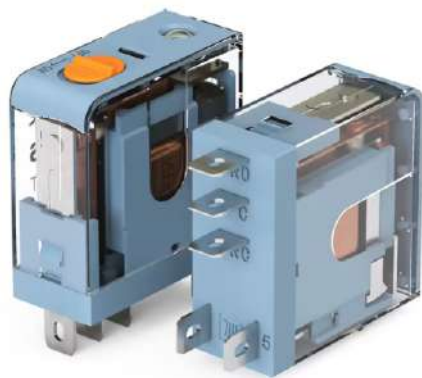


CE

CCC

RoHS

IEC:61984



特性

Product features

- 高电耐久性  
High electrical durability
- 一组转换触点形式  
A set of conversion contact forms
- 防尘罩型封装形式  
Dust cover type package
- 备有插座可供选择  
Sockets are available
- 带测试按钮规格  
With test button specifications

触点参数 Contact Parameters

|                                   |  |
|-----------------------------------|--|
| 触点形式 Contact Form                 | 1NO1NC   |
| 接触电阻 Contact Resistance           | ≤50mΩ  |
| 触点材料 Contact material             | 详见订货标记 See Order Mark For Details              |
| 触点负载(阻性) Contact load (resistive) | 12A 220VAC/24VDC                               |
| 最大切换电压 Maximum Switching Voltage  | 250VAC/30VDC                                   |
| 最大切换电流 Maximum Switching Current  | 12A  |
| 最大切换功率 Maximum Switching Power    | 3000VA/360W                                    |
| 机械寿命 Mechanical Life              | ≥2×10 <sup>7</sup>                             |
| 电气寿命 Electrical Life              | 高温(1s通1s断): ≥20万次 (1800 Ops/h) (参考GB/T14048.5) |
|                                   | 常温(1s通1s断): ≥30万次 (600 Ops/h) (参考GB/T14048.5)  |

性能参数 Performance Parameters

|  |  |                   |
|--|--|-------------------|
| 绝缘电阻 Insulation Resistance                         | ≥500mΩ   |                   |
| 抗电强度<br>Electrical Strength                        | 线圈与触点间 Between coil and contact                                  | 5000VAC 50Hz 1Min |
|  | 断开的触点间 Between disconnected contacts                             | 3000VAC 50Hz 1Min |
|  | 触点组之间 Between contact groups                                     | 1000VAC 50Hz 1Min |
| 吸合时间 Absorption Time                               | ≤20ms  |                   |
| 释放时间 Release Time                                  | ≤10ms  |                   |
| 线圈温升 The Coil Temperature Rises                    | ≤85K   |                   |
| 高低温冲击实验 High And Low Temperature Impact Experiment | -45℃~+85℃, 85%RH. 40min/循环, 50个循环, 接触电阻≤200mΩ, 按压力变化值≤30%, LED正常 |                   |
| 耐震性 Shock Resistance                               | XYZ三向, 60Hz, 振幅2mm, 10小时(每2小时观察)                                 |                   |
| 工作环境湿度 Working Environment Humidity                | 35~85%   |                   |
| 工作环境温度 Operating Ambient Temperature               | -40~+70℃, 非真空状态下, 不结冰情况下   |                   |
| 引出端形式 Lead-out Form                                | 插入式 Plug-in  |                   |
| 重量 Weight  | DC24V: 32.9g; AC220V: 30.9g                                      |                   |
| 封装方式 Encapsulation Method                          | 防尘罩型 Dust Cover Type   |                   |

备注: 上数值均为初始值。  
Note: The values in the above book are all initial values.

线圈参数 Coil Parameters

|                         |                         |
|-------------------------|-------------------------|
| 额定线圈功率 Rated Coil Power | DC: 约0.4W<br>AC: 约1.6VA |
|-------------------------|-------------------------|

| 额定电压<br>Rated Voltage<br>VDC | 动作电压<br>Operating Voltage<br>VDC | 释放电压<br>Release The Voltage<br>VDC | 最大电压<br>Maximum Voltage<br>VDC | 线圈电阻<br>Coil Resistance<br>Ω |
|------------------------------|----------------------------------|------------------------------------|--------------------------------|------------------------------|
| 6                            | ≤4.5                             | ≥0.60                              | 6.6                            | 40                           |
| 12                           | ≤9.0                             | ≥1.20                              | 13.2                           | 160                          |
| 24                           | ≤18                              | ≥2.40                              | 26.4                           | 640                          |
| 48                           | ≤36                              | ≥4.80                              | 52.8                           | 2600                         |
| 110                          | ≤82.5                            | ≥11.0                              | 121                            | 13450                        |
| 220                          | ≤165                             | ≥22.0                              | 242                            | 42000                        |

| 额定电压<br>Rated Voltage<br>VAC | 动作电压<br>Operating Voltage<br>VAC | 释放电压<br>Release The Voltage<br>VAC | 最大电压<br>Maximum Voltage<br>VAC | 线圈电阻<br>Coil Resistance<br>Ω |
|------------------------------|----------------------------------|------------------------------------|--------------------------------|------------------------------|
| 6                            | ≤4.8                             | ≥1.80                              | 6.6                            | 12                           |
| 12                           | ≤9.6                             | ≥3.60                              | 13.2                           | 45                           |
| 24                           | ≤19.2                            | ≥7.20                              | 26.4                           | 180                          |
| 48                           | ≤38.4                            | ≥14.4                              | 52.8                           | 700                          |
| 110                          | ≤88.0                            | ≥33.0                              | 121                            | 3750                         |
| 220                          | ≤176                             | ≥66.0                              | 242                            | 14500                        |
| 380                          | ≤304                             | ≥114                               | 418                            | 42000                        |

备注: 1、常温下, 让继电器正常动作时, 需要在继电器的线圈脚施加电压的最小值不得低于额定电压值得80%, 但为了达到规定的产品性能, 使用时请对线圈施加额定电压。  
2、最大电压是指继电器线圈在短时间内能承受的最大电压值

Remarks: 1. At room temperature, when the meter relay is in normal operation, the minimum value of the voltage that needs to be applied to the coil foot of the relay shall not be lower than 80% of the rated voltage, but in order to achieve the specified product performance, please apply the rated voltage to the coil when using.  
2. The maximum voltage refers to the maximum voltage value that the relay coil can withstand in a short period of time

## 订货标记示例 Example Of Order Mark

ES 1N - D24 L T

继电器系列 Relay Series

触点形式 Contact Form 一组转换 1NO1NC

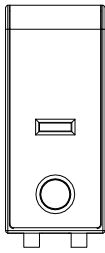
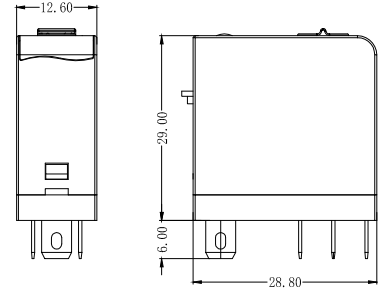
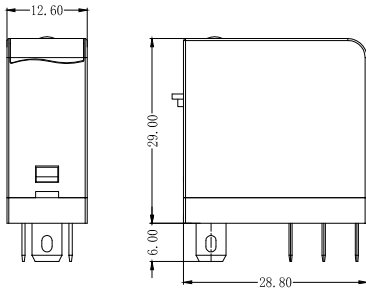
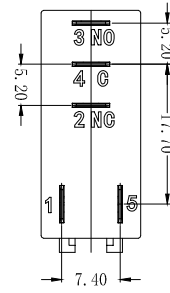
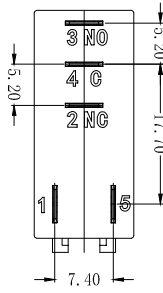
线圈电压Coil Voltage D: 直流DC A: 交流AC

L: LED灯 LED lights 无: 不带LED灯 Without LED light

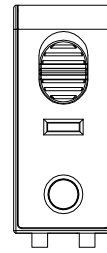
T: 测试按钮 Test button 无: 不带测试按钮 Without a test button

备注: 1、客户特殊要求由我司评审后, 按特性的形式标识。

Remarks: 1. After the customer's special requirements are reviewed by our company, they are identified in the form of a feature number.

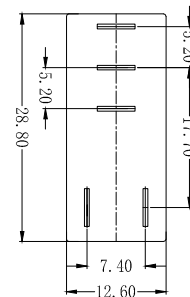
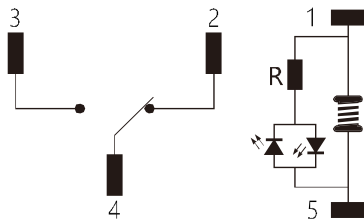


ES1N系列



备注：产品部分外形尺寸未注尺寸公差，当外形尺寸 $\leq 1\text{mm}$ ，公差为 $\pm 0.2\text{mm}$ ；当外形尺寸在 $(1\sim 5)\text{mm}$ 之间，公差为 $\pm 0.3\text{mm}$ ；当外形尺寸 $> 5\text{mm}$ ，公差为 $\pm 0.4\text{mm}$ 。

Remarks: Note: The external dimension of the product part is not marked with the dimensional tolerance, when the external dimension is  $\leq 1\text{mm}$ , the tolerance is  $\pm 0.2\text{mm}$ ; When the overall dimension is between  $(1\sim 5)\text{mm}$ , the tolerance is  $\pm 0.3\text{mm}$ ; When the overall dimension  $> 5\text{mm}$ , the tolerance is  $\pm 0.4\text{mm}$ .



PCB印刷版式(安装孔位)  
Top View

CE

CCC

RoHS

IEC:61984



特性

Product features

- 高电耐久性  
High electrical durability
- 一组转换触点形式  
A set of conversion contact forms
- 防尘罩型封装形式  
Dust cover type package
- 备有插座可供选择  
Sockets are available

触点参数 Contact Parameters

|                                   |   |
|-----------------------------------|---|
| 触点形式 Contact Form                 | 1NO1NC  |
| 接触电阻 Contact Resistance           | ≤50mΩ   |
| 触点材料 Contact material             | 详见订货标记 See Order Mark For Details                   |
| 触点负载(阻性) Contact load (resistive) | 12A 220VAC/24VDC                                    |
| 最大切换电压 Maximum Switching Voltage  | 250VAC/30VDC  |
| 最大切换电流 Maximum Switching Current  | 12A   |
| 最大切换功率 Maximum Switching Power    | 3000VA/360W   |
| 机械寿命 Mechanical Life              | ≥2×10 <sup>7</sup>                                  |
| 电气寿命 Electrical Life              | 室温下, 5A 250VAC/30VDC(1s通9s断): ≥40×10 <sup>4</sup>   |
|                                   | 70°C时, 5A 250VAC/30VDC(1s通9s断): ≥20×10 <sup>4</sup> |
|                                   | 室温下, 7A 250VAC/30VDC(1s通9s断): ≥10×10 <sup>4</sup>   |
|                                   | 70°C时, 7A 250VAC/30VDC(1s通9s断): ≥5×10 <sup>4</sup>  |
|                                   | 室温下, 12A 250VAC/30VDC(1s通9s断): ≥5×10 <sup>4</sup>   |
|                                   | 70°C时, 12A 250VAC/30VDC(1s通9s断): ≥3×10 <sup>4</sup> |

性能参数 Performance Parameters

|  |   |                   |
|--|---|-------------------|
| 绝缘电阻 Insulation Resistance                         | ≥500mΩ  |                   |
| 抗电强度<br>Electrical Strength                        | 线圈与触点间 Between coil and contact                                   | 5000VAC 50Hz 1Min |
|  | 断开的触点间 Between disconnected contacts                              | 3000VAC 50Hz 1Min |
|  | 触点组之间 Between contact groups                                      | 1000VAC 50Hz 1Min |
| 吸合时间 Absorption Time                               | ≤20ms   |                   |
| 释放时间 Release Time                                  | ≤10ms   |                   |
| 线圈温升 The Coil Temperature Rises                    | ≤85K  |                   |
| 高低温冲击实验 High And Low Temperature Impact Experiment | -45°C~+85°C, 85%RH。40min/循环, 50个循环, 接触电阻≤200mΩ, 按压力变化值≤30%, LED正常 |                   |
| 耐震性 Shock Resistance                               | XYZ三向, 60Hz, 振幅2mm, 10小时(每2小时观察)                                  |                   |
| 工作环境湿度 Working Environment Humidity                | 35~85%  |                   |
| 工作环境温度 Operating Ambient Temperature               | -40~+70°C, 非真空状态下, 不结冰情况下   |                   |
| 引出端形式 Lead-out Form                                | 插入式 Plug-in   |                   |
| 重量 Weight  | DC24V: 32.9g; AC220V: 30.9g                                       |                   |
| 封装方式 Encapsulation Method                          | 防尘罩型 Dust Cover Type  |                   |

备注: 上数值均为初始值。  
Note: The values in the above book are all initial values.

线圈参数 Coil Parameters

|                         |                          |
|-------------------------|--------------------------|
| 额定线圈功率 Rated Coil Power | DC: 约0.53W<br>AC: 约0.9VA |
|-------------------------|--------------------------|

| 额定电压<br>Rated Voltage<br>VDC | 动作电压<br>Operating Voltage<br>VDC | 释放电压<br>Release The Voltage<br>VDC | 最大电压<br>Maximum Voltage<br>VDC | 线圈电阻<br>Coil Resistance<br>$\Omega$ |
|------------------------------|----------------------------------|------------------------------------|--------------------------------|-------------------------------------|
| 6                            | $\leq 4.5$                       | $\geq 0.60$                        | 6.6                            | 40                                  |
| 12                           | $\leq 9.0$                       | $\geq 1.20$                        | 13.2                           | 160                                 |
| 24                           | $\leq 18$                        | $\geq 2.40$                        | 26.4                           | 640                                 |
| 48                           | $\leq 36$                        | $\geq 4.80$                        | 52.8                           | 2600                                |
| 100/110                      | $\leq 82.5$                      | $\geq 11.0$                        | 121                            | 13450                               |
| 220                          | $\leq 165$                       | $\geq 22.0$                        | 242                            | 42000                               |

| 额定电压<br>Rated Voltage<br>VAC | 动作电压<br>Operating Voltage<br>VAC | 释放电压<br>Release The Voltage<br>VAC | 最大电压<br>Maximum Voltage<br>VAC | 线圈电阻<br>Coil Resistance<br>$\Omega$ |
|------------------------------|----------------------------------|------------------------------------|--------------------------------|-------------------------------------|
| 6                            | $\leq 4.8$                       | $\geq 1.80$                        | 6.6                            | 12                                  |
| 12                           | $\leq 9.6$                       | $\geq 3.60$                        | 13.2                           | 45                                  |
| 24                           | $\leq 19.2$                      | $\geq 7.20$                        | 26.4                           | 180                                 |
| 48                           | $\leq 38.4$                      | $\geq 14.4$                        | 52.8                           | 700                                 |
| 100/110                      | $\leq 88.0$                      | $\geq 33.0$                        | 121                            | 3750                                |
| 220                          | $\leq 176$                       | $\geq 66.0$                        | 242                            | 14500                               |
| 380                          | $\leq 304$                       | $\geq 114$                         | 418                            | 42000                               |

备注：1、常温下，让计继电器正常动作时，需要在继电器的线圈脚施加电压的最小值不得低于额定电压值得80%，但为了达到规定的产品性能，使用时请对线圈施加额定电压。  
2、最大电压是指继电器线圈在短时间内能承受的最大电压值

Remarks: 1. At room temperature, when the meter relay is in normal operation, the minimum value of the voltage that needs to be applied to the coil foot of the relay shall not be lower than 80% of the rated voltage, but in order to achieve the specified product performance, please apply the rated voltage to the coil when using.  
2. The maximum voltage refers to the maximum voltage value that the relay coil can withstand in a short period of time

## 订货标记示例 Example Of Order Mark

RY 1S - CL - D24

## 企业标识 Enterprise Identity

触点形式 Contact Form 一组转换 1NO1NC

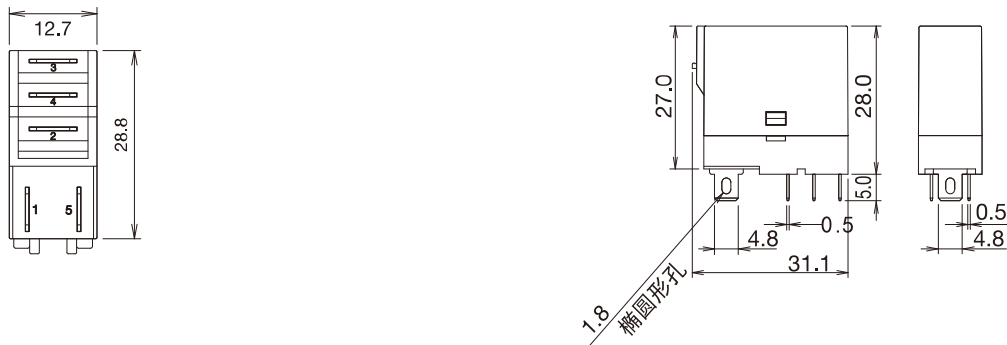
LED

线圈电压Coil Voltage D: 直流DC A: 交流AC

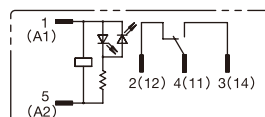
备注：1、客户特殊要求由我司评审后，按特性号的形式标识。

Remarks: 1. After the customer's special requirements are reviewed by our company, they are identified in the form of a feature number.

## 外形图Outline Drawing(mm)



## 接线图Wiring Diagram



CE

CCC

RoHS

IEC:61984



特性

Product features

- 体积小, 驱动功率大, 散热优良  
Small size, large driving power, excellent heat dissipation
- 排齿形散热器用铜片扭卡安装, 方便牢固  
The toothed radiator is installed with a copper twist card, which is convenient and firm
- 进口功率元件TRIAC/MOS, 性能稳定  
Imported power component TRIAC/MOS, stable performance
- 内部元件全部SMC贴片  
All internal components are SMC patches

控制参数Control parameters

| 型号选型<br>Model selection | 控制电压(V)<br>Control voltage | 控制电流(mA)<br>Control the current | 启动电压(V)<br>Start-up voltage | 关断电压(V)<br>Shutdown voltage | 线圈内阻(KΩ)<br>Coil internal resistance | 工作指示(LED)<br>Work instructions |
|-------------------------|----------------------------|---------------------------------|-----------------------------|-----------------------------|--------------------------------------|--------------------------------|
| RY1SR-C04-A             | 3-10V                      | < 25                            | 2.5                         | 1.5                         | 0.39                                 | 红RED                           |
|                         | 10-28V                     |                                 | 9.5                         | 8.5                         | 2.20                                 |                                |
| RY1SR-C07-A             | 3-10V                      | < 25                            | 2.5                         | 1.5                         | 0.39                                 | 红RED                           |
|                         | 10-28V                     |                                 | 9.5                         | 8.5                         | 2.20                                 |                                |
| RY1SR-M04-D             | 4-10V                      | < 50                            | 3.5                         | 2.5                         | 0.18                                 | 绿Green                         |
|                         | 10-28V                     |                                 | 9.5                         | 8.0                         | 0.56                                 |                                |
| RY1SR-F12-D             | 4-10V                      | < 50                            | 3.5                         | 2.5                         | 0.18                                 | 绿Green                         |
|                         | 10-28V                     |                                 | 9.5                         | 8.0                         | 0.56                                 |                                |

输出参数Output parameters

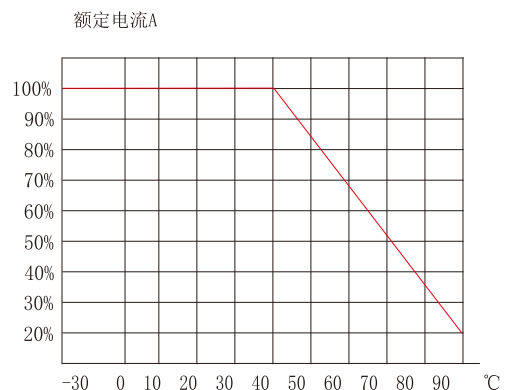
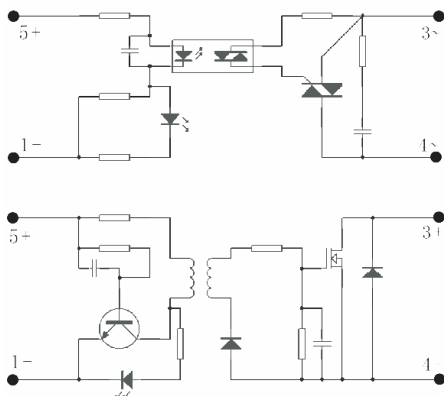
| 型号选型<br>Model selection | 输出电压(V)<br>Output voltage | 输出电流(A)<br>Output current | 通态降压(V)<br>On-state buck | 峰值电压(VTM)<br>Peak voltage | 浪涌电流(10ms)<br>Inrush current |
|-------------------------|---------------------------|---------------------------|--------------------------|---------------------------|------------------------------|
| RY1SR-C04-A             | 24-440VAC                 | 0.05-4                    | < 1.5                    | 900V                      | 160A                         |
| RY1SR-C07-A             | 24-440VAC                 | 0.05-7                    | < 1.5                    | 900V                      | 240A                         |
| RY1SR-M04-D             | 5-200VDC                  | 0.01-4                    | < 1.5                    | 220V                      | 80A                          |
| RY1SR-F12-D             | 4-60VDC                   | 0.01-12                   | ≤0.7                     | 80V                       | 360A                         |

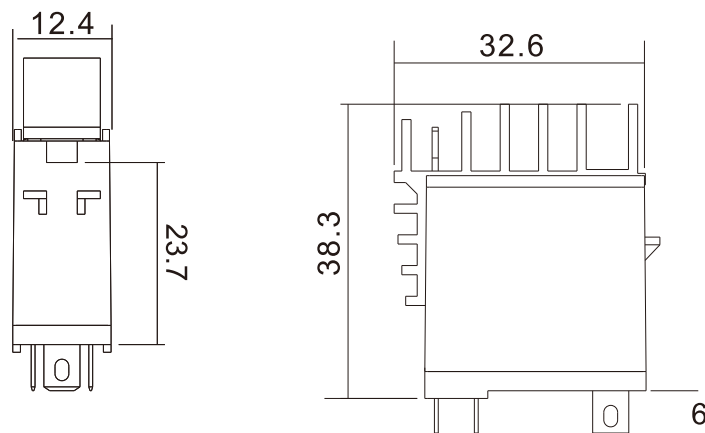
特性参数Attribute parameters

| 型号选型<br>Model selection | 介质耐压(VAC)<br>The medium is pressure-resistant | 通断时间(S)<br>On-off time | 工作温度(°C)<br>Operating temperature |
|-------------------------|---|------------------------|-----------------------------------|
| RY1SR-C04-A             | ≥2000   | 半周期(Half cycle)+1      | -30~+80                           |
| RY1SR-C07-A             | ≥2000   | 半周期(Half cycle)+1      | -30~+80                           |
| RY1SR-M04-D             | ≥2000   | 1mS                    | -30~+80                           |
| RY1SR-F12-D             | ≥1000   | 5mS                    | -30~+80                           |

内部原理图Internal schematic

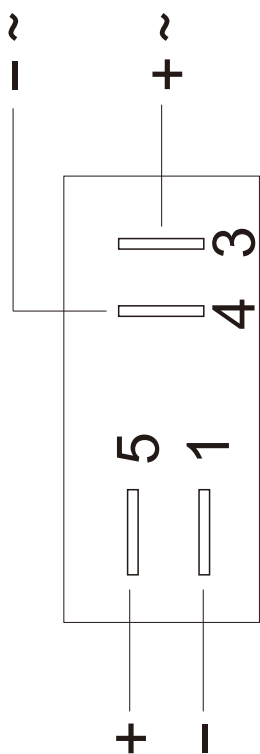
内部原理图Internal schematic





备注：产品部分外形尺寸未注尺寸公差，当外形尺寸≤1mm，公差为±0.2mm；当外形尺寸在(1~5)mm之间，公差为±0.3mm；当外形尺寸>5mm，公差为±0.4mm。

Remarks: Note: The external dimension of the product part is not marked with the dimensional tolerance, when the external dimension is ≤1mm, the tolerance is ±0.2mm; When the overall dimension is between (1~5)mm, the tolerance is ±0.3mm; When the overall dimension > 5mm, the tolerance is ±0.4mm.



注意事项

输入工作条件:

- 1.注意工作电压的范围和正负极。
- 2.为确保固体继电器正常工作，环境温度较低时应加大输入电流。温度较高时应减少输入电流。
- 3.用集成电路直接驱动SSR时应有足够的带载能力和尽可能底的“O”电平输出。

Notes

Enter working conditions:

1. Pay attention to the range of working voltage and positive and negative poles.
2. In order to ensure the normal operation of the solid relay, the input current should be increased when the ambient temperature is low. When the temperature is high, it should be reducedLess input current.
3. When using integrated circuits to directly drive SSR, there should be sufPcient load capacity and as low as possible "O" level output.

输出工作条件:为确保SSR的可靠工作，按负载类型降额选型及采取必要的保护措施。

- 1.峰值电压选择:电感负载:取线路电压(有效值)的2-3倍。纯电阻负载:取线路电压(有效值)的1-2倍。
- 2.压敏电阻的选用:压敏电阻的标称工作电压值按SSR工作电压有效值的1.8-2倍选取。
- 3.为了避免固体继电器的温升超过允许值，设计应用时应充分考虑散热效果和安装位置，当两只或多只固体继电器并排安装时，应留有适当大的间距。

Output operating conditions:

In order to ensure the reliable operation of SSR, derating selection according to load type and taking necessary protective measures.

1. Peak voltage selection: inductive load: take 2-3 times of the line voltage (rms). Pure resistive load: take the line voltage (Yes1-2 times the potency).
2. Selection of varistor: The nominal working voltage value of the varistor is selected according to 1.8-2 times the rms value of the SSR working voltage.
3. In order to avoid the temperature rise of the solid relay exceeding the allowable value, the heat dissipation effect and installation position should be fully considered when designing and applying When two or more solid relays are installed side by side, an appropriately large spacing should be left

| 负载类型<br>Load type    | 纯电阻<br>Pure resistance | 电热丝<br>Heating wire | 白炽灯<br>incandescent lamp | 变压器<br>Transformer | 电磁铁<br>Electromagnets | 电箱电机<br>Electric box motor | 三相电机<br>Three-phase motor | 电容投切<br>Capacitor switching |
|----------------------|------------------------|---------------------|--------------------------|--------------------|-----------------------|----------------------------|---------------------------|-----------------------------|
| 功率因素<br>Power factor | 1.0                    | 0.7                 | 0.5                      | 0.4                | 0.5                   | 0.2                        | 0.3                       | 浪涌Swell                     |
| 放大倍数<br>MagniPcation | 1.5                    | 2                   | 2.5                      | 4                  | 4                     | 7                          | 6                         | 10                          |

# 继电器配套底座 Relay Matching Base



IEC:61984



## 特性 Product features

- 体积小, 节省空间  
Small size, save space
- 带手指保护功能  
With Finger protection
- PCB式、螺钉式、导轨式安装形式可供选择  
PCB type, screw type, DIN rail mounting form are available
- 多款插入式模块可供选择, 实现通电指示, 线路保护功能  
A variety of plug-in modules are available to realize power-on indication and line protection functions
- 可选配件: 卡簧、标记牌、插入式模块  
Optional accessories: circlips, marker plates, plug-in modules
- 外壳采用PA66+G20环保阻燃尼龙  
The shell adopts PA66+G20 environmentally friendly flame retardant nylon

## 性能参数 Performance Parameters


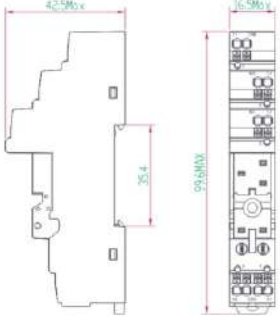
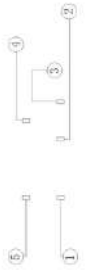

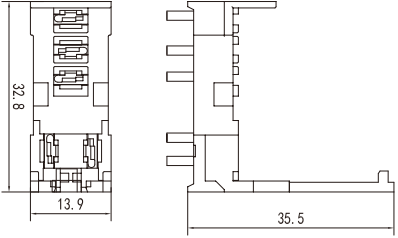
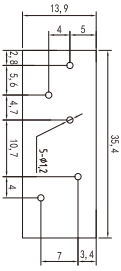

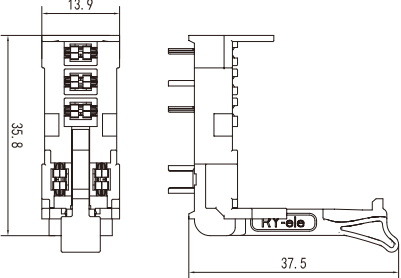
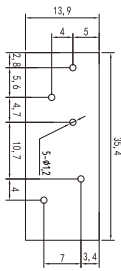
| 型号<br>Model | 额定电压<br>Rated Voltage | 额定电流<br>Rated Current | 环境温度<br>Ambient Temperature | 介电耐压<br>Dielectric Strength | 插拔寿命<br>Plug-in life | 螺钉扭矩<br>Screw Torque | 外接导线<br>Size Of Wire | 插片材料<br>Insert material | 重量<br>Weight |
|-------------|-----------------------|-----------------------|-----------------------------|-----------------------------|----------------------|----------------------|----------------------|-------------------------|--------------|
| RY1S-05B    | 250VAC                | 12A                   | -35°C~70°C                  | 2000VAC                     | 10000                | 0.8-1.0N.m           | 7mm                  | 磷铜                      | 约32g         |
| RY1S-05E    | 250VAC                | 12A                   | -35°C~70°C                  | 2000VAC                     | 10000                | 0.8-1.0N.m           | 7mm                  | 磷铜                      | 约33.45g      |
| 14F-1Z-C5   | 250VAC                | 12A                   | -35°C~70°C                  | 2000VAC                     | 10000                | 0.8-1.0N.m           | 7mm                  | 磷铜                      | 约37.63g      |
| RY1S-05PU   | 250VAC                | 12A                   | -35°C~70°C                  | 2000VAC                     | 10000                | -                    | -                    | 磷铜                      | 约39.46g      |
| SJ1S-61     | 250VAC                | 12A                   | -35°C~70°C                  | 2000VAC                     | 10000                | -                    | -                    | 磷铜                      | 约55.67g      |
| 1S-61-S     | 250VAC                | 12A                   | -35°C~70°C                  | 2000VAC                     | 10000                | -                    | -                    | 磷铜                      | 约63.2g       |

## 外形图、接线图, 安装孔尺寸 Outline drawing, wiring diagram, mounting hole size

单位: mm

| 底座<br>Base       | 外形尺寸<br>Form Factor | 接线图<br>Wiring Diagram | 可选配件<br>Optional Accessories  |
|------------------|---------------------|-----------------------|---|
| <p>RY1S-05B</p>  |                     |                       | <p>连接条 ES-10-16H(蓝blue)<br/>ES-10-16HR(红Red)<br/>ES-10-16HB(黑black)</p> |
| <p>RY1S-05E</p>  |                     |                       | <p>连接条 ES-10-16H(蓝blue)<br/>ES-10-16HR(红Red)<br/>ES-10-16HB(黑black)</p> |
| <p>14F-1Z-C5</p> |                     |                       |   |

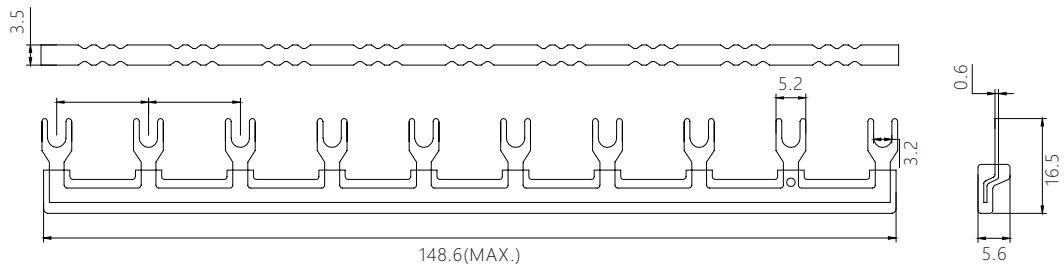


| 底座<br>Base   | 外形尺寸<br>Form Factor  | 接线图<br>Wiring Diagram  | 可选配件<br>Optional Accessories |
|--|--|--|------------------------------|
| <p>Ry1S-05PU</p>  |   |   |                              |
| <p>SJ1S-61</p>    |   |   |                              |
| <p>1S-61-S</p>   |  |  |                              |

相关配件可选 Related accessories are available

单位: mm

连接条 Connection Strips

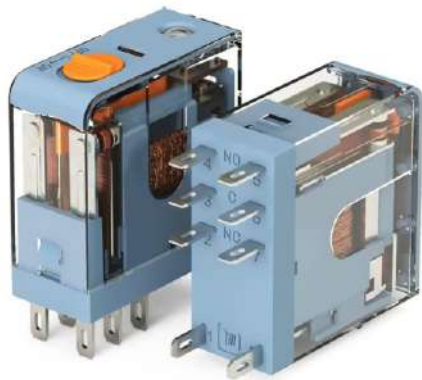


CE

CCC

RoHS

IEC:61984



特性

Product features

- 高电耐久性  
High electrical durability
- 二组转换触点形式  
Two of conversion contact forms
- 防尘罩型封装形式  
Dust cover type package
- 备有插座可供选择  
Sockets are available
- 带测试按钮规格  
With test button specifications

触点参数 Contact Parameters

|                                   |  |
|-----------------------------------|--|
| 触点形式 Contact Form                 | 2NO2NC   |
| 接触电阻 Contact Resistance           | ≤50mΩ  |
| 触点材料 Contact material             | 详见订货标记 See Order Mark For Details              |
| 触点负载(阻性) Contact load (resistive) | 8A 220VAC/24VDC                                |
| 最大切换电压 Maximum Switching Voltage  | 250VAC/30VDC                                   |
| 最大切换电流 Maximum Switching Current  | 8A   |
| 最大切换功率 Maximum Switching Power    | 3000VA/360W                                    |
| 机械寿命 Mechanical Life              | ≥2×10  |
| 电气寿命 Electrical Life              | 高温(1s通1s断): ≥20万次 (1800 Ops/h) (参考GB/T14048.5) |
|                                   | 常温(1s通1s断): ≥30万次 (600 Ops/h) (参考GB/T14048.5)  |

性能参数 Performance Parameters

|  |  |                   |
|--|--|-------------------|
| 绝缘电阻 Insulation Resistance                         | ≥500mΩ   |                   |
| 抗电强度<br>Electrical Strength                        | 线圈与触点间 Between coil and contact                                  | 5000VAC 50Hz 1Min |
|  | 断开的触点间 Between disconnected contacts                             | 3000VAC 50Hz 1Min |
|  | 触点组之间 Between contact groups                                     | 1000VAC 50Hz 1Min |
| 吸合时间 Absorption Time                               | ≤20ms  |                   |
| 释放时间 Release Time                                  | ≤10ms  |                   |
| 线圈温升 The Coil Temperature Rises                    | ≤85K   |                   |
| 高低温冲击实验 High And Low Temperature Impact Experiment | -45℃~+85℃, 85%RH. 40min/循环, 50个循环, 接触电阻≤200mΩ, 按压力变化值≤30%, LED正常 |                   |
| 耐震性 Shock Resistance                               | XYZ三向, 60Hz, 振幅2mm, 10小时(每2小时观察)                                 |                   |
| 工作环境湿度 Working Environment Humidity                | 35~85%   |                   |
| 工作环境温度 Operating Ambient Temperature               | -40~+70℃, 非真空状态下, 不结冰情况下   |                   |
| 引出端形式 Lead-out Form                                | 插入式 Plug-in  |                   |
| 重量 Weight  | DC24V: 19.5g; AC220V: 19.5g                                      |                   |
| 封装方式 Encapsulation Method                          | 防尘罩型 Dust Cover Type   |                   |

备注: 上数值均为初始值。  
Note: The values in the above book are all initial values.

线圈参数 Coil Parameters

|                         |                         |
|-------------------------|-------------------------|
| 额定线圈功率 Rated Coil Power | DC: 约0.4W<br>AC: 约1.6VA |
|-------------------------|-------------------------|

| 额定电压<br>Rated Voltage<br>VDC | 动作电压<br>Operating Voltage<br>VDC | 释放电压<br>Release The Voltage<br>VDC | 最大电压<br>Maximum Voltage<br>VDC | 线圈电阻<br>Coil Resistance<br>Ω |
|------------------------------|----------------------------------|------------------------------------|--------------------------------|------------------------------|
| 6                            | ≤4.5                             | ≥0.60                              | 6.6                            | 40                           |
| 12                           | ≤9.0                             | ≥1.20                              | 13.2                           | 160                          |
| 24                           | ≤18                              | ≥2.40                              | 26.4                           | 640                          |
| 48                           | ≤36                              | ≥4.80                              | 52.8                           | 2600                         |
| 110                          | ≤82.5                            | ≥11.0                              | 121                            | 13450                        |
| 220                          | ≤165                             | ≥22.0                              | 242                            | 42000                        |

| 额定电压<br>Rated Voltage<br>VAC | 动作电压<br>Operating Voltage<br>VAC | 释放电压<br>Release The Voltage<br>VAC | 最大电压<br>Maximum Voltage<br>VAC | 线圈电阻<br>Coil Resistance<br>Ω |
|------------------------------|----------------------------------|------------------------------------|--------------------------------|------------------------------|
| 6                            | ≤4.8                             | ≥1.80                              | 6.6                            | 12                           |
| 12                           | ≤9.6                             | ≥3.60                              | 13.2                           | 45                           |
| 24                           | ≤19.2                            | ≥7.20                              | 26.4                           | 180                          |
| 48                           | ≤38.4                            | ≥14.4                              | 52.8                           | 700                          |
| 110                          | ≤88.0                            | ≥33.0                              | 121                            | 3750                         |
| 220                          | ≤176                             | ≥66.0                              | 242                            | 14500                        |
| 380                          | ≤304                             | ≥114                               | 418                            | 42000                        |

备注: 1、常温下, 让继电器正常动作时, 需要在继电器的线圈脚施加电压的最小值不得低于额定电压值得80%, 但为了达到规定的产品性能, 使用时请对线圈施加额定电压。  
2、最大电压是指继电器线圈在短时间内能承受的最大电压值

Remarks: 1. At room temperature, when the meter relay is in normal operation, the minimum value of the voltage that needs to be applied to the coil foot of the relay shall not be lower than 80% of the rated voltage, but in order to achieve the specified product performance, please apply the rated voltage to the coil when using.  
2. The maximum voltage refers to the maximum voltage value that the relay coil can withstand in a short period of time

## 订货标记示例 Example Of Order Mark

ES 2N - D24 L T

继电器系列 Relay Series

触点形式 Contact Form 二组转换 2NO2NC

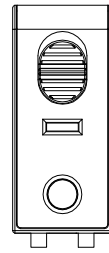
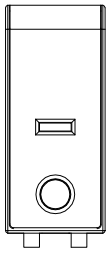
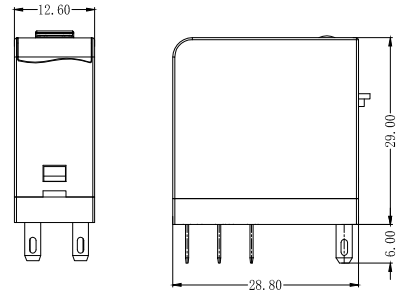
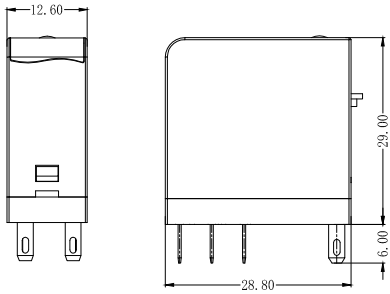
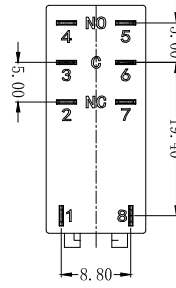
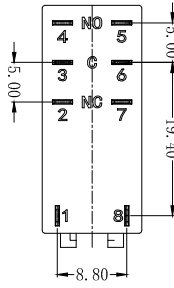
线圈电压Coil Voltage D: 直流DC A: 交流AC

L: LED灯 LED lights 无: 不带LED灯 Without LED light

T: 测试按钮 Test button 无: 不带测试按钮 Without a test button

备注: 1、客户特殊要求由我司评审后, 按特性的形式标识。

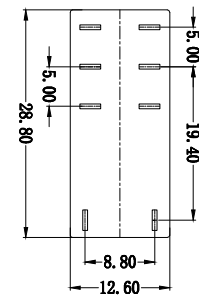
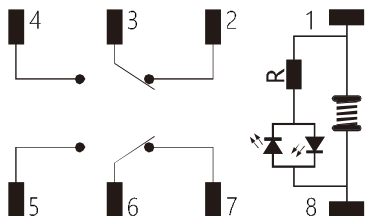
Remarks: 1. After the customer's special requirements are reviewed by our company, they are identified in the form of a feature number.



ES2N系列

备注：产品部分外形尺寸未注尺寸公差，当外形尺寸 $\leq 1\text{mm}$ ，公差为 $\pm 0.2\text{mm}$ ；当外形尺寸在 $(1\sim 5)\text{mm}$ 之间，公差为 $\pm 0.3\text{mm}$ ；当外形尺寸 $> 5\text{mm}$ ，公差为 $\pm 0.4\text{mm}$ 。

Remarks: Note: The external dimension of the product part is not marked with the dimensional tolerance, when the external dimension is  $\leq 1\text{mm}$ , the tolerance is  $\pm 0.2\text{mm}$ ; When the overall dimension is between  $(1\sim 5)\text{mm}$ , the tolerance is  $\pm 0.3\text{mm}$ ; When the overall dimension  $> 5\text{mm}$ , the tolerance is  $\pm 0.4\text{mm}$ .



PCB印刷版式(安装孔位)  
Top View

CE

CCC

RoHS

IEC:61984



特性

Product features

- 高电耐久性  
High electrical durability
- 二组转换触点形式  
Two of conversion contact forms
- 防尘罩型封装形式  
Dust cover type package
- 备有插座可供选择  
Sockets are available

触点参数 Contact Parameters

|   |   |
|---|---|
| 触点形式 Contact Form                                   | 2NO2NC  |
| 接触电阻 Contact Resistance                             | ≤50mΩ   |
| 触点材料 Contact material                               | 详见订货标记 See Order Mark For Details                   |
| 触点负载(阻性) Contact load (resistive)                   | 8A 220VAC/24VDC                                     |
| 最大切换电压 Maximum Switching Voltage                    | 250VAC/30VDC  |
| 最大切换电流 Maximum Switching Current                    | 8A  |
| 最大切换功率 Maximum Switching Power                      | 3000VA/360W   |
| 机械寿命 Mechanical Life                                | ≥2×10 <sup>7</sup>                                  |
| 电气寿命 Electrical Life                                | 室温下, 5A 250VAC/30VDC(1s通9s断): ≥40×10 <sup>4</sup>   |
|   | 70°C时, 5A 250VAC/30VDC(1s通9s断): ≥20×10 <sup>4</sup> |
|   | 室温下, 7A 250VAC/30VDC(1s通9s断): ≥10×10 <sup>4</sup>   |
|   | 70°C时, 7A 250VAC/30VDC(1s通9s断): ≥5×10 <sup>4</sup>  |
|   | 室温下, 12A 250VAC/30VDC(1s通9s断): ≥5×10 <sup>4</sup>   |
| 70°C时, 12A 250VAC/30VDC(1s通9s断): ≥3×10 <sup>4</sup> |   |

性能参数 Performance Parameters

|  |   |                   |
|--|---|-------------------|
| 绝缘电阻 Insulation Resistance                         | ≥500mΩ  |                   |
| 抗电强度<br>Electrical Strength                        | 线圈与触点间 Between coil and contact                                   | 5000VAC 50Hz 1Min |
|  | 断开的触点间 Between disconnected contacts                              | 3000VAC 50Hz 1Min |
|  | 触点组之间 Between contact groups                                      | 1000VAC 50Hz 1Min |
| 吸合时间 Absorption Time                               | ≤20ms   |                   |
| 释放时间 Release Time                                  | ≤10ms   |                   |
| 线圈温升 The Coil Temperature Rises                    | ≤85K  |                   |
| 高低温冲击实验 High And Low Temperature Impact Experiment | -45°C~+85°C, 85%RH。40min/循环, 50个循环, 接触电阻≤200mΩ, 按压力变化值≤30%, LED正常 |                   |
| 耐震性 Shock Resistance                               | XYZ三向, 60Hz, 振幅2mm, 10小时(每2小时观察)                                  |                   |
| 工作环境湿度 Working Environment Humidity                | 35~85%  |                   |
| 工作环境温度 Operating Ambient Temperature               | -40~+70°C, 非真空状态下, 不结冰情况下   |                   |
| 引出端形式 Lead-out Form                                | 插入式 Plug-in   |                   |
| 重量 Weight  | DC24V: 32.9g; AC220V: 30.9g                                       |                   |
| 封装方式 Encapsulation Method                          | 防尘罩型 Dust Cover Type  |                   |

备注: 上数值均为初始值。  
Note: The values in the above book are all initial values.

线圈参数 Coil Parameters

|                         |                          |
|-------------------------|--------------------------|
| 额定线圈功率 Rated Coil Power | DC: 约0.53W<br>AC: 约0.9VA |
|-------------------------|--------------------------|

| 额定电压<br>Rated Voltage<br>VDC | 动作电压<br>Operating Voltage<br>VDC | 释放电压<br>Release The Voltage<br>VDC | 最大电压<br>Maximum Voltage<br>VDC | 线圈电阻<br>Coil Resistance<br>Ω |
|------------------------------|----------------------------------|------------------------------------|--------------------------------|------------------------------|
| 6                            | ≤4.5                             | ≥0.60                              | 6.6                            | 40                           |
| 12                           | ≤9.0                             | ≥1.20                              | 13.2                           | 160                          |
| 24                           | ≤18                              | ≥2.40                              | 26.4                           | 640                          |
| 48                           | ≤36                              | ≥4.80                              | 52.8                           | 2600                         |
| 100/110                      | ≤82.5                            | ≥11.0                              | 121                            | 13450                        |
| 220                          | ≤165                             | ≥22.0                              | 242                            | 42000                        |

| 额定电压<br>Rated Voltage<br>VAC | 动作电压<br>Operating Voltage<br>VAC | 释放电压<br>Release The Voltage<br>VAC | 最大电压<br>Maximum Voltage<br>VAC | 线圈电阻<br>Coil Resistance<br>Ω |
|------------------------------|----------------------------------|------------------------------------|--------------------------------|------------------------------|
| 6                            | ≤4.8                             | ≥1.80                              | 6.6                            | 12                           |
| 12                           | ≤9.6                             | ≥3.60                              | 13.2                           | 45                           |
| 24                           | ≤19.2                            | ≥7.20                              | 26.4                           | 180                          |
| 48                           | ≤38.4                            | ≥14.4                              | 52.8                           | 700                          |
| 100/110                      | ≤88.0                            | ≥33.0                              | 121                            | 3750                         |
| 220                          | ≤176                             | ≥66.0                              | 242                            | 14500                        |
| 380                          | ≤304                             | ≥114                               | 418                            | 42000                        |

备注：1、常温下，让计继电器正常动作时，需要在继电器的线圈脚施加电压的最小值不得低于额定电压值得80%，但为了达到规定的产品性能，使用时请对线圈施加额定电压。  
2、最大电压是指继电器线圈在短时间内能承受的最大电压值

Remarks: 1. At room temperature, when the meter relay is in normal operation, the minimum value of the voltage that needs to be applied to the coil foot of the relay shall not be lower than 80% of the rated voltage, but in order to achieve the specified product performance, please apply the rated voltage to the coil when using.  
2. The maximum voltage refers to the maximum voltage value that the relay coil can withstand in a short period of time

订货标记示例 Example Of Order Mark

**RY 2S - CL - D24**

企业标识 Enterprise Identity

触点形式 Contact Form      二组转换      2NO2NC

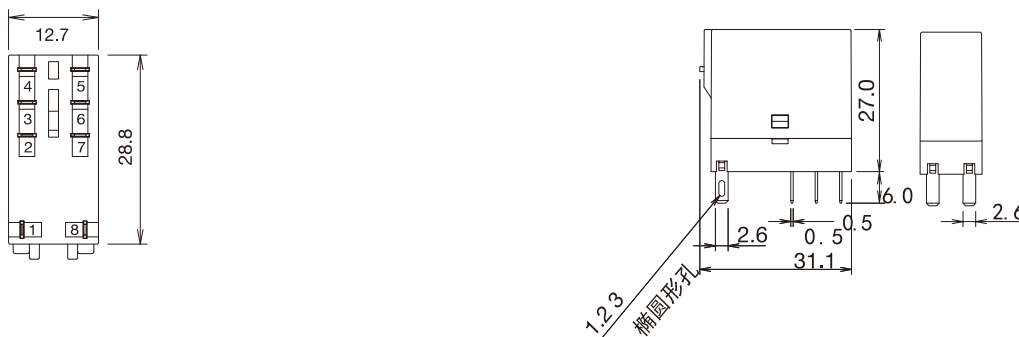
LED

线圈电压Coil Voltage      D: 直流DC    A: 交流AC

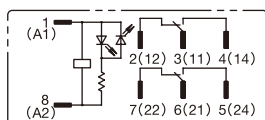
备注：1、客户特殊要求由我司评审后，按特性号的形式标识。

Remarks: 1. After the customer's special requirements are reviewed by our company, they are identified in the form of a feature number.

外形图Outline Drawing(mm)



接线图Wiring Diagram



# 继电器配套底座 Relay Matching Base



IEC:61984



## 特性 Product features


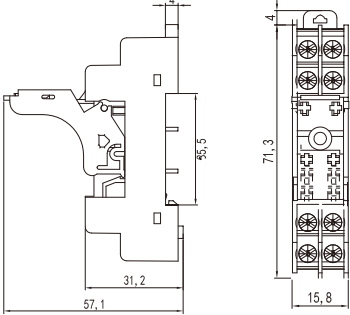
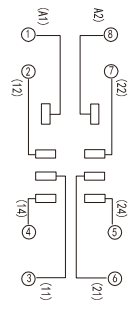

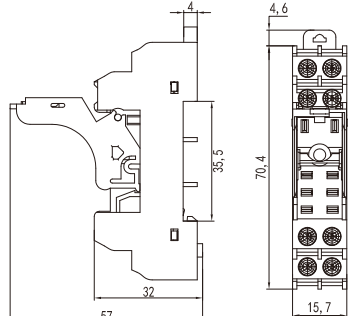
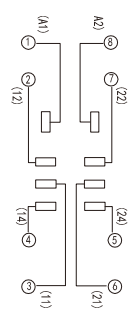

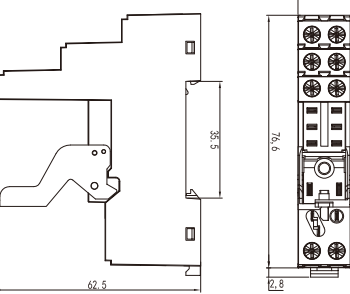
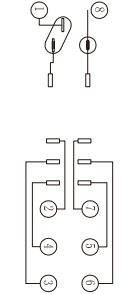
- 体积小, 节省空间  
Small size, save space
- 带手指保护功能  
With Finger protection
- PCB式、螺钉式、导轨式安装形式可供选择  
PCB type, screw type, DIN rail mounting form are available
- 多款插入式模块可供选择, 实现通电指示, 线路保护功能  
A variety of plug-in modules are available to realize power-on indication and line protection functions
- 可选配件: 卡簧、标记牌、插入式模块  
Optional accessories: circlips, marker plates, plug-in modules
- 外壳采用PA66+G20环保阻燃尼龙  
The shell adopts PA66+G20 environmentally friendly flame retardant nylon


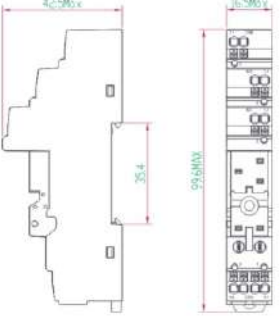


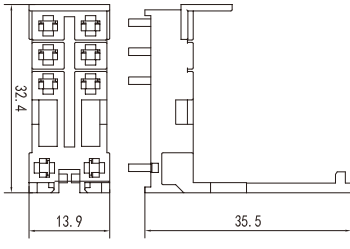
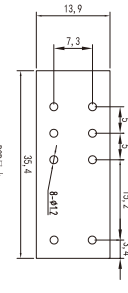

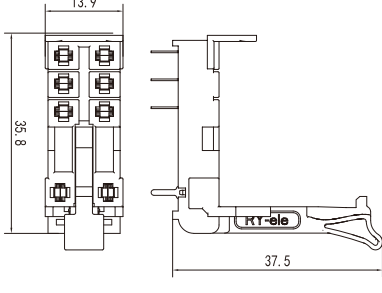
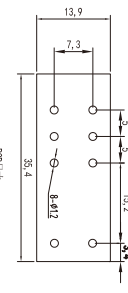
## 性能参数 Performance Parameters

| 型号<br>Model | 额定电压<br>Rated Voltage | 额定电流<br>Rated Current | 环境温度<br>Ambient Temperature | 介质耐压<br>Dielectric Strength | 插拔寿命<br>Plug-in life | 螺钉扭矩<br>Screw Torque | 外接导线<br>Size Of Wire | 插片材料<br>Insert material | 重量<br>Weight |
|-------------|-----------------------|-----------------------|-----------------------------|-----------------------------|----------------------|----------------------|----------------------|-------------------------|--------------|
| RY2S-05B    | 250VAC                | 8A                    | -35°C~70°C                  | 2000VAC                     | 10000                | 0.8-1.0N.m           | 7mm                  | 磷铜                      | 约29.7g       |
| RY2S-08E    | 250VAC                | 8A                    | -35°C~70°C                  | 2000VAC                     | 10000                | 0.8-1.0N.m           | 7mm                  | 磷铜                      | 约28.38g      |
| 14F-2Z-C5   | 250VAC                | 8A                    | -35°C~70°C                  | 2000VAC                     | 10000                | 0.8-1.0N.m           | 7mm                  | 磷铜                      | 约46.42g      |
| RY2S-05PU   | 250VAC                | 8A                    | -35°C~70°C                  | 2000VAC                     | 10000                | -                    | -                    | 磷铜                      | 约41.01g      |
| SJ2S-61     | 250VAC                | 8A                    | -35°C~70°C                  | 2000VAC                     | 10000                | -                    | -                    | 磷铜                      | 约4.07g       |
| 2S-61-S     | 250VAC                | 8A                    | -35°C~70°C                  | 2000VAC                     | 10000                | -                    | -                    | 磷铜                      | 约4.72g       |

## 外形图、接线图, 安装孔尺寸 Outline drawing, wiring diagram, mounting hole size

单位: mm

| 底座<br>Base   | 外形尺寸<br>Form Factor   | 接线图<br>Wiring Diagram   | 可选配件<br>Optional Accessories  |
|--|---|---|---|
| <p>RY2S-05B</p>   |  |  | <p>连接条 ES-10-16H(蓝blue)<br/>ES-10-16HR(红Red)<br/>ES-10-16HB(黑black)</p> |
| <p>RY2S-08E</p>   |  |  | <p>连接条 ES-10-16H(蓝blue)<br/>ES-10-16HR(红Red)<br/>ES-10-16HB(黑black)</p> |
| <p>14F-2Z-C5</p>  |  |  |   |

| 底座<br>Base  | 外形尺寸<br>Form Factor  | 接线图<br>Wiring Diagram  | 可选配件<br>Optional Accessories |
|---|--|--|------------------------------|
| <p>RYS-05PU</p>  |   |   |                              |
| <p>SJ2S-61</p>   |   |   |                              |
| <p>2S-61-S</p>  |  |  |                              |

相关配件可选 Related accessories are available

单位: mm

连接条 Connection Strips

