

BRT3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16A触点切换能力,产品类型结构为1A/1B/1C.
High contact capacity 16A 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
- 体积小, 仅15.6mm高度,符合REACH ROHS 指令,
Small size, only 15.6mm high, Comply with reach RoHS Directive,
- 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
- 爬电距离达10mm, 耐压可达5000伏(线圈触点间) 耐压10KV浪涌电压
Creepage distance up to 10mm, withstand voltage up to 5000V(between coil contacts) withstand voltage 10KV surge voltage
- 多种触点形式可供选择
A variety of contact forms are available

触点负载 Contact Rating	
触点形式 contact form	1A 1B 1C
触点材料 contact material	银合金 AgSn02
额定负载(阻性) Rated load (Resistance)	1HP 250VAC 16A /8A 250VAC 1/2HP 125VAC 16A 30VDC
最大切换电压 Max. switching Voltage	250VAC/30VDC
最大切换电流 Max. switching Current	16A
最大切换功率 Max. switching power	4000VA/480W
电耐久性 Electrical durability	1A: 5×10 ⁴ 次 16A 250VAC 阻性, 室温1S ON/9S OFF 1C: 5×10 ⁴ 次 16A/8A 250VAC 阻性, 室温1S ON/9S OFF
机械耐久性Mechanical	1×10 ⁷ 次 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 E333244	16A/8A 250VAC 1HP 250VAC 1/2HP 125VAC
TUV R50209295 AK50493046	16A 250VAC
CQC CQC10002042508	16A 250VAC

性能参数Performance Parameter		
绝缘电阻 Insulation resistance		1000MΩ (500VDC)
吸合时间(额定电压下) Operate Time		≤15ms
释放时间(额定电压下) Release Time		≤8ms
介质耐压 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) Surge voltage(BCC)		10KV (1.2/50us)
湿度 humidity		5%~85%RH
温度范围Temperature Range		-40℃~105℃(不结冰) (NO freezing)
冲击 Shock	稳定性 Error	98.1m/s ²
	强度Endurance	981m/s ²
接触电阻 Contact Resistance		≤100mΩ (1A 6VDC)
振动vibration		10Hz~55Hz 1.5mm双振幅
线圈温升 Coil temperature rise		35℃ Max
封装方式Type of Sealing		防焊剂型The flux type
重量Weight		约13克 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

线圈参数Coil Specification (at 23 ℃)

线圈灵敏度 Coil sensitivity	额定电压 Nominal Voltage (VDC)	额定电流 Rated current (mA)	线圈电阻 Coil Resistance ($\Omega \pm 10\%$)	额定功率 Rated power (w)	吸合电压 Pull-In Voltage (Max)	释放电压 Drop-Out Voltage (Min)	最大电压 Maximum Voltage (Max)
BRT3-L BRT3-LM	5	50	100	约0.25W about	额定电压的 Rated voltage 75%	额定电压的 Rated voltage 5%	额定电压的 Rated voltage 130%
	6	41.7	144				
	9	27.7	324				
	12	20.8	576				
	18	13.8	1296				
	24	10.4	2304				
	48	5.2	9216				
BRT3-D BRT3-DM	5	80	62	约0.4W about			
	6	66.6	90				
	9	44.4	202				
	12	33.3	360				
	18	22.2	810				
	24	16.6	1440				
	48	8.3	5760				
BRT3-D BRT3-DM	5	106	47	约0.53W about			
	6	88	68				
	9	58	153				
	12	44	272				
	18	29.5	611				
	24	22	1086				
	48	11	4347				

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

3. 0.53W产品为特规产品，下单时请备注。

0.53W product is a special product,please note when placing an order

订货标记Ordering Information

BRT3 - SS - 1 12 D M G	G: 高负载 high-load
	触点形式: M:常开型 NO Contact form: B:常闭型 NC 无:转换型 CO
	线圈功耗: D:标准直流线圈 L:高灵敏度直流线圈 Coil power: D: Standard DC coil L: High sensitivity DC coil
	线圈电压: 05:5V,06:6V,09:9V Coil oltage: 12:12V,24:24V,48:48V
	触点组数:1:1 组 Numbe of pole:1:1-One pole
	密封方式: SS:防焊剂型 Type of sealing: SS:The flux type
	品名: BRT3 Model: BRT3

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备注:

1. 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
 2. 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。
 3. 对于需要符合“IEC60079系列”防爆要求的产品，下单时请在型号规格后备注[EX]，我司会在产品外壳加印“EX”标识加以区分。
- 因不是所有规格产品都具有防爆认证，有需要时请与我司联系，以便确定合适的产品

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 H₂S SO₂ NO₂dust and other pollutants), it is recom mended to use plastic encapsulated products.please confirm in actual use.
- (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.
- 3.For products that need to meet the explosino-proof requirements of the IEC60079 series,please indicate[EX]after the model specificationswhen placing anorder.Our company will mark the product shell with the"EX"mark to distinguish it.Since not all specifications of productshave explosion-proof certification,please contact our company if necessary to determine suitable products;

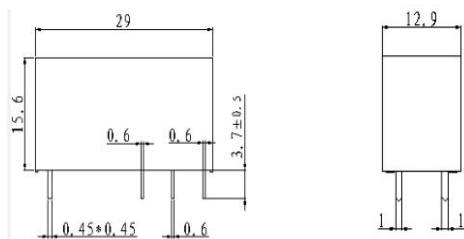
类别 category

型号 model	BRT3			
线圈灵敏度 Coil sensitivity	标准直流线圈 Standard DC coil		高灵敏度直流线圈 High sensitivity DCcoil	
	1C	1A	1C	1A
防焊剂型 The flux type	BRT3-SS-1□□D	BRT3-SS-1□□DM	BRT3-SS-1□□L	BRT3-SS-1□□LM

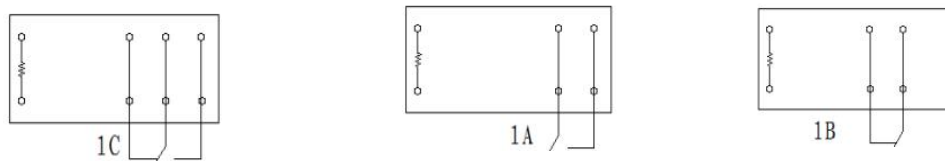
外形尺寸、接线、安装孔位图

Overall dimension,wiring and installation hole bitmap

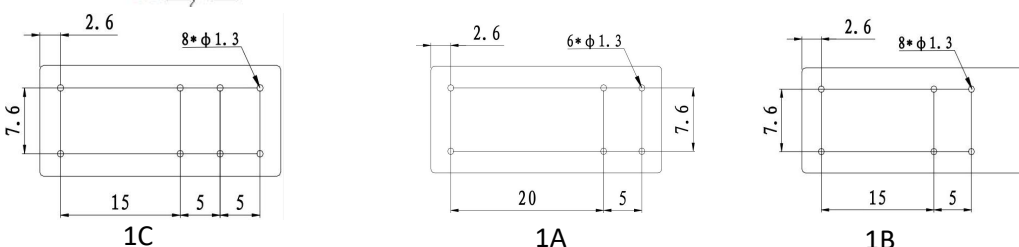
外形尺寸 Outline Dimensions



接线图(底视图) Wiring Diagram (Bottom view)



安装孔位图(底视图) PCB Layout (Bottom view)



BRT3系列 Series

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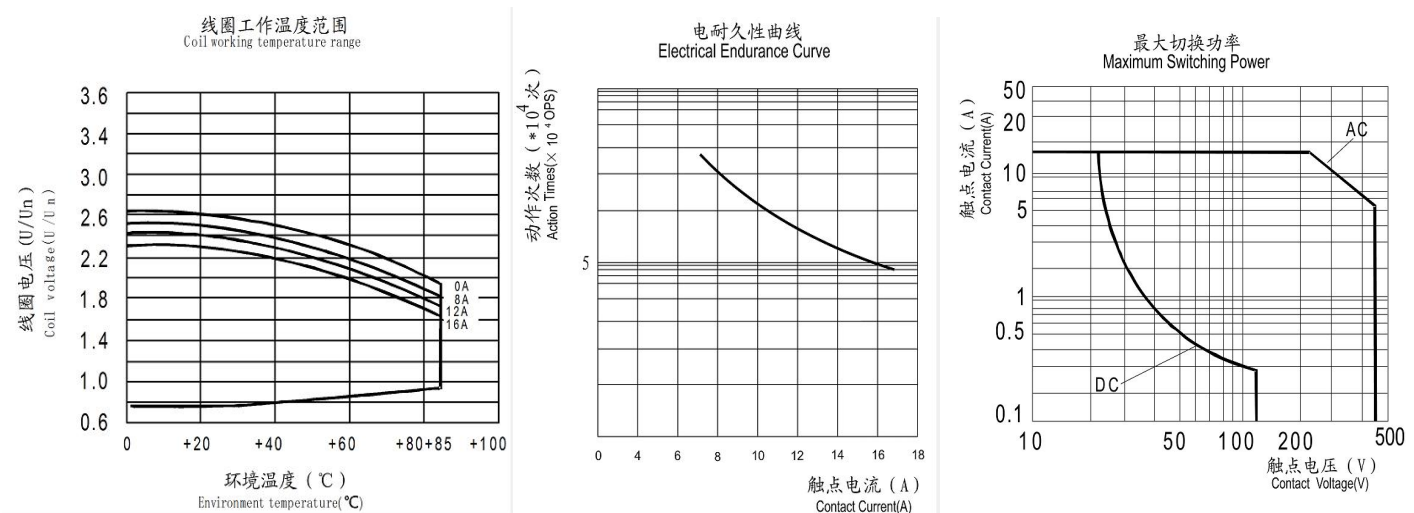
备注:

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 mountin 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 il not marked with dimensional tolerance, when teh 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.