

CX92F系列 Seris

小型大功率继电器  
Small high power relay



- 产品特点Product Features:
- 30A触点切换能力  
30A contact switching capability
  - 触点与线圈间耐压为4KV,爬电距离为8mm  
The contact and coil withstand voltage is 4KV,and the creepage distance is 8mm
  - 具有两组常开、两组转换触点形式  
With two sets of normally open and two sets of switching contact forms
  - 具有印制板式和面板式两种安装形式  
Available in both printed board and panel installation forms
  - 塑封型和防尘罩型可供选择  
plastis sealing type and anti flux type are optional

| 触点负载 Contact Rating                       |                                                                                                                                                                                          |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 触点形式<br>contact form                      | 2A 2C                                                                                                                                                                                    |
| 触点材料<br>contact material                  | Silver alloy                                                                                                                                                                             |
| 额定负载(阻性)<br>Rated load (Resistance)       | NO:30A 250VAC, 30A 277VAC<br>NC:3A 250VAC, 3A 277VAC                                                                                                                                     |
| 最大切换电压<br>Max. switching Voltage          | 277VAC                                                                                                                                                                                   |
| 最大切换电流<br>Max. switching Current          | 30A                                                                                                                                                                                      |
| 最大切换功率<br>Max. switching power            | 8310VA                                                                                                                                                                                   |
| 机械耐久性Mechanical                           | 5×10 <sup>6</sup> 次                                                                                                                                                                      |
| 电耐久性<br>Electrical durability             | 5×10 <sup>4</sup> 次 (NO:30A 277VAC, 阻性负载<br>Resistive load<br>室温Room temperature, 1s ON/9s OFF)<br>5×10 <sup>4</sup> 次 (NC:3A 277VAC, Resistiveload<br>室温Room temperature, 1s ON/9s OFF) |
| 接触电阻 <sup>(1)</sup><br>Contact Resistance | ≤50mΩ (1A 24VDC)                                                                                                                                                                         |

备注: 备注: 1. 上述值为初始值  
2. 对于塑封型产品试验时, 应打开外壳上的透气孔  
1.remarks:The above values are initial values  
2. When experimenting with plastic encapsulated products,the vent holes on the housing should be opened

| 性能参数Performance Parameter             |                                  |                                                                            |
|---------------------------------------|----------------------------------|----------------------------------------------------------------------------|
| 绝缘电阻<br>Insulation resistance         |                                  | 1000MΩ (500VDC)                                                            |
| 吸合时间 (额定电压下)<br>Operate Time          |                                  | ≤25ms (直流型DC type)                                                         |
| 释放时间 (额定电压下)<br>Release Time          |                                  | ≤25ms (直流型DC type)                                                         |
| 介质耐压<br>Dielectric Strength           | 断开的触点间BOC                        | 1500VAC 1Min                                                               |
|                                       | 触点与线圈间BCC                        | 4000VAC 1Min                                                               |
|                                       | 触点组间<br>Between contact circrits | 2000VAC 1Min                                                               |
| 浪涌电压 (线圈与触点间)<br>Surge voltage (BCC)  |                                  | 10KV (1.2/50us)                                                            |
| 线圈温升 (额定电压下)<br>coil temperature rise |                                  | ≤90K                                                                       |
| 抗振动<br>Anti vibration                 |                                  | 10Hz-55Hz 1.65mm双振幅                                                        |
| 抗冲击<br>Shock resistance               |                                  | 稳定性Error Operation: 98m/S <sup>2</sup><br>强度Endurance: 980m/S <sup>2</sup> |
| 环境温度<br>ambient temperature           |                                  | 交流型 (AC type): -40℃~65℃<br>直流型 (DC type): -40℃~85℃                         |
| 湿度范围humidity                          |                                  | 5~85%RH<br>不结冰 (no freezing)                                               |
| 引出端形式<br>Terminal style               |                                  | PCB式、快连接式<br>PCB terminal, socket terminal                                 |
| 封装方式Type of Sealing                   |                                  | 塑封型、防焊剂型<br>Plastic sealed type、<br>Solder resist type                     |
| 重量Weight                              |                                  | 约:75g                                                                      |

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线圈参数Coil Specification (at 23 °C)

直流型 (DC type)约: 1.7W

| 规格<br>代号 | 额定电压<br>Nominal Voltage<br>(VDC) | 线圈电阻<br>Coil Resistance<br>( $\Omega \pm 10\%$ ) | 吸合电压 (VDC) <sup>(1)</sup><br>Pull-In Voltage<br>(Max) | 释放电压 (VDC) <sup>(1)</sup><br>Drop-Out Voltage<br>(Min) | 最大电压 (VDC) <sup>(2)</sup><br>Maximum Voltage<br>(Max) |
|----------|----------------------------------|--------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------|
| 005D     | 5                                | $15 \times (1 \pm 10\%)$                         | $\leq 3.8$                                            | $\geq 0.5$                                             | 8.0                                                   |
| 006D     | 6                                | $21 \times (1 \pm 10\%)$                         | $\leq 4.5$                                            | $\geq 0.6$                                             | 9.6                                                   |
| 012D     | 12                               | $85 \times (1 \pm 10\%)$                         | $\leq 9$                                              | $\geq 1.2$                                             | 19.2                                                  |
| 024D     | 24                               | $339 \times (1 \pm 10\%)$                        | $\leq 18$                                             | $\geq 2.4$                                             | 38.4                                                  |
| 048D     | 48                               | $1355 \times (1 \pm 10\%)$                       | $\leq 36$                                             | $\geq 4.8$                                             | 76.8                                                  |
| 110D     | 110                              | $7117 \times (1 \pm 10\%)$                       | $\leq 82.5$                                           | $\geq 11$                                              | 176                                                   |

交流型 (AC type)约: 4.0VA 50Hz

| 规格<br>代号 | 额定电压<br>Nominal Voltage<br>(VAC) | 线圈电阻<br>Coil Resistance<br>( $\Omega \pm 10\%$ ) | 吸合电压 (VAC) <sup>(1)</sup><br>Pull-In Voltage<br>(Max) | 释放电压 (VAC) <sup>(1)</sup><br>Drop-Out Voltage<br>(Min) | 最大电压 (VAC) <sup>(2)</sup><br>Maximum Voltage<br>(Max) |
|----------|----------------------------------|--------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------|
| 024A5    | 24                               | $45 \times (1 \pm 10\%)$                         | $\leq 19.2$                                           | $\geq 4.8$                                             | 26.4                                                  |
| 120A5    | 120                              | $1125 \times (1 \pm 10\%)$                       | $\leq 96$                                             | $\geq 24$                                              | 132                                                   |
| 208A5    | 208                              | $3278 \times (1 \pm 10\%)$                       | $\leq 166.4$                                          | $\geq 41.6$                                            | 229                                                   |
| 220A5    | 220                              | $3800 \times (1 \pm 10\%)$                       | $\leq 176$                                            | $\geq 44$                                              | 242                                                   |
| 240A5    | 240                              | $4500 \times (1 \pm 10\%)$                       | $\leq 192$                                            | $\geq 48$                                              | 264                                                   |
| 277A5    | 277                              | $5960 \times (1 \pm 10\%)$                       | $\leq 221.6$                                          | $\geq 55.4$                                            | 305                                                   |

交流型 (AC type)约: 4.0VA 60Hz

| 规格<br>代号 | 额定电压<br>Nominal Voltage<br>(VAC) | 线圈电阻<br>Coil Resistance<br>( $\Omega \pm 10\%$ ) | 吸合电压 (VAC) <sup>(1)</sup><br>Pull-In Voltage<br>(Max) | 释放电压 (VAC) <sup>(1)</sup><br>Drop-Out Voltage<br>(Min) | 最大电压 (VAC) <sup>(2)</sup><br>Maximum Voltage<br>(Max) |
|----------|----------------------------------|--------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------|
| 024A6    | 24                               | $35.7 \times (1 \pm 10\%)$                       | $\leq 19.2$                                           | $\geq 4.8$                                             | 26.4                                                  |
| 120A6    | 120                              | $830 \times (1 \pm 10\%)$                        | $\leq 96$                                             | $\geq 24$                                              | 132                                                   |
| 208A6    | 208                              | $2600 \times (1 \pm 10\%)$                       | $\leq 166.4$                                          | $\geq 41.6$                                            | 229                                                   |
| 220A6    | 220                              | $2870 \times (1 \pm 10\%)$                       | $\leq 176$                                            | $\geq 44$                                              | 242                                                   |
| 240A6    | 240                              | $3800 \times (1 \pm 10\%)$                       | $\leq 192$                                            | $\geq 48$                                              | 264                                                   |
| 277A6    | 277                              | $4700 \times (1 \pm 10\%)$                       | $\leq 221.6$                                          | $\geq 55.4$                                            | 305                                                   |

交流型 (AC type) 50Hz/60Hz

| 规格<br>代号 | 额定电压<br>Nominal Voltage<br>(VAC) | 线圈电阻<br>Coil Resistance<br>( $\Omega \pm 10\%$ ) | 吸合电压 (VAC) <sup>(1)</sup><br>Pull-In Voltage<br>(Max) |              | 释放电压 (VAC) <sup>(1)</sup><br>Drop-Out Voltage<br>(Min) |             | 最大电压 (VAC) <sup>(2)</sup><br>Maximum Voltage<br>(Max) |
|----------|----------------------------------|--------------------------------------------------|-------------------------------------------------------|--------------|--------------------------------------------------------|-------------|-------------------------------------------------------|
|          |                                  |                                                  | 50Hz                                                  | 60Hz         | 50Hz                                                   | 60Hz        |                                                       |
| 120A     | 120                              | $950 \times (1 \pm 10\%)$                        | $\leq 88$                                             | $\leq 96$    | $\geq 22$                                              | $\geq 24$   | 132                                                   |
| 208A     | 208                              | $2841 \times (1 \pm 10\%)$                       | $\leq 160$                                            | $\leq 166.4$ | $\geq 40$                                              | $\geq 41.6$ | 229                                                   |
| 240A     | 240                              | $3800 \times (1 \pm 10\%)$                       | $\leq 176$                                            | $\leq 192$   | $\geq 44$                                              | $\geq 48$   | 264                                                   |
| 277A     | 277                              | $5485 \times (1 \pm 10\%)$                       | $\leq 200$                                            | $\leq 221.6$ | $\geq 50$                                              | $\geq 55.4$ | 305                                                   |

备注: 1. 上述值为初始值remarks:The above values are initial values

2. 最大电压是指继电器线圈在短时间内能够承受的最大值

The maximum voltage refers to the maximum value that the relay coil can withstand in a short time

CX92F系列 Series

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订货标记Ordering Information

|                                             |  |                                                                                                                                                                                     |       |                               |   |   |     |
|---------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------|---|---|-----|
| 继电器型号<br>Relay model                        |  | CX92F                                                                                                                                                                               | -012D | -2C                           | 2 | F | XXX |
| 线圈规格号<br>Coils specifications               |  | XXXD:DC (5, 6, 12, 24, 48, 110VDC)<br>XXXA5:AC 50Hz (24, 120, 208, 220, 240, 277VDC)<br>XXXA6:AC 60Hz (24, 120, 208, 220, 240, 277VDC)<br>XXXA:AC 50Hz/60Hz (120, 208, 240, 277VDC) |       |                               |   |   |     |
| 触点形式 <sup>(1)</sup><br>Contact form         |  | 2A两组常开<br>SPDT-no 2form A                                                                                                                                                           |       | 2C两组转换<br>SPDT 2form C        |   |   |     |
| 引出端形式<br>Terminal style                     |  | 1. PCB 型<br>PCB terminal                                                                                                                                                            |       | 2. 快连接式<br>quick-connect type |   |   |     |
| 封装方式 <sup>(2)</sup><br>Type of Sealing      |  | F: 防焊剂型<br>solderresist type                                                                                                                                                        |       | S: 塑封型<br>Plastic sealed type |   |   |     |
| 特性号 <sup>(3)</sup><br>Characteristic number |  | XXX: 客户特殊要求    无: 标准型<br>XXX: Customer specific requirements    None: standard type                                                                                                 |       |                               |   |   |     |

备注:

- 对于快连接式引出端形式，不允许焊接和整体清洗，对于印制板式引出端形式，当继电器装入PCB板焊接后，如需进行整体清洗或表面处理，请联系我司，以便商定合适的焊接条件、合适的产品规格。
- 在洁净环境（不含H<sub>2</sub>S、SO<sub>2</sub>、NO<sub>2</sub>、粉尘等污染物）下使用时，推荐使用防焊剂型产品  
在污染环境（含一定量的H<sub>2</sub>S、SO<sub>2</sub>、NO<sub>2</sub>粉尘等污染物）下使用时建议选用塑封产品，并请在实际使用中进行确认。
- 客户特殊要求由我司评审后，按特性号的形式标识。

remarks:

- For the quick connect type lead out form, welding and overall cleaning are not allowed. For the printed board type lead out form, if the relay needs to be cleaned or surface treated after being welded into the PCB board, please contact the company to agree on suitable welding conditions and product specifications.
- When using in clean environment (without H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust and other pollutants), it is recommended to use flux resistant products. When using in polluted environment (with a certain amount of H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust and other pollutants), it is recommended to use plastic encapsulated products. please confirm in actual use.
- Special customer requirements will be identified in the form of characteristic numbers after our company's review.

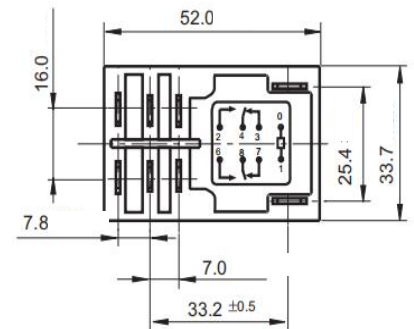
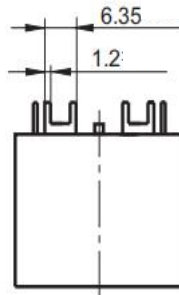
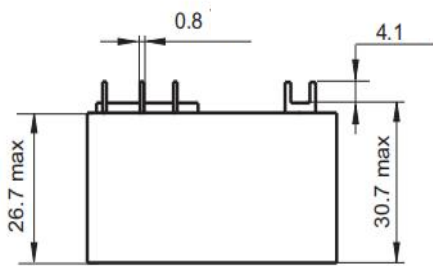
外形尺寸、接线、安装孔位图

Overall dimension, wiring and installation hole bitmap

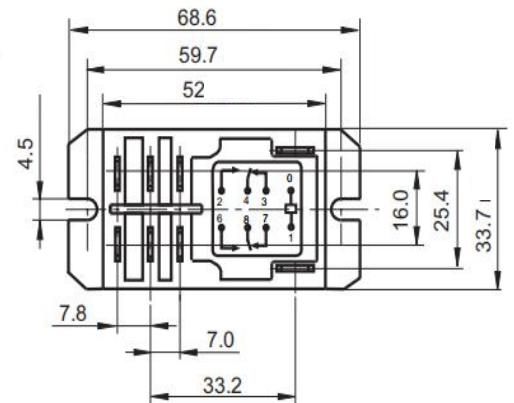
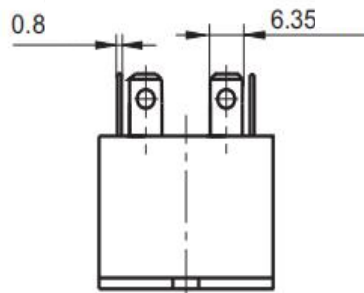
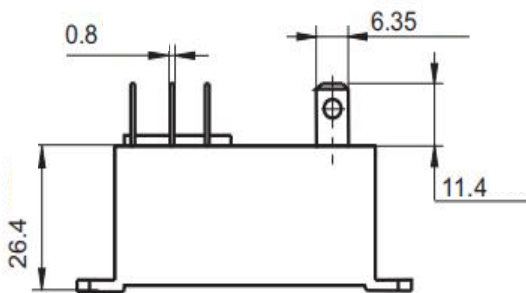
外形尺寸

Outline Dimensions

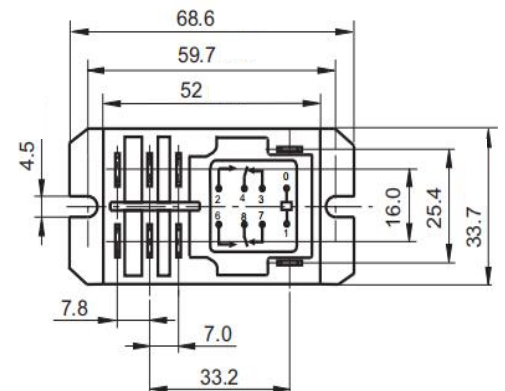
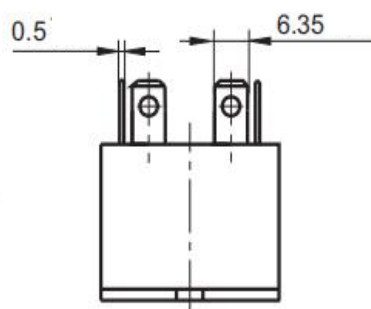
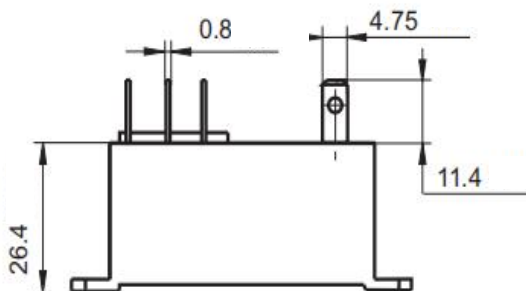
1型 (PCB引出脚)



2型 (QC引出脚)



3型 (QC引出脚)

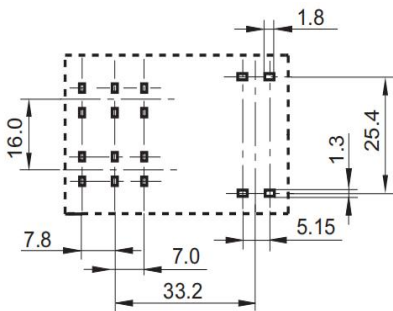


## 外形尺寸、接线、安装孔位图

### Overall dimension, wiring and installation hole bitmap

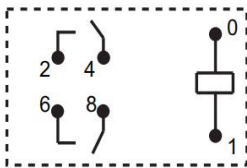
安装孔位图(底视图)

PCB Layout (Bottom view)

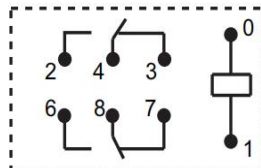


接线图(底视图)

Wiring Diagram  
(Bottom view)



两组常开2A



两组转换2C

#### 备注:

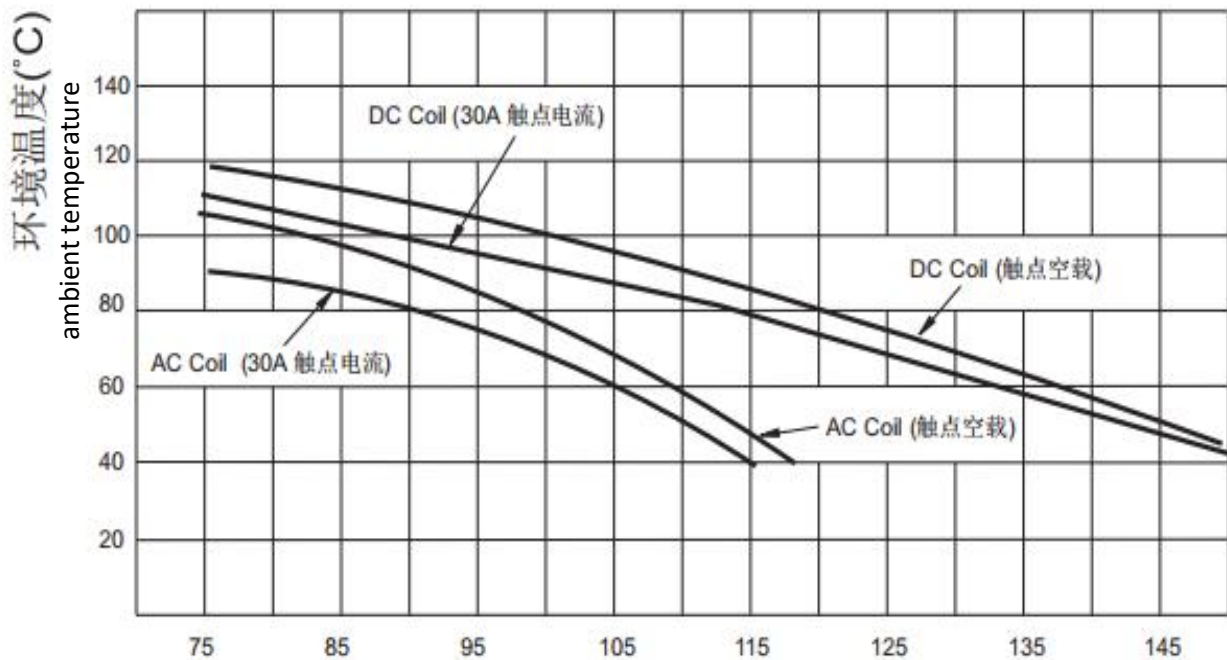
1. 产品外形图的引脚标注尺寸为沾锡前尺寸（沾锡后会变大），安装孔尺寸为推荐的PCB板孔的设计尺寸，具体PCB板孔设计尺寸可根据产品实物进行测绘、调整。
2. 产品部分外形尺寸未注尺寸公差，当外形尺寸 $\leq 1\text{mm}$ ，公差为 $\pm 0.2\text{mm}$ ；当外形尺寸在 $(1\sim 5)\text{mm}$ 之间时，公差为 $\pm 0.3\text{mm}$ ；当外形尺寸 $> 5\text{mm}$ ，公差为 $\pm 0.4\text{mm}$ 。
3. 安装孔尺寸中未注尺寸公差为 $\pm 0.1\text{mm}$ 。

#### DISCLAIMER:

1. The pin dimension in the outline drawing or the product is the dimension before dipping tin (It gets bigger when stained with tin). The size of mounting hole is the recommended design size of PCB hole. The specific PCB hole design size can be mapped and adjusted according to the actual product.
2. The overall dimension of the product if not marked with dimensional tolerance, when the overall dimension  $\leq 1\text{mm}$ , Tolerance is  $\pm 0.2\text{mm}$ . When the overall dimension is  $(1\sim 5)\text{mm}$ , Tolerance is  $\pm 0.3\text{mm}$ . When the overall dimension  $> 5\text{mm}$ , Tolerance is  $\pm 0.4\text{mm}$ .
3. The dimension tolerance of mounting hole without dimension injection is  $\pm 0.1\text{mm}$ .

## 最大允许环境温度曲线

Maximum allowable ambient temperature curve



线圈额定电压百分比

Percentage of rated voltage of coil

### 备注:

具体参数型号和产品性能以我司承认书为准，本产品规格书仅作参考，若有更改，恕不另行通知。

对科信而言，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。若有疑问，请与科信联系 以便获取更多的技术支持。但产品选型责任仅由客户负责。

### DISCLAIMER:

The specific parameters, models, and product performance shall be subject to our company's acceptance letter. This product specification sheet is for reference only and is subject to change without prior notice.

For AFE, it is not possible to assess all performance requirements for relays in each specific application area and therefore the customer should select a suitable product for each specific application, please contact AFE for additional technical support. But the responsibility of product selection is only the responsibility of the customer.