
**特点 Features**

- 小型大容量继电器 ( 25A ) , 最适用马达、压缩机控制  
Miniature relay with high switching capability (25A ), ideal for motor and compressor control
- 快接端子, 也可提供 PCB 端子型号  
Both quick terminal and PCB terminal are available
- 可提供满足 IEC60335-1/IEC60079-15 的产品  
IEC60335-1/IEC60079-15 compliant product is available

**安规认证 Safety certificate**

UL , c-UL 认证号 ( File No. ) : E190598  
 TUV 认证号 ( File No. ) : R50138321  
 VDE 认证号 ( File No. ) : 40007481  
 CQC 认证号 ( File No. ) : CQC02001002131、CQC09002030584

**触点参数 Contact Data**

型号 Type	SFK
额定负载 ( 阻性负载 ) Rated load ( Resistive load )	20A/25A 250VAC
最大切换电流 Max. switching current	25A
最大切换电压 Max. switching voltage	277VAC
最大切换功率 Max. switching power	6,925VA
最小切换负载 Min. switching load	6V 1A

**性能参数 Characteristic Data**

触点材料 Contact material	银合金 Silver alloy	
接触电阻 Contact resistance	100mΩ Max.(at 1A 6VDC)	
吸合时间 (额定电压) Operate time(at rated coil voltage)	20 ms Max. (不加二极管 No diode)	
释放时间 Release time	10 ms Max. (不加二极管 No diode)	
绝缘电阻 Insulation resistance	Min. 1,000MΩ (at 500VDC)	
介质耐压 Dielectric strength	触点与触点间 Between open contacts : 1,000VAC, 50/60Hz for 1min.	
	触点与线圈间 Between coil and contact: 4,500VAC, 50/60Hz for 1min.	
抗振动 Vibration resistance	误动作	10 ~ 55Hz , 双振幅 1.5 mm
	Functional	10 ~ 55Hz at double amplitude of 1.5 mm

	耐久 Destructive	10~55Hz, 双振幅 1.5 mm 10~55Hz at double amplitude of 1.5 mm
抗冲击 Shock resistance	误动作 Functional	10G Min.
	耐久 Destructive	100G Min.
寿命 Endurance	机械寿命(每小时 7,200 次, 室温) Mechanical endurance (at 7,200ops./h)	10,000,000 次 10,000,000 cycles (at room temperature)
	电气寿命(每小时 360 次, 室温) Electrical endurance (at 360ops./h)	100,000 次 100,000 cycles (at room temperature)
环境温度 Ambient temperature	-40°C ~ +85°C (不冷凝 no condensation)	
重量 Unit weight	约 22.0g Approx. 22.0g	

**线圈参数 Coil Data (at 20°C)**

额定电压 (VDC) Nominal voltage (VDC)	额定电流 ±10%(mA) Nominal operating current ±10%(mA)	线圈电阻 ±10% (Ω) Coil resistance ±10%(Ω)	最大连续外加电 压 Max. allowable voltage	吸合电压 (Max.) Operate voltage (Max.)	释放电压 (Min.) Release voltage (Min.)	额定功率 Nominal operating power
5	180	27.8	额定电压的 130% 130% of nominal voltage	额定电压的 75% 75% of nominal voltage	额定电压的 5% 5% of nominal voltage	约 0.9W Approx.0.9W
6	150	40				
9	100	90				
12	75	160				
18	50	360				
24	37.5	640				

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。

The data shown above are initial values. Do not energize the maximum allowable voltage of the coil for more than 10 minutes to avoid overheating of the coil.

**安规认证负载 (更多详细的认证负载, 参考安规证书)**

**Safety Certificate ( More details of approved ratings, please refer to the safety certificates)**

认证类型 Certificates	CQC	TUV	VDE	UL/CUL
认证号码 File No.	CQC02001002131 CQC09002030584	R50138321	40007481	E190598
认证负载 Approved Ratings	25A 250VAC 22A 250VAC 20A 250VAC 16A 277VAC	Making : 80A for300ms Breaking : 20A 250VAC 22A 250VAC	25A 250VAC 22A 250VAC 20A 250VAC	25A 277VAC,Resistive&General use 25A 250VAC,Resistive&General use 25A 120VAC,Resistive&General use 22A 250VAC,Resistive&General use 20A 250VAC,Resistive&General use 20A 120VAC,Resistive&General use 1HP 120VAC 2HP 240VAC TV-10 120VAC

- 上述未注明温度的负载，均指环境温度为室温。  
All values unspecified are acquired at room temperature.
- 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。  
Only typical ratings are listed above and the endurance differ in each load. Other specific load information are available upon request.
- 对于塑封式、防水式产品试验时，应打开外壳的透气孔。  
For sealed type testing, please open the ventilation hole in the case before test.

## 订货标记 Ordering Information

### 型号命名规则 Nomenclature

SFK -1 12 D M P 3 -F -E -XX

特殊参数 Special Parameter : 无 Nil-标准型 Standard type ,  
字母或数字 Letters or Numbers-特殊要求-Special requirements

触点类型 Contact Type : 无 Nil-标准型 Standard ,  
E-台阶型触点 Step type contact

绝缘等级 Insulation System: 无 Nil-普通型 Standard ,  
B-Class B , F-Class F

触点材质 Contact Material: 无 Nil-AgSnO<sub>2</sub> ,  
3-AgNi 和 AgSnO<sub>2</sub>

端子形式 Terminal Type : 无 Nil-标准型 Standard , P-PCB

触点形式 Contact Form: M-Form A

线圈功耗 Coil Power : D-0.90W

线圈规格 Coil Voltage (VDC) : 05 , 06 , 09 , 12 , 18 , 24

触点组数 Number of Poles : 1-1 Pole

基本型号 Type : SFK

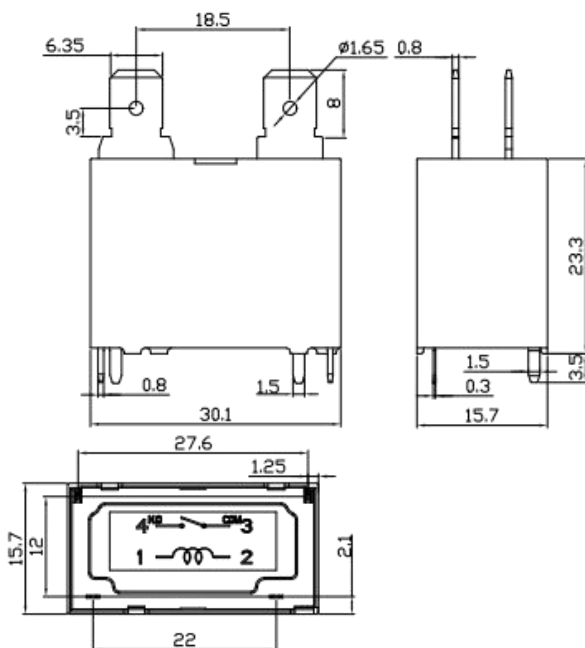
- 塑封式不能在污染环境 (含有 H<sub>2</sub>S、SO<sub>2</sub>、NO<sub>2</sub>、粉尘等污染物) 中使用。  
Flux-proof relays can not be used in the environment with pollutants like H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust, etc.
- 塑封式装入 PCB 焊接后, 不能进行整体清洗或表面处理。  
Water cleaning or surface process is not suggested after the flux-proof relays are assembled on PCB.
- 客户特殊要求 (XX), 由我司评估后, 按特性符号标识。  
Customized special suffix is available after being evaluated by Sanyou.

### 外形尺寸图、接线图、安装孔位图 (单位: mm)

### Outline dimension, wiring diagram, PCB layout (Unit: mm)

标准型

PCB



未标注尺寸公差

In case of no tolerance shown on outline dimension

If dimension < 1 mm, tolerance : ±0.2mm

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

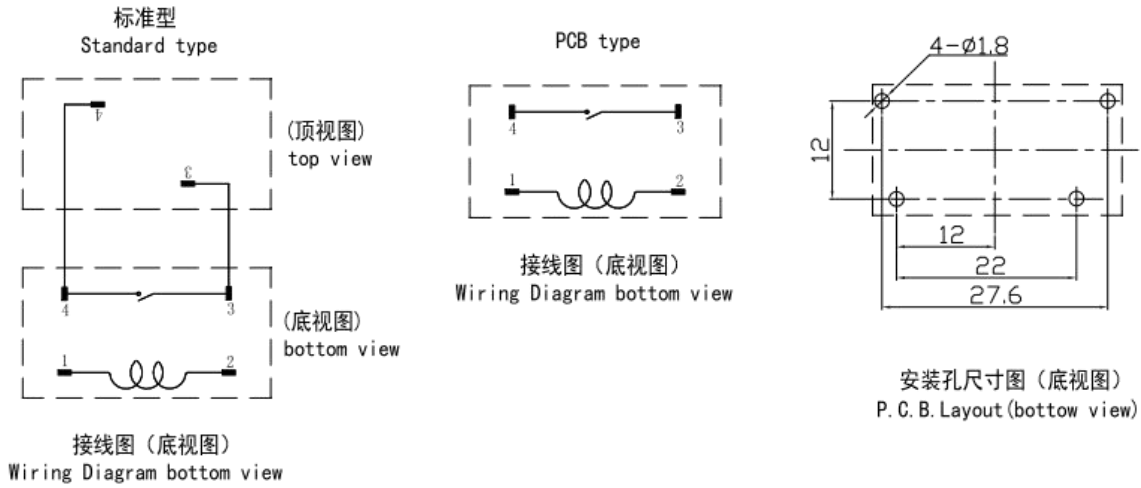
If dimension > 5mm, tolerance : ±0.4mm

注 Note :

1.引出脚尺寸为预焊前尺寸

The dimension of pin is the size before tinning

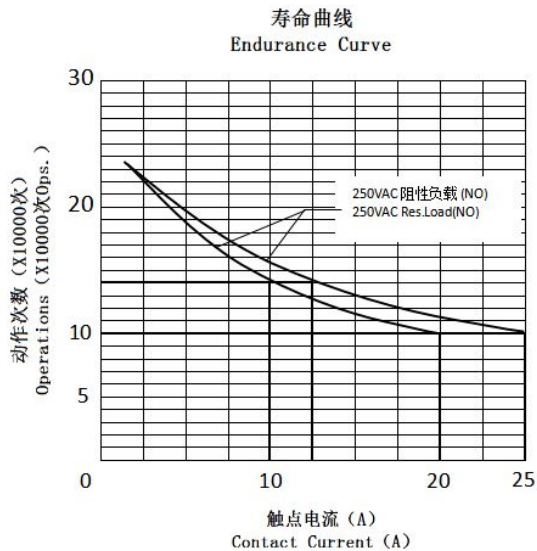
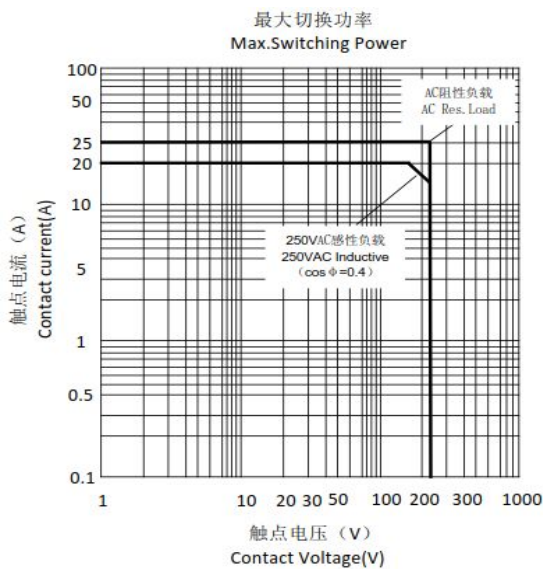
2.安装孔尺寸公差 : ±0.1mm



## 典型用途 Typical Applications

- 最适用与马达、压缩机控制，例如：空调     Ideal for motor, compressor control, e.g.:air conditioner
- 家用电器和工业电器     Home appliances and industrial electrical equipment

## 性能曲线图 Characteristic Curves



备注 Note:

(1)测试条件：常温环境，开孔品，阻性负载，1s 通 9s 断  
Test conditions: room temperature, flux-proof product, resistive load, 1s on, 9s off.

(2)以上曲线图仅供参考，最终结果以实验测试为准

The above curves are for reference only, and the final result is subject to the experiment.

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。对于密封继电器在安装清洗后，使用前请打开外壳上的透气孔。如有疑问，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。

Disclaimer : The specification is for reference only. Specifications are subject to change without prior notice.

We could not evaluate all the performance and all the parameters for every possible applications. Thus the users should in a right position to choose suitable product for their own application. For sealed relays, after installation and cleaning, please open the ventilation hole in the case before use. If there is any query, please contact Sanyou for technical services. However it is the user's responsibility to determine which product should be used.