

## 继电器产品承认书

### SPECIFICATION FOR APPROVAL

客户名称 Customer name: \_\_\_\_\_  
产品名称 Product Description: 继电器 Relay  
供方型号 Supplier Part No.: Y3U-SH-112LM  
客户料号 Customer Material Code: \_\_\_\_\_  
客户型号 Customer Part No.: \_\_\_\_\_  
版 本 REV: \_\_\_\_\_  
日 期 Date: 2020-10-26

供应 厂商	制定	审核	批准
	管接仁	方君发	龙静恒
客户 确认	开发/工程 审核	品质部 审核	批准

## 一、基本特性 Basic characteristics

### 1、线圈参数 Coil specification

- |                                |   |
|--------------------------------|---|
| (1) 额定电压 Nominal voltage       | DC 12V  |
| (2) 线圈阻抗 Coil resistance       | 400 $\Omega$ $\pm$ 10% (at 23 $\pm$ 5 $^{\circ}$ C) |
| (3) 额定电流 Rated current         | DC 30mA $\pm$ 10% (at 23 $\pm$ 5 $^{\circ}$ C)      |
| (4) 动作电压 Operate voltage       | DC 9.0V Max ((at 23 $\pm$ 5 $^{\circ}$ C)           |
| (5) 释放电压 Release voltage       | DC 1.2V Min ((at 23 $\pm$ 5 $^{\circ}$ C)           |
| (6) 最大电压 Maximum voltage       | DC 15.6V(130% of nominal voltage)                   |
| (7) 线圈温升 Coil temperature rise | 50K Max (Coil:12V; Contact:17A)                     |

### 2、触点参数 Contact Specification

- |  |  |
|--|--|
| (1) 触点型式 Contact configuration         | SPST-NO (1 Form A)--单刀单掷 (一组常开)  |
| (2) 触点额定负载 Contact rating              | NO: 17A/250VAC/30VDC (Resistive load)<br>NO: 20A/125VAC (Resistive load) |
| (3) 接触电阻 Contact resistance            | Initial (初始值) 100 m $\Omega$ Max (At DC6V 1A)                            |
| (4) 动作时间 Operate time                  | 15ms Max   |
| (5) 释放时间 Release time                  | 10ms Max   |
| (6) 最大动作频率 Maximum operating frequency | Mechanically 18000 cycle/h (机械)<br>Electrically 600 cycle/h (电气)         |
| (7) 触点温升 Contact temperature rise      | 50K Max (Coil:12V;Contact:17A)   |

### 3、通用参数 General Specification

- |                                  |   |
|----------------------------------|---|
| (1) 绝缘阻抗 Insulation resistance   | 1000M $\Omega$ Min (at DC500V)  |
| (2) 电气强度 Dielectric strength     |   |
| 触点间 between open contacts        | 750VAC,50/60 HZ for 1Minute   |
| 线圈与触点间 between contacts and coil | 2500VAC,50/60 HZ for 1 Minute   |
| (3) 环境温度 Ambient temperature     | -40 $^{\circ}$ C $\sim$ +105 $^{\circ}$ C<br>(Not freezing and condensing at low temperature) |
| (4) 相对湿度 Relative Humidity       | 45% to 85% RH   |
| (5) 电气寿命 Electrical life         | 100,000 Operations Min (at 17A 250VAC/30VDC)  |
| (6) 机械寿命 Mechanical life         | 10,000,000 operations Min   |

### 4、体系、安规认证和环保 Quality System、Safety Certification and RoHS(REACH)

- |                           |                                   |
|---------------------------|-----------------------------------|
| (1) UL certified          | File No. E341498                  |
| (2) TUV certified         | File No.R50446369                 |
| (3) CQC certified         | File No.19002224659<br>17A 250VAC |
| (4) ISO9001:2015certified | File No. 00117Q38063R2S/4403      |

#### (5) RoHS and REACH Compliant

## 二、环境参数 Environmental Characteristics

### 1、抗振动性 Vibration resistance

#### 1.1 误动作 Error operation

在 X、Y、Z 轴三个方向施加双振幅为 1.5mm，频率为 10-55HZ 的振动，时间 5 分钟，误动作时间不超过 1ms。

At constant vibration of double amplitude 1.5mm, 10 ~ 55 HZ , in each direction of X,Y,Z for 5 minutes. No error operation more than 1 ms.

#### 1.2 耐久性 Endurance

在三个方向施加振动 2 小时，无结构损坏。

No construction trouble when vibrate it from 3 directions for 2 hours.( Amplitude 1.5mm, 10~55 HZ)

### 2、抗冲击性 Shock resistance

#### 2.1 误动作 Error operation

在三个方向施加三次加速度为  $100\text{m/s}^2$  持续时间 11ms，误动作不超过 1ms。

At peak acceleration  $100\text{m/s}^2$  duration 11ms, 3 shocks is given in each direction of X, Y, Z. No error operation more than 1 ms.

#### 2.2 耐久性 Endurance

三个方向三次加速度为  $1000\text{m/s}^2$  持续时间 6ms，无结构损坏。

No construction trouble when shock it from 3 directions 3 times at peak acceleration  $1000\text{m/s}^2$  duration 6ms.

### 3、耐寒性 Cold resistance

#### 3.1 耐寒性 Cold resistance

放置于  $-40^\circ\text{C} \pm 2^\circ\text{C}$  环境温度下 240 小时，然后在标准条件下放置 2 小时，结构和性能无异常。

No any trouble on construction or characteristic when leave relay in  $-40^\circ\text{C} \pm 2^\circ\text{C}$  for 240h. After that, leave it in standard condition for 2 hours.

### 4、耐热性 Heat resistance

#### 4.1 耐热性 Heat resistance

放置于  $+105^\circ\text{C} \pm 2^\circ\text{C}$  环境温度下 240 小时，然后在标准条件下放置 2 小时，结构和性能无异常。

No any trouble on construction or characteristic when leave relay in  $+105^\circ\text{C} \pm 2^\circ\text{C}$  for 240h. After that, leave it in standard condition for 2 hours.

### 5、耐湿性 Moisture resistance

#### 5.1 放置于 $40^\circ\text{C}$ ，湿度 90% 环境下 240 小时，然后在标准条件下放置 2 小时，绝缘电阻最小 $10\text{M}\Omega$ ，结构和性能无异常。

After keeping relay for 240h in  $40^\circ\text{C}$ , 90%, then leave it in standard condition for 2 hours. Insulation resistance  $10\text{M}\Omega$  Min. No any trouble on construction or characteristic.

### 三、端子性能 Terminal characteristics

#### 1、端子强度 Terminal strength

在端子上施加 5N 压力 10 秒钟，无变形现象。

5N pushed into any terminals for 10 s. There shall be no abnormalities.

(The curving of the terminals shall be acceptable)

#### 2、端子可焊性 Terminal solderability

端子浸入  $260 \pm 5^\circ\text{C}$  焊锡槽中，时间  $5 \pm 0.5\text{ s}$ ，90% 部位应该上锡。

In case of lead free solder  $260 \pm 5^\circ\text{C}$ ,  $5 \pm 0.5\text{ s}$ , 90% of the dipped portion shall be soldered.

#### 3、耐焊接热 Soldering thermal

端子浸入  $260 \pm 5^\circ\text{C}$  焊锡槽中，时间  $10 \pm 1\text{ s}$ ，结构和性能无异常。

No any trouble on construction or characteristic. When dipped into solder bath  $260 \pm 5^\circ\text{C}$ ,  $10 \pm 1\text{ s}$ .

### 四、标准测试条件 Standard test condition

#### 1、环境温度 Ambient temperature

$23 \pm 5^\circ\text{C}$

#### 2、相对湿度 Relative humidity

25%~75%

#### 3、气压 Air pressure

86kPa~106kPa

#### 4、测试位置 Direction of Test

端子朝下位置 Terminals down position

### 五、储存条件 Storage condition

#### 1、环境温度 Ambient temperature

$+15^\circ\text{C} \sim +35^\circ\text{C}$

#### 2、相对湿度 Relative humidity

25%~85%

#### 3、环境 Environment

##### 3.1、不要储存在诸如硫化氢和盐雾气体等有腐蚀性的环境中。

Store in locations where the product or container is not expose to corrosive gas such as hydrogen sulfide or salty air.

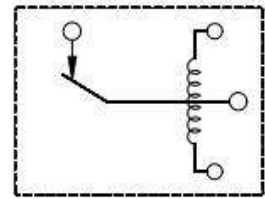
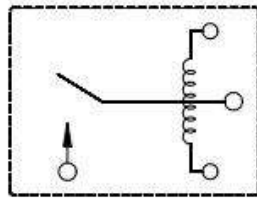
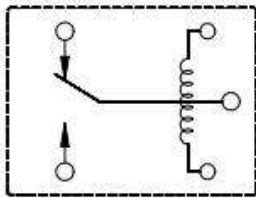
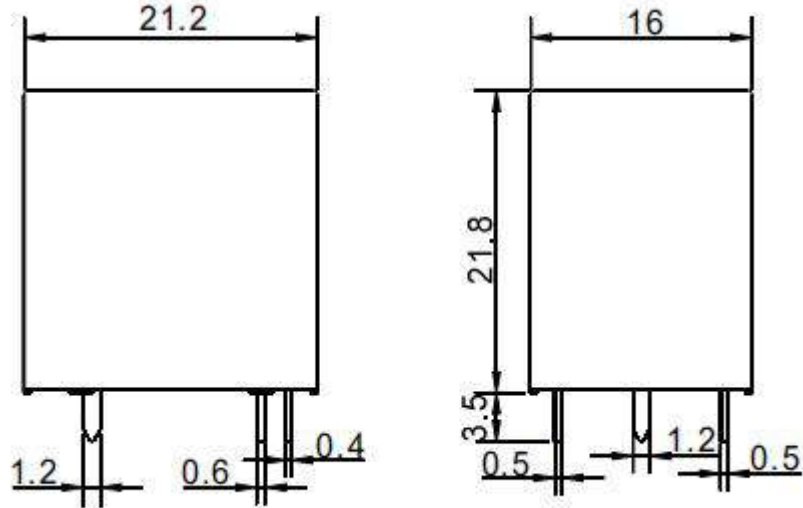
##### 3.2、储存在没有可视尘埃的环境中。

Store in locations where no visible dust exists.

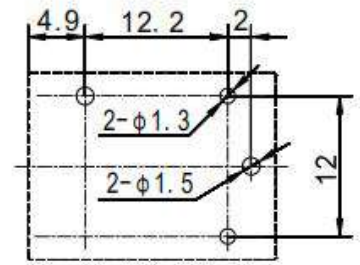
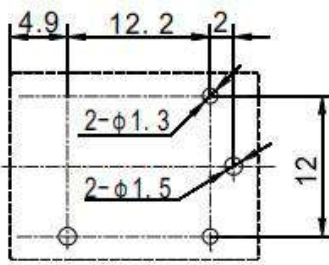
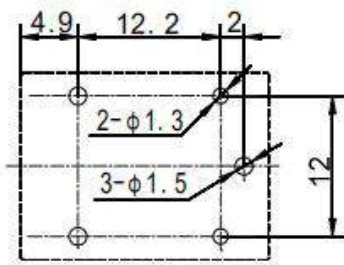
##### 3.3、储存在没有直射阳光的环境中。

Store in locations not subject to direct sunlight.

六、外型图、线路板孔位图和线路图 Outline、PCB Layout and Wiring diagram(unit:mm)



接线图(底视图)



1C

1A

1B

安装孔位图(底视图)

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: ±0.1mm

## 七、包装信息 Packing Information

P/N	Inner packing	Carton Dimensions L×W×H (cm)	QTY (PCS) /carton	Net weight (Kg)	Gross weight (Kg)
Y3U	100pcs/box	36.2 x 23.5 x 18.5	1000	10	12

## 八、命名规则 Encoding Information

Y3U — X — X X X X X X

1      2      3      4      5      6      7      8

- 产品型号 Product type: Y3U
- 封装方式 Enclosure  
SS---Flux-tight 防焊剂型      SH---Sealed case(Washable)完全密封型
- 触点组数 Contact Pole  
1—1 pole
- 线圈额定电压 Coil Nominal Voltage  
03—3VDC    05—05VDC    06—06VDC    09—9VDC    12—12VDC  
15—15VDC    18—18VDC    24—24VDC    36—36VDC    48—48VDC  
(3-48VDC)
- 线圈额定功率 Coil Nominal Power  
L-0.36W    D—0.45W
- 触点型式 Contact arrangement  
Blank—1 Form C    M—1 Form A    B---1 Form B
- 材料代码 Material type:  
Blank—标准型 Standard type  
F—过灼热丝产品 Glow wire product
- 特殊代码 Special code(not necessary to be shown on product)  
Blank—标准型 Standard type  
Numbers or letters, or blank (except for B, F and M), do not represent electrical changes, these codes denote customer's requirements.

## 九、特别提醒 Reminds

- 如有任何特殊要求, 请联系元则电器公司。 Any special requirements, please contact us.
- 在诸如 H2S、SO2 或 NO2 有害气体的环境中, 推荐选用完全密封型产品。 Under the Environment with dangerous gas such as H2S, SO2 or NO2, fully sealed type is recommended.
- 如果环境允许, 优先选用防焊剂型产品。 If the ambience allows, flux proof type is preferentially recommended.
- 如果客户需要用超声波设备清洗 PCB 和继电器, 则必须选用完全密封型产品。 If the user washes the PCB and relay in the ultrasonic cleaner, fully sealed type must be selected.