
**特点 Features**

- 体积小，适用于密集安装。负载可达 16A。  
Small in size and suitable for intensive installation. Load of up to 16A.
- 耐压可达 5000 伏。  
Pressure resistance is up to 5,000 volts.
- 可提供满足 IEC60335-1 的产品。  
Satisfy IEC60335-1 product is available.
- 可提供满足 IEC60079-15 的产品。  
Satisfy IEC60079-15 product is available.

**安规认证 Safety Approval**

UL, C-UL 认证号 File No : E190598  
 VDE 认证号 File No : 40036033  
 TUV 认证号 File No : R50226154  
 CQC 认证号 File No : CQC07001018779

**触点负载 Contact Capacity**

型号 Model	SZ-DM&LM	SZ-D&L
额定负载 (阻性) Nominal switching capacity (res. load)	16A&17A 277VAC	NO/NC : 16A&17A/10A 277VAC
最大切换电流 Max. switching current	20A	17A
最大切换电压 Max. switching voltage	277VAC	277VAC
最大切换功率 Max. switching power	5540VA	4709VA
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 Initial contact resistance	100mΩ Max.(at 1A 6VDC)	
吸合时间 Operate time (at nominal volt.)	15 msec. Max. (不加二极管 no diode)	
释放时间 Release time (at nominal volt.)	5 msec. Max. (不加二极管 no diode)	
绝缘电阻 Initial insulation resistance	1,000MΩ Min.(DC500V)	
介质耐压 Initial dielectric strength	触点与触点间 Between open contacts : AC1000V, 50/60Hz 1min.	
	触点与线圈间 Between coil and contact : AC5,000V, 50/60Hz 1min.	
抗振动 Vibration resistance	误动作 Function	10~55Hz, 双振幅 1.5 mm 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 Function	10G Min.
	耐久 Destructive	100G Min.
寿命 Endurance(operations)	机械寿命(每小时 10,800 次, 室温) Mechanical (at 10,800ops./h)	10,000,000 次 10,000,000(at room temperature)
	电气寿命(每小时 360 次, 室温) Electrical (at 360ops./h)	100,000 次 100,000(at room temperature)
环境温度 Ambient temperature	-40°C ~ +85°C ( 不冷凝 no condensation )	
重量 Unit weight	约 12.8g Approx. 12.8g	

### 线圈参数(at 20°C) CoilData (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.) Pick-up voltage (Max.)	释放电压 (Min.) Drop-out voltage (Min.)	额定功率 Nominal operating power
3	240.00	12.5	额定电压的 130%	额定电压的 75%	额定电压的 5%	约 0.72W  Approx. 0.72W
5	144.00	35				
6	120.00	50				
9	80.00	112				
12	60.00	200				
18	40.00	450				
24	30.00	820				
48	14.50	3,300				
3	180.00	17	130% of nominal voltage	75% of nominal voltage	5% of nominal voltage	约 0.54W  Approx. 0.54W
5	108.00	47				
6	90.00	68				
9	60.00	150				
12	45.00	270				
18	30.00	600				
24	22.50	1,100				
48	11.25	4,267				

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（注：更多详细的认证负载，参考安规证书）

Safety Approval Ratings (Note: More detail of approval ratings, please refer to the safety certification)

认证类型 Approval	CQC	TUV	VDE	UL/CUL
认证号码 File No.	CQC07001018779	R50226154	40036033	E190598
认证负载 Approved Ratings	16A 250VAC 10A 277VAC.NC 17A 277VAC.NO	From A: 16A 250VAC 16A 30VDC  From C: 16A/10A 250VAC 16A/10A 30VDC	10A 277VAC.NC 17A 277VAC.NO	16A 240VAC,Resistive,NO&NC 16A 240VAC,GeneralUse,NO 5A 120VAC/24VDC,Resistive&GeneralUse,NO&NC 17A 277VAC/30VDC,Resistive&GeneralUse,NO&NC TV-8 120VAC,NO

(1) 上述未注明温度的负载，均指环境温度为室温。

The above-mentioned unspecified temperature ratings, means that the ambient temperature is 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。

Only some typical ratings are listed above. Each rating's test condition is different, so the electrical endurance will be different. If more details are required, please contact us.

(3) 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 of case before test.

## 订货标记 Ordering Information

### 型号命名规则 Nomenclature

SZ -S -1 12 D M 1 -F -XX

特殊参数 Special Parameter : 无-标准型 Nil-Standard type  
字母或数字-特殊要求  
Letter or number-Special  
requirement

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

触点材质 Contact Material : 无- AgSnO<sub>2</sub> , 1- AgCdO

触点形式 Contact Form : 无-Form A , M-Form A

线圈功耗 Coil Power : D-0.72W , L-0.54W

线圈规格 Coil Voltage (VDC) : 03 , 05 , 06 , 09 , 12 , 18 , 24 , 48

触点组数 Number of Poles : 1-1 Pole

封装形式 Protective Construction : S-塑封式 Flux proofed ,  
SH-防水式 Sealed type washable

基本型号 Type Designation : SZ

(1) 塑封式不能在污染环境 (含有 H<sub>2</sub>S、S<sub>0</sub>2、N<sub>0</sub>2、粉尘等污染物) 中使用。

Plastic sealing type can not be used in polluted environment (containing H<sub>2</sub>S, S<sub>0</sub>2, N<sub>0</sub>2, 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。

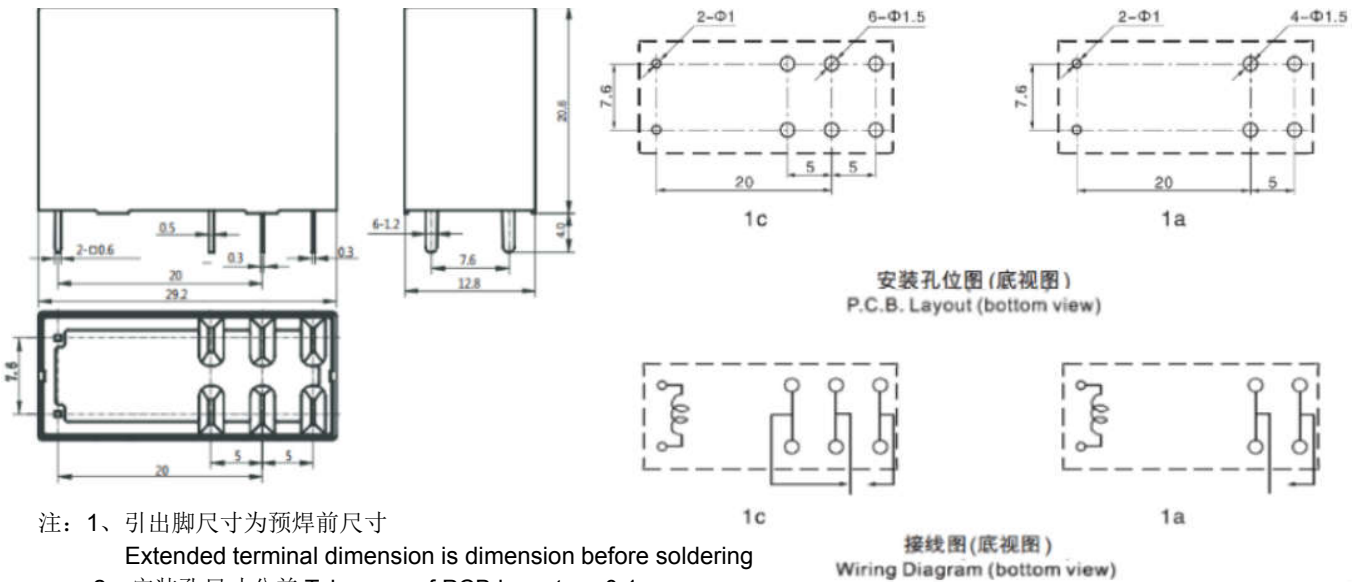
After the plastic seal product is loaded into PCB welding, the whole cleaning or surface treatment can not be carried out.

(3) 客户特殊要求 (XX), 由我司评估后, 按特性符号标识。

Special requirements of customers (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, installation vacancy drawing (unit: mm)



注: 1、引出脚尺寸为预焊前尺寸

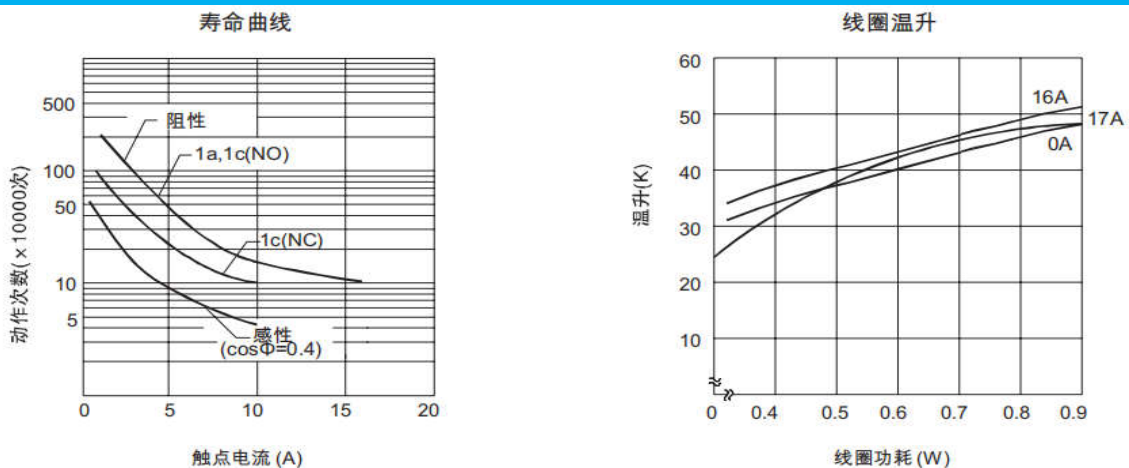
Extended terminal dimension is dimension before soldering

2、安装孔尺寸公差 Tolerance of PCB layout : ±0.1mm

### 典型用途 Typical Applications

- 安全设备
- 办公室设备
- 家用电器等, 如空调, 微波炉
- Safety equipment
- office equipment
- Home appliances such as air conditioner, microwave oven

### 性能曲线图 Characteristic Curves



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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。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。

Disclaimer: This datasheet is the customers' reference. All the specification are subject to change without notice.

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