

## 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.: \_\_\_\_\_ Y32F-SH-112D2

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

客户型号 Customer Part No.: \_\_\_\_\_

版 本 REV: \_\_\_\_\_

日 期 Date: \_\_\_\_\_ 2022-03-26

|          |          |        |     |
|----------|----------|--------|-----|
| 供应<br>厂商 | 制 定      | 审 核    | 批 准 |
|          | 阳 刚      | 方君发    | 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 12V                                              |
| (2) 线圈阻抗 Coil resistance       | 360 $\Omega$ $\pm$ 10% (at 23 $\pm$ 5 $^{\circ}$ C) |
| (3) 额定电流 Rated current         | DC 33.3mA $\pm$ 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 0.6V 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 | 45K Max (Coil:12V; Contact:5A)                      |

### 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              | 5A 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                  | 10ms Max                                                         |
| (5) 释放时间 Release time                  | 5ms 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:5A)                                             |

### 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        | 1000VAC,50/60 HZ for 1Minute                                                                 |
| 线圈与触点间 between contacts and coil | 4000VAC,50/60 HZ for 1 Minute                                                                |
| (3) 环境温度 Ambient temperature     | -40 $^{\circ}$ C $\sim$ +85 $^{\circ}$ 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 5A 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) GB/T 19001-2016/ISO9001:2015 certified File No. 00120Q39207R3M/4403

(2) 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

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

#### 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.

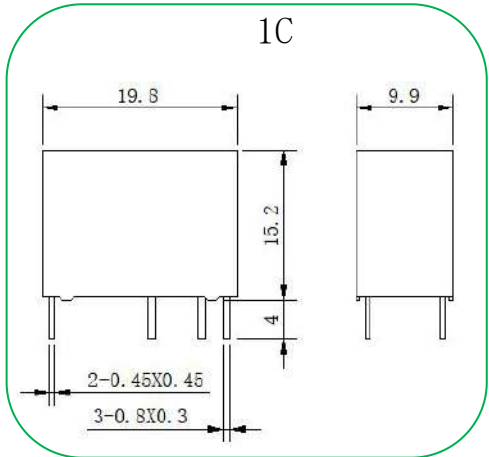
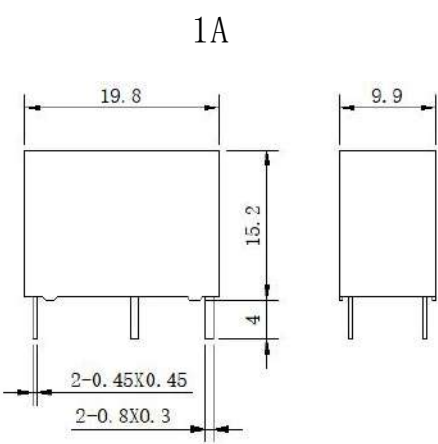
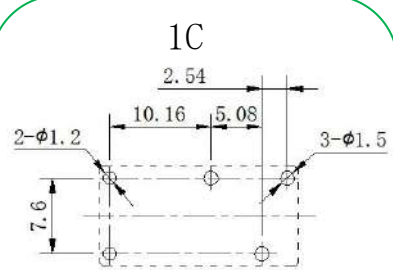
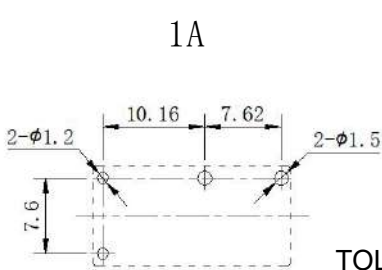
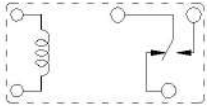
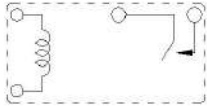
##### 3.2、储存在没有可视尘埃的环境中。

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)

| <div>外形图</div> <div>OUTLINE</div> <div>DIMENSIONS</div>                            | <div> <div>1C</div>  </div> <div> <div>1A</div>  </div> <div> <div>产品外形尺寸未注尺寸公差</div> <div>Outline dimensions hadn't specified tolerance</div> <table> <tr> <th>外形尺寸</th><th>公差</th></tr> <tr> <th>Outline Dimensions</th><th>Tolerance</th></tr> <tr> <td>≤1mm</td><td>±0.2mm</td></tr> <tr> <td>1~5mm</td><td>±0.3mm</td></tr> <tr> <td>&gt;5mm</td><td>±0.4mm</td></tr> </table> </div> <div> <div>注：1、引出脚尺寸为预焊前尺寸，引出端长度尺寸不包含锡尖尺寸，沾锡后锡尖长度不超过 1mm</div> </div> | 外形尺寸 | 公差 | Outline Dimensions | Tolerance | ≤1mm | ±0.2mm | 1~5mm | ±0.3mm | >5mm | ±0.4mm |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----|--------------------|-----------|------|--------|-------|--------|------|--------|
| 外形尺寸                                                                               | 公差                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |    |                    |           |      |        |       |        |      |        |
| Outline Dimensions                                                                 | Tolerance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |    |                    |           |      |        |       |        |      |        |
| ≤1mm                                                                               | ±0.2mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |    |                    |           |      |        |       |        |      |        |
| 1~5mm                                                                              | ±0.3mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |    |                    |           |      |        |       |        |      |        |
| >5mm                                                                               | ±0.4mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |    |                    |           |      |        |       |        |      |        |
| <div>安装孔尺寸</div> <div>(底视图)</div> <div>PCB layout</div> <div>(Bottom View)</div>   | <div> <div>1C</div>  </div> <div> <div>1A</div>  <div>TOLERANCE: ±0.1</div> </div>                                                                                                                                                                                                                                                                                                                                                                            |      |    |                    |           |      |        |       |        |      |        |
| <div>接线图</div> <div>(底视图)</div> <div>WIRING DIAGRAM</div> <div>(Bottom View)</div> | <div> <div>1C</div>  </div> <div> <div>1A</div>  </div>                                                                                                                                                                                                                                                                                                                                                                                                       |      |    |                    |           |      |        |       |        |      |        |

## 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) |
|------|---------------|---------------------------------|----------------------|--------------------|----------------------|
| Y32F | 100pcs/box    | /                               | 1000                 | /                  | /                    |

## 八、命名规则 Encoding Information

**Y32F — X — X X X X X**

**1      2      3      4      5      6      7**

1. 产品型号 Product type: Y32F
2. 封装方式 Enclosure  
SS---Flux-tight 防焊剂型      SH---Sealed case(Washable)完全密封型
3. 触点组数 Contact Pole  
1—1 pole
4. 线圈额定电压 Coil Nominal Voltage  
05—5VDC      12—12VDC      24—24VDC
5. 线圈额定功率和触点负载 Coil Nominal Power and contact rating  
D—Standard coil power 0.4W;  
L—Sensitive coil power 0.2W;
6. 触点型式 Contact arrangement  
Blank—1 Form C      M—1 Form A
7. 特殊代码 Special code(not necessary to be shown on product)  
2—Case type code 外壳结构代码  
Numbers or letters, do not represent electrical changes, these codes denote customer's requirements.

## 九、特别提醒 Reminds

- 1、如有任何特殊要求, 请联系元则电器公司。Any special requirements, please contact us.
- 2、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.
- 3、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.
- 4、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.