

# 产品规格书

## Product Specification

www.chinaketai.com

文件编号 File No.:

客户 Customer : \_\_\_\_\_

客户零件号 Customer Part No. : \_\_\_\_\_

科泰产品名称 Ketai Roduct Name : \_\_\_\_\_

科泰产品料号 Ketai Product Part No.: \_\_\_\_\_

发布日期 Release Date: \_\_\_\_\_

版本 Version: \_\_\_\_\_

| 科泰审批签字<br>Signature by Ketai |             |            | 客户回签或盖章<br>Customer's countersignature<br>or seal |
|------------------------------|-------------|------------|---------------------------------------------------|
| 批准<br>Approved               | 审核<br>Check | 编制<br>Make | 负责人 By:<br><br>日期 Date:                           |
| 谢云                           | 骆海辉         | 黄威         |                                                   |

别说明：此确认书请顾客在 2 周内确认，如未在规定时间内答复，则视为同意。

Especially claim: This specification should be checked in 2 weeks, if had not answered in the scheduled time ,then regards as the agreement.

变更履历 Revision Record

|                    |                     |                                   |              |           |
|--------------------|---------------------|-----------------------------------|--------------|-----------|
| 顾客<br>Customer     |                     | 产品型号: _____<br><br>Part No. _____ |              |           |
| 变更版<br>Version No. | 变更日期<br>Change Date | 变更内容<br>Description               | 原因<br>Reason | 负责人<br>By |
|                    |                     |                                   |              |           |
|                    |                     |                                   |              |           |
|                    |                     |                                   |              |           |
|                    |                     |                                   |              |           |

## 产品规格确认书 Relay Specification for approval

### 1' 构造 Type Model

1.1 品名 Type: KT152

1.2 外形尺寸 Outline: 21×16×20.8mm

1.3 触点形式 Contact Arrangement: 一组常开型 1 Form A ; 一组转换型 1 Form C

1.4 触点材质 Contact Material: 银合金 Silver alloy

### 2' 安全认证 Safety Approval

|                         |     |     |    |
|-------------------------|-----|-----|----|
| 安全认证<br>Safety approval | CQC | TUV | UL |
| 证书号 File No.            |     |     |    |

上述认证号代表该产品取得相关认证，但具体认证内容请以我公司提交的认证证书为准。

The above certificate No.is just a license No. Please refer to the certificates we supplied for detail information.

### 3' 线圈额定参数 Coil Rating

at 23°C

| 额定电压<br>Nominal<br>Voltage (Vd.c) | 动作电压<br>Pick-up<br>Voltage(Vd.c.) | 释放电压<br>Drop-out<br>Voltage(Vd.c.) | *允许最大线圈电压<br>Max. Allowable<br>Voltage(Vd.c.) | 线圈电阻<br>Coil Resistance<br>(Ω)±10% | 线圈功耗<br>Coil Power |
|-----------------------------------|-----------------------------------|------------------------------------|-----------------------------------------------|------------------------------------|--------------------|
| 3                                 | 75%                               | 10%                                | 90~130%                                       | 25                                 | About 0.36W        |
| 5                                 |                                   |                                    |                                               | 69.5                               |                    |
| 6                                 |                                   |                                    |                                               | 100                                |                    |
| 9                                 |                                   |                                    |                                               | 225                                |                    |
| 12                                |                                   |                                    |                                               | 400                                |                    |
| 24                                |                                   |                                    |                                               | 1600                               |                    |

| 额定电压<br>Nominal<br>Voltage (Vd.c) | 动作电压<br>Pick-up<br>Voltage(Vd.c.) | 释放电压<br>Drop-out<br>Voltage(Vd.c.) | *允许最大线圈电压<br>Max. Allowable<br>Voltage(Vd.c.) | 线圈电阻<br>Coil Resistance<br>(Ω)±10% | 线圈功耗<br>Coil Power |
|-----------------------------------|-----------------------------------|------------------------------------|-----------------------------------------------|------------------------------------|--------------------|
| 3                                 | 75%                               | 10%                                | 90~130%                                       | 20                                 | About 0.45W        |
| 5                                 |                                   |                                    |                                               | 55.6                               |                    |
| 6                                 |                                   |                                    |                                               | 80                                 |                    |
| 9                                 |                                   |                                    |                                               | 180                                |                    |
| 12                                |                                   |                                    |                                               | 320                                |                    |
| 24                                |                                   |                                    |                                               | 1280                               |                    |

\*最大容许电压为继电器线圈能够施加的电压的最大值，仅为短时间过载，不允许长时间施加。

Note: Max.allowable voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

#### 4' 开关部/CONTACT SPECIFICATION

|     |                                |                                                                 |
|-----|--------------------------------|-----------------------------------------------------------------|
| 4.1 | 开关类型<br>Contact Configuration  | 一组常开型，一组转换型，<br>1 Form A, 1 Form C,                             |
| 4.2 | 接点规格<br>Contact Rating         | 17A/20A 250VAC/30VDC (阻性负载)<br>17A/20A 250VAC/30VDC (Resistive) |
| 4.3 | 最大切换电流<br>Max. Contact Current | 20A                                                             |
| 4.4 | 最大切换电压<br>Max. Contact Voltage | 270VAC / 30VDC                                                  |
| 4.5 | 接触电阻<br>Contact Resistance     | 100mΩ 以下，DC 6V/1A<br>100mΩ Max. DC 6V/1A                        |
| 4.6 | 吸合时间<br>Operate Time           | 10ms 以下 (额定电压下)<br>10ms Max. ( Rated Voltage)                   |
| 4.7 | 释放时间<br>Release Time           | 10ms 以下 (施加额定电压后断开时)<br>10ms Max. (Rated Voltage)               |
| 4.8 | 最大动作频率<br>Max. Switching Rate  | 300 次/分 (无负载)<br>300 ops./min. (No load).                       |
|     |                                | 6 次/分 (额定负载)<br>6 ops./min. (Rated load)                        |

## 5' 特性/GENERAL SPECIFICATION

|      |                               |                                  |                                                                                                                                       |
|------|-------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 5.1  | 绝缘电阻<br>Insulation Resistance |                                  | 1000MΩ以上 (500VDC)<br>1000MΩ Min(500VDC)                                                                                               |
| 5.2  | 介质耐压<br>Dielectric Strength   |                                  | 750VAC/分钟(接点间)<br>750VAC/ min.(Between Open Contacts)<br>4000VAC/分钟(线圈/接点间)<br>4000VAC/min.(Between Coil and Contacts)                |
| 5.3  | 温升<br>Temperature rise        | 线圈(Coil)                         | 阻性法, 线圈加额定电压触点电流: 0.1A 温度 $\leq$ △50℃。<br>△50℃ Max.by resistance method at Ccontact:0.1A,Coil: rated voltage                          |
|      |                               | 触点(CContact):                    | 测温法, 线圈加额定电压触点电流: 17A 温度 $\leq$ △50℃。<br>△50℃ Max .by temperature measuring method at Contact:17A,Coil: rated voltage                 |
| 5.4  | 电气寿命<br>Electrical Life       |                                  | 1X10 <sup>5</sup> 次以上 (负载: 17A 250VAC)<br>1X10 <sup>5</sup> Cycle Min. ( load: 17A 250VAC)                                            |
| 5.5  | 机械寿命<br>Mechanical Life       |                                  | 1X10 <sup>6</sup> 次以上 (无负载)<br>1X10 <sup>6</sup> Cycle Min. (No load)                                                                 |
| 5.6  | 使用环境温度<br>Temperature         |                                  | -40~105℃ (无凝结时)<br>-40~105℃ (No condensation)                                                                                         |
| 5.7  | 使用环境湿度<br>Humidity            |                                  | 20~85% RH (无凝结时)<br>20~85% RH (No condensation)                                                                                       |
| 5.8  | 抗振动<br>Vibration              | 耐久<br>Mechanical                 | 10 ~ 55Hz, 双振幅 1.5mm<br>10 ~ 55Hz, 1.5mm double amplitude                                                                             |
|      |                               | 误动作<br>Operational               | 10 ~ 55Hz, 双振幅 1.5mm<br>10 ~ 55Hz, 1.5mm double amplitude                                                                             |
| 5.9  | 抗冲击<br>Shock                  | 耐久<br>Mechanical                 | 980m/s <sup>2</sup> Min (约 100G)<br>980m/s <sup>2</sup> Min (About 100G )                                                             |
|      |                               | 误动作<br>Operational               | 98m/s <sup>2</sup> Min (约 10G)<br>98m/s <sup>2</sup> Min (About 10G )                                                                 |
| 5.10 | 端子性能<br>Terminal characte     | 端子强度<br>Terminals strength       | 5 牛/10 秒, 任意方向静态压力, 无异常. (但端子弯曲可以)<br>5N 10s,There shall be no abnormalities. ((The curving of the terminal shall be acceptable)      |
| 5.11 | rsitics                       | 可焊性<br>Terminal solderbility     | 260±5℃ 5s, 端子头部 3mm 部分 90%以上的面积有锡覆盖 (无铅焊锡)<br>260±5℃ 5s, In Case of lead lead free solder,90% of the dipped portion shall be solderd. |
| 5.12 |                               | 耐热性<br>Soldering Heat Resistance | 5s @ 260℃,端子头部 3mm 浸入锡中, 无异常发生<br>5s @ 260℃,There shall be no abnormalities. (wave soldering)                                         |

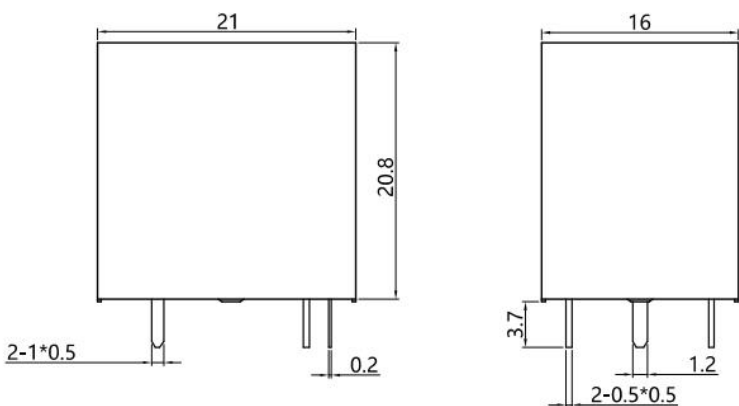
|      |                        |                                                                                                                              |
|------|------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 5.13 | 焊锡条件<br>Solder ability | 5s±0.5s @ 260°C (波峰焊)<br>5s±0.5s @ 260°C (wave soldering)                                                                    |
| 5.14 | 耐 温 性<br>Temperature   | 耐寒<br>Cold Resistance<br>-40±2°C, 16h, 恢复常温 2h, 无异常发生<br>-40±2°C, 16h, Room Temperature:2h, There shall be no abnormalities. |
| 5.15 | Resistance             | 耐热<br>Heat Resistance<br>105±5°C, 16h, 恢复常温 2h, 无异常发生<br>105±5°C, 16h, Room Temperature:2h, There shall be no abnormalities. |
| 5.16 | 重量<br>Weight           | 约 12.5 克<br>About 12.5g                                                                                                      |

## 6' 订货标记/Ordering Information

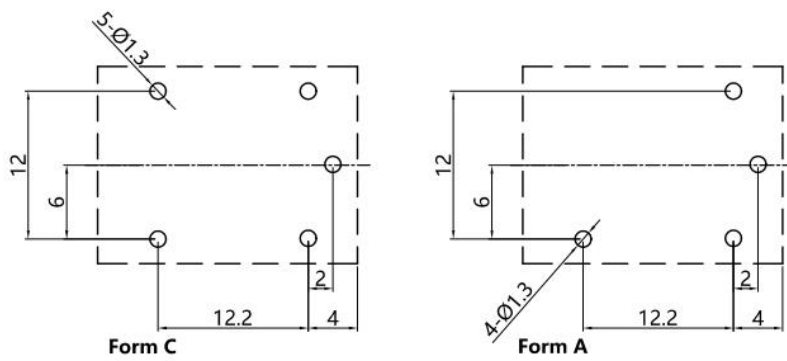
|                                                                     |              |            |           |          |          |           |            |
|---------------------------------------------------------------------|--------------|------------|-----------|----------|----------|-----------|------------|
|                                                                     | <b>KT152</b> | <b>- 1</b> | <b>24</b> | <b>D</b> | <b>M</b> | <b>-S</b> | <b>XXX</b> |
| 产品型号 Model designation: KT152                                       |              |            |           |          |          |           |            |
| 接点组数 Number of poles: 1 : 1 组 (1 pole)                              |              |            |           |          |          |           |            |
| 线圈电压 Coil voltage : 24:24VDC (参考线圈参数表 Refer to coil characters )    |              |            |           |          |          |           |            |
| 线圈功率 Coil Power : L : 0.36 ; D : 0.45W                              |              |            |           |          |          |           |            |
| 接点结构 Contact configuration: M 常开型 (Form A) , Z 转换型 (Form C)         |              |            |           |          |          |           |            |
| 密封类型 Sealing type : 无 None: 防尘型 Dust protected , S: 密封型 Sealed type |              |            |           |          |          |           |            |
| 特殊参数 Special request                                                |              |            |           |          |          |           |            |

## 7' 产品结构 Configuration

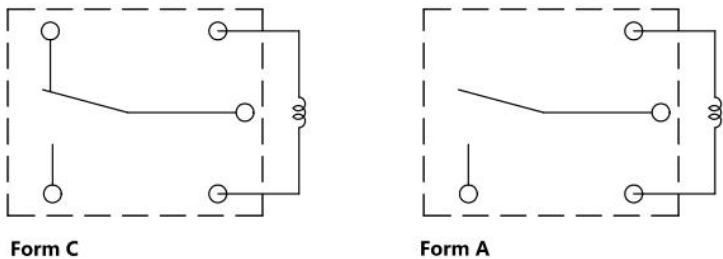
### 7.1 外形尺寸图/OUTLINE



### 7.2 安装孔尺寸图 (底视图) Mounting dimension(bottom view)

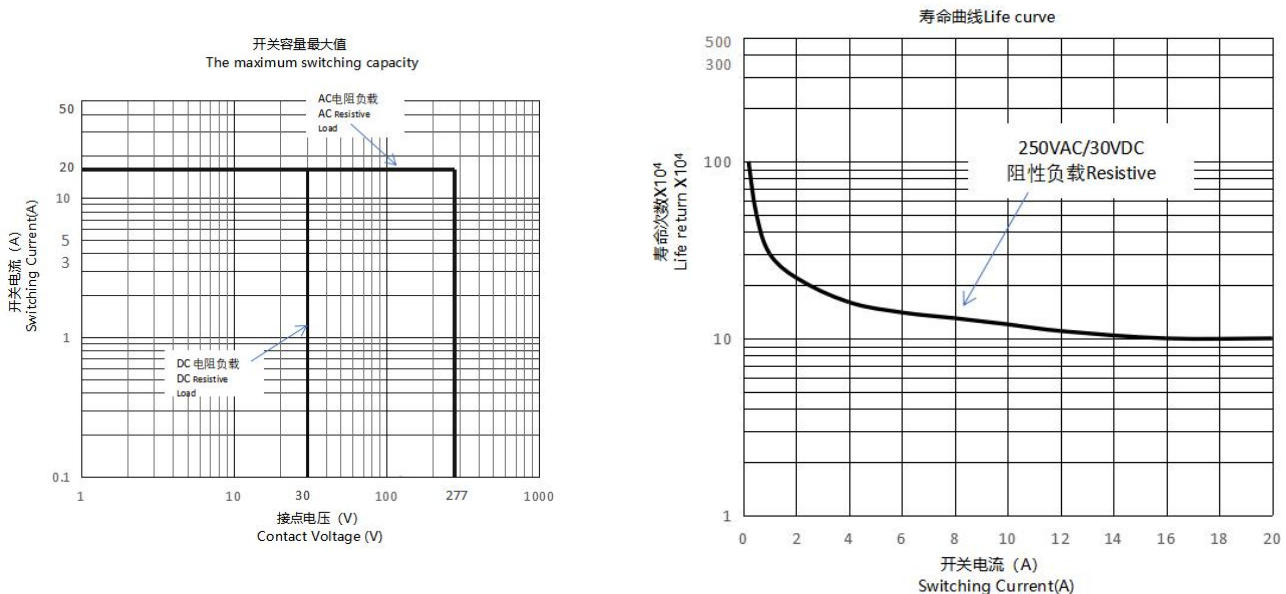


### 7.3 接线图 (底视图) Wiring diagram (bottom view)



| 产品部分外形尺寸未注尺寸公差<br>Outline dimensions with no<br>tolerance specified |                 |
|---------------------------------------------------------------------|-----------------|
| 外形尺寸<br>Outline Dimensions                                          | 公差<br>Tolerance |
| ≤1                                                                  | ±0.2            |
| > 1 ~ 5                                                             | ±0.3            |
| > 5                                                                 | ±0.4            |

## 8' 性能曲线图/Performance curves



## 9' 其它 Others

9.1 非塑封继电器需要防止助焊剂或污染物进入继电器。

Non-plastic sealed relays should prevent flux or contamination into the relay.

9.2 避免在强磁场条件下使用继电器，外界强磁场会造成继电器动作和释放等参数发生变化。

Avoid using relays in strong magnetic field because it will change the parameters of relay such as operate and release voltage

9.3 对科泰而言，不可能评定继电器在每个应用领域、应用环境的所有性能参数要求，因而，客户应根据具体的使用条件选择与之相匹配的产品，如有疑问，请与科泰联系获得更多的技术支持。但产品的选型责任仅由客户负责。

We could not evaluate all the performance and all the parameters for every possible application field and environment. Thus the user should be in a right position to choose the suitable produce for their own application. If there is any query, please contact Ketai for the technical service. However, it is the user's responsibility to determine which product should be used only.

9.4 本产品规格书中标称的使用环境温度范围指的是产品在特定负载条件下的最大耐受温度范围。对于防爆规格产品的使用环境温度按相应防爆认证证书的规定。

Operate temperature range in this specification refers to the maximum tolerable temperature range under specific load conditions. To explosion-proof product, the ambient temperature should conform to regulations in related explosion-proof certification.

9.5 继电器的电耐久性次数可能会因使用环境条件的不同而有差异。产品的电耐久性能详细情况见认证证书。本产品规格书中电耐久性所列的试验条件、触点负载可能未包含在认证证书中，当使用环境条件与认证条件不同时，电耐久性能需要由具体试验确认。

Differences in relay electrical endurance cycles would exist due to difference in operating ambient conditions. The electrical endurance of the products detailed in the safety certificates. The test condition and contact rating for electrical endurance in this specification may not be included in the safety certificates, in



case that the condition in real applications is different from safety certificates, the electrical endurance of the relay must be confirmed by tests

9.6 为了保持继电器的性能，请注意不要使继电器掉落或受到强冲击。建议掉落后的继电器报废。To maintain the performances of relays, please do not make the relay drop or be shocked strongly. Suggest that the relays dropped be scrapped.

9.7 规格书内的各项性能参数是基于标准测试条件下测得的初始值。

All the performance data listed in the datasheet are the initial values tested under standard testing condition.

9.8 请确保在继电器周围不存在硅系物质（如硅橡胶、硅油、硅系涂料剂、硅填充剂等），因为它们会产生含硅挥发气体，可能导致硅附着于继电器触点上，引起触点接触不良。

Please make sure that there is no silicon material around relay (Such as silicon rubber, silicon oil, silicon coating agent, silicon filler, etc), because silicon material produces silicon-containing volatile gases, silicon may be attached to relay contacts and result in bad contact

9.9 环保措施 Environmental Protection

产品均符合 RoHS 要求 Products are all RoHS compliant.

9.10 包装方式:Packing method \_\_\_\_\_ 装箱数量: Packing \_\_\_\_\_

9.11 事前协议事项 Priority Consultation

## 10' 生产批号说明 Production Batch Number Description

|              |        |        |            |
|--------------|--------|--------|------------|
| KT           | 25     | 2      | 1          |
| 铭牌 Nameplate | 年 year | 周 week | 星期一 Monday |