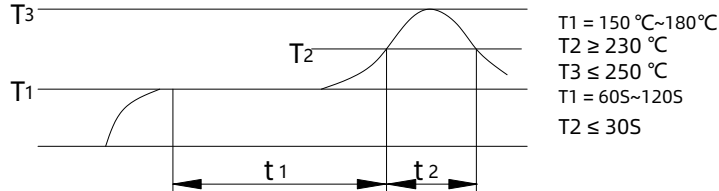
波峰焊温度分布图 Wave soldering temperature profile

推荐焊接温度和时间: 240°C~260°C, 3s~5s。另外, 根据实际使用的基板种类等, 对继电器产生的影响可能会有所不同

Recommended welding temperature and time: 240°C~260°C, 3s~5s. In addition, the impact on the relay may vary according to the type of substrate actually used

因此请通过实际使用的基板进行确认。

Therefore, check the actual substrate for confirmation.



### (2) 回流焊接安装条件 (Pin-in-Paste 工艺)

(2) Reflow welding installation conditions (PIN-in-paste process)

同一基板上的部品混存的状态下, 继电器的温度上升在很大程度上取决于回流焊机器的加热方法, 因此请设定温度条件,

Under the condition of mixed parts on the same substrate, the temperature rise of the relay largely depends on the heating method of reflow welding machine, so please set the temperature condition.

使得继电器的端子焊接部和继电器外壳天面的温度小于上述条件, 然后通过实际机器事先进行确认。

Make the temperature of the relay terminal welding part and the surface of the relay shell less than the above conditions, and then confirm with the actual machine in advance.

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。

Statement: This product specification is for reference only, subject to change without prior notice.

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配的产品,

It is not possible for Sanyo to evaluate all the performance parameter requirements of relays in each specific application field, so the customer should choose the unsuitable ones according to the specific application conditions

产品, 若有疑问, 请与三友联系获取更多的技术支持, 但产品选择权由客户负责。

Products, if you have any questions, please contact us for more technical support, but the customer is responsible for product selection.