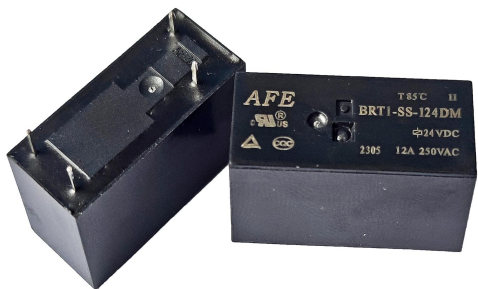


**BRT1系列 Seris**

**小型大功率继电器  
Small high power relay**



专利证书:ZL 2020 215857526

**产品特点**

- 高触点容量12A触点切换能力,产品类型结构为1A/1B/1C.  
High contact capacity12A contact switching capability,The product type structure is 1A/1B/1C
- 超小型 (29×12.9×15.6) 标准印刷版引出脚  
Subminiature(29×12.9×15.6)standad pinting plate lead out pin
- 满足TUV EN61810加强绝缘  
Meet TUV en61810 reinforced insulation
- 塑封型和防焊剂型可选择  
plastis sealing type and anti flux type are optional
- 选择耐高温环保材料, 更好的提高产品稳定性  
Select high temperature resistant and environment-friendly materials to better improe the stability of products
- 符合REACH ROHS 指令,耐压10KV浪涌电压  
Comply with reach RoHS Directive, Withstand voltage 10kV surge voltage
- BRT1系列产品浪涌电压为10000V  
The surge voltage of BRT1 series products is 10000V

| 触点负载 Contact Rating                 |                                                      |
|-------------------------------------|------------------------------------------------------|
| 触点形式<br>contact form                | 1A 1B 1C                                             |
| 触点材料<br>contact material            | 银合金 AgSn02                                           |
| 额定负载(阻性)<br>Rated load (Resistance) | 12A 250VAC<br>10A 30VDC                              |
| 最大切换电压<br>Max. switching Voltage    | 250VAC                                               |
| 最大切换电流<br>Max. switching Current    | 12A                                                  |
| 最大切换功率<br>Max.switching power       | 3000VA 300W                                          |
| 电耐久性<br>Electrical durability       | 5×10 <sup>4</sup> 次 12A 250VAC<br>阻性, 室温1S ON/9S OFF |
| 机械耐久性Mechanical                     | 1×10 <sup>7</sup> 次<br>每小时10800次                     |

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

**安规认证 Safety certification**

|                       |            |
|-----------------------|------------|
| UL/CUL<br>E333244     | 12A 250VAC |
| TUV<br>R50209295      | 12A 250VAC |
| CQC<br>CQC10002042508 | 12A 250VAC |

| 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         |              | ≤15ms                            |
| 释放时间 (额定电压下)<br>Release Time         |              | ≤8ms                             |
| 介质耐压<br>Dielectric Strength          | 断开的触点间BOC    | 1000VAC 50/60Hz 1分钟              |
|                                      | 触点与线圈间BCC    | 5000VAC 50/60Hz 1分钟              |
| 浪涌电压 (线圈与触点间)<br>Surge voltage (BCC) |              | 10KV (1.2/50us)                  |
| 湿度 humidity                          |              | 45%~85%RH                        |
| 温度范围Temperature Range                |              | -40℃~105℃ (不结冰)<br>(NO freezing) |
| 冲击<br>Shock                          | 稳定性<br>Error | 98.1m/s <sup>2</sup>             |
|                                      | 强度Endurance  | 981m/s <sup>2</sup>              |
| 接触电阻<br>Contact Resistance           |              | ≤100mΩ (1A 6VDC)                 |
| 振动vibration                          |              | 10Hz~55Hz 1.5mm双振幅               |
| 线圈温升<br>Coil temperature rise        |              | 55K Max                          |
| 封装方式Type of Sealing                  |              | 防焊剂型The flux type                |
| 重量Weight                             |              | 约13克<br>about13g                 |

**典型用途 Typical use**

- 工业控制、仪器仪表等。  
●Industrial control instruments and meters, etc
- 家用电器, 空调、洗衣机、微波炉、音响显示器等  
●Household appliances, air conditioner, audio display, etc

BRT1系列 Seris

小型大功率继电器  
Small high power relay

线圈参数Coil Specification (at 23 °C)

| 线圈灵敏度<br>Coil<br>sensitivity | 额定电压<br>Nominal<br>Voltage<br>(VDC) | 额定电流<br>Rated<br>current<br>(mA) | 线圈电阻<br>Coil<br>Resistance<br>( $\Omega \pm 10\%$ ) | 额定功率<br>Rated<br>power<br>(w) | 吸合电压<br>Pull-In Voltage<br>(Max) | 释放电压<br>Drop-Out<br>Voltage<br>(Min) | 最大电压<br>Maximum<br>Voltage<br>(Max) |
|------------------------------|-------------------------------------|----------------------------------|-----------------------------------------------------|-------------------------------|----------------------------------|--------------------------------------|-------------------------------------|
| BRT1-L<br>BRT1-LM            | 5                                   | 50                               | 100                                                 | 约0.25W<br>about               | 额定电压的<br>Rated voltage<br>75%    | 额定电压的<br>Rated<br>voltage<br>5%      | 额定电压的<br>Rated<br>voltage<br>130%   |
|                              | 6                                   | 41.7                             | 144                                                 |                               |                                  |                                      |                                     |
|                              | 9                                   | 27.7                             | 324                                                 |                               |                                  |                                      |                                     |
|                              | 12                                  | 20.8                             | 576                                                 |                               |                                  |                                      |                                     |
|                              | 24                                  | 10.4                             | 2304                                                |                               |                                  |                                      |                                     |
|                              | 48                                  | 5.2                              | 9216                                                |                               |                                  |                                      |                                     |
| BRT1-D<br>BRT1-DM            | 5                                   | 80                               | 62                                                  | 约0.4W<br>about                |                                  |                                      |                                     |
|                              | 6                                   | 66.6                             | 90                                                  |                               |                                  |                                      |                                     |
|                              | 9                                   | 44.4                             | 202                                                 |                               |                                  |                                      |                                     |
|                              | 12                                  | 33.3                             | 360                                                 |                               |                                  |                                      |                                     |
|                              | 24                                  | 16.6                             | 1440                                                |                               |                                  |                                      |                                     |
|                              | 48                                  | 8.3                              | 5760                                                |                               |                                  |                                      |                                     |

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

订货标记Ordering Information

|                      |                                                                                                |
|----------------------|------------------------------------------------------------------------------------------------|
| BRT1 - SS - 1 12 D M | 触点形式: M:常开型 NO<br>Contact form: B:常闭型 NC<br>无:转换型 CO                                           |
|                      | 线圈功耗: D:标准直流线圈<br>L:高灵敏度直流线圈<br>Coil power: D: Standard DC coil<br>L: High sensitivity DC coil |
|                      | 线圈电压: 05:5V,06:6V,09:9V<br>Coil oltage: 12:12V,24:24V,48:48V                                   |
|                      | 触点组数: 1:一组<br>Numbe of pole:1:1-One pole                                                       |
|                      | 密封方式: SS:防焊剂型<br>Type of sealing: SS:The flux type                                             |
|                      | 品名: BRT1<br>Model: BRT1                                                                        |

备注:

- 在洁净环境（不含H2S、SO2、NO2、粉尘等污染物）下使用时，推荐使用防焊剂型产品
- 在污染焊剂（含一定量的H2S、SO2、NO2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
- 当继电器装入PCB版焊接后，如需进行整体清洗或表面处理，请与我司联系，以便商定合适的焊接条件、合格的产品规格。

remarks:

- (1)When using in clean enbironment （without H2S SO2 NO2 dust and other pollutants),  
it is recommended to Use flux resistant products. When using in polluted environ ment(with a certain amount of H2SO2 NO2dust and other pollutants), it is recom mended to use plastic encapsulated products.please confirm in actu
- (2)After the relay is installed into the PCB board for welding, if it needs overall cleaning or surface treatment,  
please Contact me to negotiate the appropriate welding conditions and product specifications.

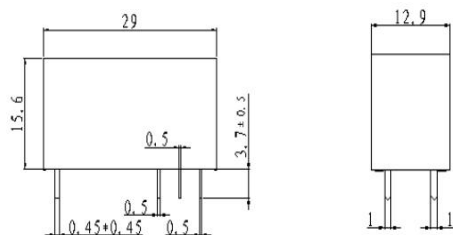
类型category

| 型号                        | BRT1                       |               |                                     |               |
|---------------------------|----------------------------|---------------|-------------------------------------|---------------|
| 线圈灵敏度<br>Coil sensitivity | 标准直流线圈<br>Standard DC coil |               | 高灵敏度直流线圈<br>High sensitivity DCcoil |               |
|                           | 1C                         | 1A            | 1C                                  | 1A            |
| 防焊剂型 The flux type        | BRT1-SS-1□□D               | BRT1-SS-1□□DM | BRT1-SS-1□□L                        | BRT1-SS-1□□LM |

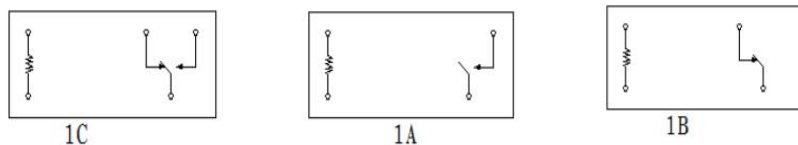
外形尺寸、接线、安装孔位图

Overall dimension,wiring and installation hole bitmap

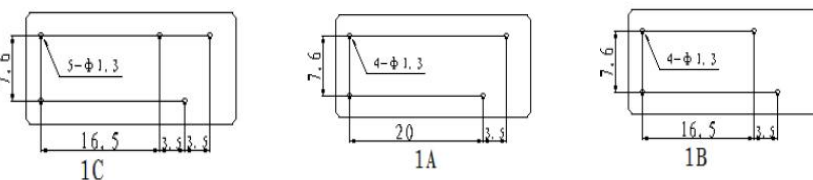
## 外形尺寸 Outline Dimensions



## 接线图(底视图) Wiring Diagram (Bottom view)



## 安装孔位图(底视图) PCB Layout (Bottom view)



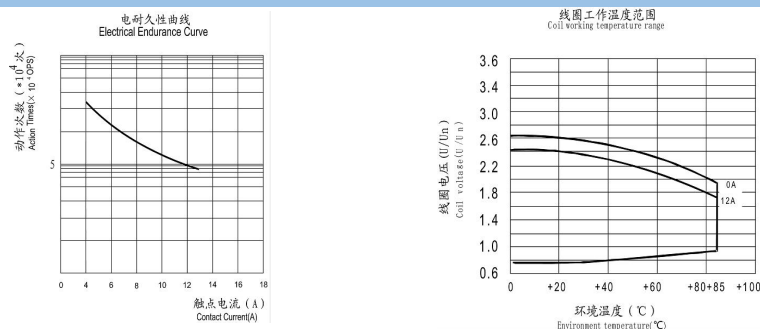
## 备注:

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  $(1\sim 5)\text{mm}$  Between 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  $\pm 0.1\text{mm}$

## 性能曲线图 Performance Curve



## 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.