

## 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.: \_\_\_\_\_ Y14F-SS-124L

客户料号 Customer Material Code: \_\_\_\_\_

客户型号 Customer Part No.: \_\_\_\_\_

版 本 REV: \_\_\_\_\_

日 期 Date: \_\_\_\_\_ 2021-11-13

|          |          |        |     |
|----------|----------|--------|-----|
| 供应<br>厂商 | 制 定      | 审 核    | 批 准 |
|          | 彭美云      | 李建权    | 龙静恒 |
| 客户<br>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 24V                                                |
| (2) 线圈阻抗 Coil resistance       | 1066 $\Omega \pm 10\%$ (at 23 $\pm 5^\circ\text{C}$ ) |
| (3) 额定电流 Rated current         | DC 22.5mA $\pm 10\%$ (at 23 $\pm 5^\circ\text{C}$ )   |
| (4) 动作电压 Operate voltage       | DC18 Max ((at 23 $\pm 5^\circ\text{C}$ )              |
| (5) 释放电压 Release voltage       | DC 1.2V Min ((at 23 $\pm 5^\circ\text{C}$ )           |
| (6) 最大电压 Maximum voltage       | DC 31.2V(130% of nominal voltage)                     |
| (7) 线圈温升 Coil temperature rise | 45K Max (Coil:24V)                                    |

### 2、触点参数 Contact Specification

|                                        |                                                                  |
|----------------------------------------|------------------------------------------------------------------|
| (1) 触点型式 Contact configuration         | SPDT (1 Form C)—单刀双掷                                             |
| (2) 触点额定负载 Contact rating              | 16A 250VAC; (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                  | 15ms 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 (Contact:16A)                                            |

### 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     |                                                                                                      |
| 开路触点间 between open contacts      | 1000VAC,50/60 HZ for 1Minute                                                                         |
| 线圈与触点间 between contacts and coil | 5000VAC,50/60 HZ for 1 Minute                                                                        |
| (3) 环境温度 Ambient temperature     | -40 $^\circ\text{C}$ $\sim$ +85 $^\circ\text{C}$<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 16A 250VAC)                                                               |
| (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;<br>16A 250VAC       |
| (2) TUV certified            | File No. R50198479<br>16A 240VAC      |
| (3) CQC certified            | File No. CQC11002056152<br>16A 250VAC |
| (4) ISO9001:2008 certified   | File No. 05311Q22581R0S               |
| (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  $+85^\circ\text{C} \pm 2^\circ\text{C}$  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  $+85^\circ\text{C} \pm 2^\circ\text{C}$  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

$-40^\circ\text{C} \sim +85^\circ\text{C}$

#### 2、相对湿度 Relative humidity

35%~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.

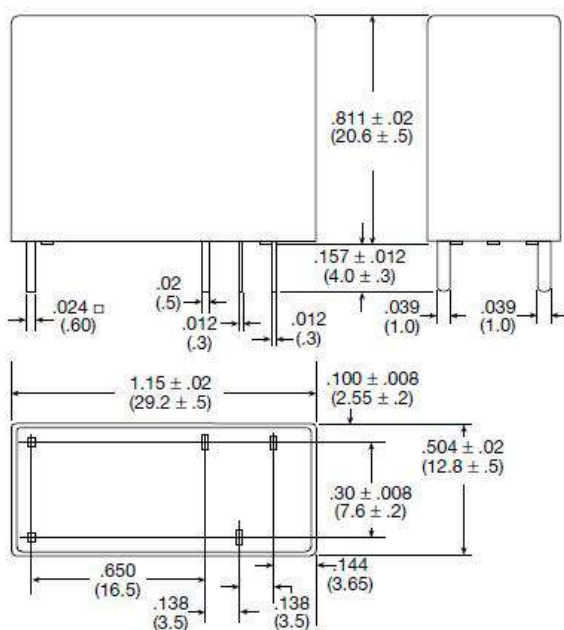
##### 3.3、储存在没有直射阳光的环境中。

Store in locations not subject to direct sunlight.

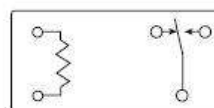
## 六、外型图、线路板孔位图和线路图 Outline、PCB Layout and Wiring diagram(unit:mm)

### 外型图 (OUTLINE)

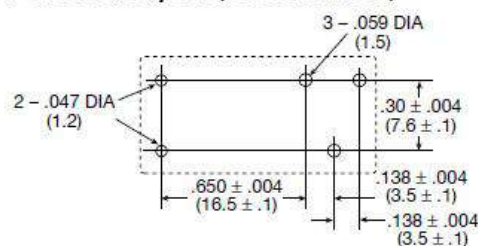
Outline Dimensions



Wiring Diagram (Bottom View)



PC Board Layout (Bottom View)



## 七、包装信息 Packing Information

| P/N  | Inner packing | Carton Dimensions<br>L×W×H (cm) | QTY (PCS)<br>/carton | Net weight<br>(Kg) | Gross weight<br>(Kg) |
|------|---------------|---------------------------------|----------------------|--------------------|----------------------|
| Y14F | 20pcs/tube    | 40.0 x 23.0 x 21.5              | 1000                 | 12.0               | 13.5                 |

## 八、命名规则 Encoding Information

**Y14F —X — X X X X X**

**1      2      3      4      5      6      7**

- 产品型号 Product type: Y14F
- 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      2—2 pole
- 线圈额定电压 Coil Nominal Voltage  
05—5VDC      12—12VDC      24—24VDC
- 线圈额定功率和触点负载 Coil Nominal Power and contact rating  
D—Standard coil power 0.72W  
L—Sensitive coil power 0.54W
- 触点型式 Contact arrangement  
Blank—Form C (转换型)      M—Form A (常开型)
- 特殊代码 Special code(not necessary to be shown on product)  
Numbers or letters, 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 H<sub>2</sub>S、SO<sub>2</sub> 或 NO<sub>2</sub> 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 H<sub>2</sub>S, SO<sub>2</sub> or NO<sub>2</sub>, 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.