

## 公司介绍

### COMPANY PROFILE

作为全球知名的继电器品牌,赛特勒继电器产品以高可靠性著称,广泛运用于太阳能和电动汽车充电、汽车、通讯、医疗、工控、家电等行业,特别是在太阳能发电用逆变器领域,赛特勒致力于开发该领域专用的AZSR系列继电器,可满足高负载,宽触点间隙,电使用寿命长等严苛的电气特性要求,并且能符合UL、VDE、CQC和TUV等安规标准。

太阳能及其他新能源技术将继续在全球范围内增长,赛特勒新能源解决方案事业部致力于通过提供一流的工程和产品设计,支持世界新能源产业的客户。

As a well-known international brand of Relays, ZETTLER Relay has established an industry leading reputation for a high reliability, ZETTLER Relays are used in a wide range of industries including Solar and Electric Vehicle Charging, Automotive, Tel-communications, Medical, Industrial Controls, and Home Appliances, particularly in Solar Inverters application for which ZETTLER has committed to develop series of AZSR relays to meet the strict electrical requirements of high loads, wide contact gap, long lifetime and the compliance with pertinent safety standards such as UL, VDE, CQC, and TUV.

As solar and other new energy technologies continue to grow globally, ZETTLER's NEW ENERGY SOLUTIONS division has committed to supporting customers in new energy industries around the world, with first-class engineering and product design.

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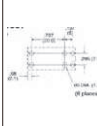
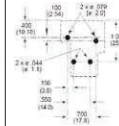
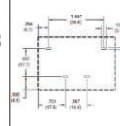
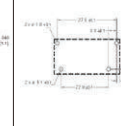
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包装规格 Packing Info

| 产品型号<br>P/N | 内包装方式<br>Inner Packing | 纸箱规格<br>Carton Dimension<br>(L x W x H) cm | 最小包装量<br>SPQ<br>pos | 净重<br>Net Weight<br>kg | 毛重<br>Gross Weight<br>kg |
|-------------|------------------------|--|---------------------|------------------------|--------------------------|
| AZ733W      | 50pcs/tray             | 35(L)*29(W)*20(H)cm                        | 500                 | 8.55                   | 10.05                    |
| AZ2150W     | 40pcs/tray             | 34(L)*29(W)*24(H)cm                        | 280                 | 7.14                   | 9.0                      |
| AZ2704      | 20pcs/tray             | 35(L)*29(W)*24(H)cm                        | 80                  | 9.6                    | 11                       |
| AZSR131     | 50pcs/tray             | 40.5(L)*23(W)*18.9(H)cm                    | 500                 | 11.3                   | 12.8                     |
| AZSR143     | 50pcs/tray             | 40.5(L)*23(W)*18.9(H)cm                    | 500                 | 11.3                   | 12.8                     |
| AZSR235     | 10pcs/tube             | 33.3(L)*24.8(W)*15.2(H)cm                  | 100                 | 9.3                    | 10.4                     |
| AZSR250     | 10pcs/tube             | 33.3(L)*24.8(W)*15.2(H)cm                  | 100                 | 9.3                    | 10.4                     |
| AZSR165     | 10pcs/tube             | 44.2(L)*21(W)*19.5(H)cm                    | 150                 | 12.75                  | 15                       |
| AZSR180     | 10pcs/tube             | 33.3(L)*24.8(W)*15.2(H)cm                  | 100                 | 9.3                    | 11                       |
| AZSR190     | 10pcs/tube             | 44.2(L)*21(W)*19.5(H)cm                    | 150                 | 12.75                  | 15                       |
| AZSR1160    | 5pcs/tube              | 43(L)*36.1(W)*13.7(H)cm                    | 50                  | 13.15                  | 15                       |
| AZSR1180    | 5pcs/tube              | 43(L)*36.1(W)*13.7(H)cm                    | 50                  | 13.15                  | 15                       |
| AZSR1200    | 5pcs/tube              | 43(L)*36.1(W)*13.7(H)cm                    | 50                  | 13.15                  | 15                       |
| AZEV116/132 | 50pcs/tray             | 42.2(L)*22.6(W)*18.5(H)cm                  | 400                 | 14                     | 15.5                     |
| AZEV140     | 50pcs/tray             | 42.2(L)*22.6(W)*18.5(H)cm                  | 400                 | 14                     | 15.5                     |
| AZDC6       | 13pcs/tube             | 55(L)*20(W)*15(H)cm                        | 260                 | 8                      | 9                        |
| AZDC007     | 50pcs/tray             | 40.5(L)*23(W)*18.9(H)cm                    | 400                 | 10.4                   | 12                       |

简要参数一览表 Summary List of Parameters

|  | AZ733W  | AZ2150W   | AZ2704  | AZSR131   |                 |
|--|---|---|---|---|-----------------|
| 外形<br>Appearance   |    |    |    |    |                 |
| 最大切换功率<br>Max. Switched Power  | 3324VA  | 8310VA  | 8310VA  | 9695VA  |                 |
| 触点<br>Contact  | 触点形式<br>Contact Arrangement   | 2A  | 1A  | 1A or 2A  | 1A              |
|  | 触点负载<br>Contact Rating  | 12A 277VAC  | 30A 277VAC  | 30A 277VAC  | 35A 277VAC      |
|  | 触点间隙<br>Contact Gap   | 1.5mm or 2.0mm  | 1.75mm  | 2.4mm or 3.0mm  | 1.8mm or 2.3mm  |
| 线圈<br>Coil   | 额定电压<br>Rated Voltage VDC   | 3-110   | 5、6、9、12、24、48  | 3-200<br>6-240AC  | 5、9、12、18、24、48 |
|  | 额定功率<br>Rated Power   | 0.8W or 1.41W   | 1.11W   | 1.92W   | 1.4W            |
| 初始的介电耐压<br>(线圈与触点间)<br>Initial Dielectric Strength<br>(Between coil and contact) | 5000Vrms  | 2500Vrms or<br>4000Vrms   | 4000Vrms  | 4500Vrms  |                 |
| 外形尺寸<br>Outline<br>Dimensions(LWH)   | 29x13x26.3mm  | 31.8x27x19.1mm  | 50.5x33.5x36mm  | 30.4x15.9x25.15mm   |                 |
| PC 板安装图<br>PC Board Layout   |  |  |  |  |                 |
| 环境温度(工作)<br>Ambient Temperature(operate)   | -40°C ~ 70°C  | -40°C ~ 70°C  | -40°C ~ 40°C  | -40°C ~ 85°C  |                 |
| 国际标准<br>International Standard   | UL TUV  | UL VDE CQC  | UL TUV  | UL TUV CQC  |                 |

简要参数一览表 Summary List of Parameters

| 外形<br>Appearance   | AZSR143                      | AZSR250                 | AZSR165                      | AZSR180      | AZSR190         |                             |
|--|------------------------------|-------------------------|------------------------------|--------------|-----------------|-----------------------------|
| 最大切换功率<br>Max. Switched Power  | 19200VA                      | 13850VA/15235VA         | 28800VA                      | 22160VA      | 44000VA/48000VA |                             |
| 触点<br>Contact  | 触点形式<br>Contact Arrangement  | 1A                      | 1A or 2A                     | 1A           | 1A              |                             |
|  | 触点负载<br>Contact Rating       | 50A 277VAC              | 50A 277VAC<br>55A 277VAC(1A) | 65A 480VAC   | 80A 277VAC      | 90/100A 277VAC or<br>480VAC |
|  | 触点间隙<br>Contact Gap          | 1,8mm<br>2,0mm          | 1,85mm                       | 3,6mm        | 2,05mm          | 3,6mm                       |
| 线圈<br>Coil   | 额定电压<br>Rated Voltage<br>VDC | 5, 9, 12, 18,<br>24, 48 | 5, 9, 12, 18, 24             | 6, 9, 12, 24 | 12, 24          | 6, 9, 12, 24                |
|  | 额定功率<br>Rated Power          | 1,6W                    | 0,48W                        | 2,2W         | 0,48W           | 1,92W                       |
| 初始的介电耐压<br>(线圈与触点间)<br>Initial Dielectric Strength<br>(Between coil and contact) | 4500Vrms                     | 5000Vrms                | 5000Vrms                     | 5000Vrms     | 5000Vrms        |                             |
| 外形尺寸<br>Outline Dimensions(LWH)  | 30,4x25,15x15,9mm            | 40x25x49,2mm            | 38x33x41,5mm                 | 40x25x49,2mm | 38x33x43mm      |                             |
| PC 板安装图<br>PC Board Layout   |                              |                         |                              |              |                 |                             |
| 环境温度<br>Ambient Temperature  | -40°C ~ 85°C                 | -40°C ~ 85°C            | -40°C ~ 85°C                 | -40°C ~ 85°C | -40°C ~ 85°C    |                             |
| 国际标准<br>International Standard   | UL TUV CQC                   | UL VDE CQC TUV          | UL TUV CQC                   | UL VDE CQC   | UL TUV CQC      |                             |

简要参数一览表 Summary List of Parameters

| 外形<br>Appearance   | AZSR1160                     | AZSR1180         | AZSR1200         | AZEV116          | AZEV132          |                  |
|--|------------------------------|------------------|------------------|------------------|------------------|------------------|
| 最大切换功率<br>Max. Switched Power  | 110400VA                     | 144000VA         | 160000VA         | 6400VA           | 12800VA          |                  |
| 触点<br>Contact  | 触点形式<br>Contact Arrangement  | 1A               | 1A               | 1A               | 1A+1B or 1A      | 1A+1B or 1A      |
|  | 触点负载<br>Contact Rating       | 160A 690VAC      | 180A 800VAC      | 200A 800VAC      | 16A 400VAC       | 32A 400VAC       |
|  | 触点间隙<br>Contact Gap          | 3,2mm or 3,6mm   | 3,6mm            | 3,6mm            | 2,25mm           | 2,25mm           |
| 线圈<br>Coil   | 额定电压<br>Rated Voltage<br>VDC | 6, 9, 12, 24, 48 | 6, 9, 12, 24, 48 | 6, 9, 12, 24, 48 | 5, 9, 12, 24, 48 | 5, 9, 12, 24, 48 |
|  | 额定功率<br>Rated Power          | 3W               | 3W               | 3W               | 1,55W            | 1,55W            |
| 初始的介电耐压<br>(线圈与触点间)<br>Initial Dielectric Strength<br>(Between coil and contact) | 4000Vrms                     | 4000Vrms         | 4000Vrms         | 4000Vrms         | 4000Vrms         |                  |
| 外形尺寸<br>Outline Dimensions(LWH)  | 63,3x62x41,7mm               | 63,3x62x41,7mm   | 63,3x62x41,7mm   | 35x16x27,9mm     | 35x16x27,9mm     |                  |
| PC 板安装图<br>PC Board Layout   |                              |                  |                  |                  |                  |                  |
| 环境温度<br>Ambient Temperature  | -40°C ~ 85°C                 | -40°C ~ 85°C     | -40°C ~ 85°C     | -40°C ~ 85°C     | -40°C ~ 85°C     |                  |
| 国际标准<br>International Standard   | UL TUV CQC                   | UL TUV CQC       | UL TUV CQC       | UL CQC TUV       | UL CQC TUV       |                  |

简要参数一览表 Summary List of Parameters

| 外形<br>Appearance   | AZEV140                     | AZDC6            | AZDC007           |                          |
|--|-----------------------------|------------------|-------------------|--------------------------|
| 最大切换功率<br>Max. Switched Power  | 22000VA                     | 7500W            | 3250VA            |                          |
| 触点<br>Contact  | 触点形式<br>Contact Arrangement | 1A               | 1A or 2A          | 1A                       |
|  | 触点负载<br>Contact Rating      | 40A 440VAC       | 12.5A 600VDC      | 50A 65VDC                |
|  | 触点间隙<br>Contact Gap         | 2,25mm           | 3,6mm             | 1,8mm                    |
| 线圈<br>Coil   | 额定电压<br>Rated Voltage VDC   | 5, 9, 12, 24, 48 | 5, 9, 12, 24, 48  | 5, 9, 12, 18, 24, 48, 60 |
|  | 额定功率<br>Rated Power         | 2.1W             | 1.4W              | 1.6W                     |
| 初始的介电耐压<br>(线圈与触点间)<br>Initial Dielectric Strength<br>(Between coil and contact) | 4000Vrms                    | 4000Vrms         | 4500Vrms          |                          |
| 外形尺寸<br>Outline<br>Dimensions(LWH)   | 35x16x28mm                  | 33.9x30.6x16mm   | 33.4x15.9x25.15mm |                          |
| PC 板安装图<br>PC Board Layout   |                             |                  |                   |                          |
| 环境温度 (工作)<br>Ambient Temperature (operate)                                       | -40°C ~ 85°C                | -40°C ~ 85°C     | 40°C ~ 85°C       |                          |
| 国际标准<br>International Standard   | UL CQC TUV                  | CSA              | UL TUV CQC        |                          |

AZ733W 12Amp Solar Relay

|                                       |  |   |
|---------------------------------------|--|---|
| <p>文件号: E44211<br/>文件号: R50129285</p> | <p><b>特征:</b></p> <ul style="list-style-type: none"> <li>介电耐压 5000Vrms</li> <li>1,5mm 触点间隙 (2,0mm 触点间隙可用)</li> <li>可提供环氧树脂密封版</li> <li>12 Amp 切换电流 — 双触点</li> <li>绝缘间隙大于 8mm</li> <li>UL B 级绝缘系统, F 级可用</li> </ul> | <p><b>FEATURES:</b></p> <ul style="list-style-type: none"> <li>Dielectric strength 5000Vrms</li> <li>1,5mm contact gap (2,0mm contact gap available)</li> <li>Epoxy sealed version available</li> <li>12 Amp switching — double pole contacts</li> <li>Isolation spacing greater than 8mm</li> <li>UL Class B insulation system, Class F available</li> </ul> |
|---------------------------------------|--|---|

CONTACTS 触点参数

|   |  |                   |
|---|--|-------------------|
| 触点形式<br>Arrangement   | DPST (2 Form A)  |                   |
| 负载<br>Ratings   | 阻性负载<br>Resistive load   | 300W or 3324VA    |
|   | 最大切换功率<br>Max. switched power  | 300W or 3324VA    |
|   | 最大切换电流<br>Max. switched current  | 12A               |
|   | 最大切换电压<br>Max. switched voltage  | 250VDC* or 277VAC |
| 备注: 如果切换电压大于 30VDC, 必须采取特殊的预防措施, 请联系工厂。<br>*Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory. |  |                   |
| 认证负载<br>Rated Load  |  |                   |
| UL  | 10A at 250VAC, 100k cycles [1]<br>12A at 277VAC, resistive, 70°C, 80k cycles [2]   |                   |
| CUR   | 130HP at 125VAC [2]<br>34HP at 250VAC [2]<br>TV-3 at 125VAC, 25k cycles [1] 12A  |                   |
| TUV   | at 250VAC, resistive, 70°C, 10k cycles [2][3]<br>10A at 250VAC, resistive, 70°C, 30k cycles [1][2][3]<br>10A at 30VDC, resistive, 70°C, 10k cycles [1] |                   |
| 触点材料<br>Material  | Silver cadmium oxide [1] Silver tin oxide [2], Silver nickel [3], Gold plating available   |                   |
| 绝缘电阻<br>Resistance  | < 50 milliohms, initially (24V, 1A voltage drop method)  |                   |

COIL 线圈参数

|                                       |  |
|---------------------------------------|--|
| 吸合电压下的功率<br>Power At pickup Voltage   | 450mW  |
| 最大连续耗散<br>Max. Continuous Dissipation | 22W at 20°C (68°F) ambient                               |
| 温升<br>Temperature Rise                | 40°C (83°F) at nominal coil voltage                      |
| 绝缘等级<br>Temperature                   | Max. 130°C (266°F) Class B<br>Max. 155°C (311°F) Class F |

NOTES

- All values at 20°C (68°F).
- Relay may pull in with less than "Must Operate" value.
- Specifications subject to change without notice.

备注

- 所有值的测试温度为 20°C (68°F)。
- 继电器有可能在小于“最大动作电压”值下吸合
- 规格如有变动, 恕不另行通知

GENERAL DATA 基本参数

|                                  |   |
|----------------------------------|---|
| 预期寿命<br>Life Expectancy          | Minimum operations  |
| 机械寿命<br>Mechanical               | 5 x 10 <sup>6</sup>   |
| 电寿命<br>Electrical                | 1 x 10 <sup>6</sup> at 10A, 250VAC Res.   |
| 吸合时间<br>Operate Time             | 15ms max at nominal coil voltage  |
| 释放时间<br>Release Time             | 5ms max at nominal coil voltage (with no coil suppression)                                  |
| 介电耐压 (1分钟)<br>level for 1 min.)) | 5000Vrms contact to coil<br>2500Vrms between open contacts<br>3000Vrms between contact sets |
| 绝缘电阻<br>Insulation Resistance    | 1000 megohms min. at 20°C,<br>500VDC, 50% RH  |
| 释放<br>Dropout                    | Greater than 10% of nominal coil voltage  |
| 环境温度<br>Ambient Temperature      | at nominal coil voltage   |
| 工作温度<br>Operating                | -40°C (-40°F) to 85°C (185°F)   |
| 储存温度<br>Storage                  | -40°C (-40°F) to 105°C (221°F)  |
| 震动<br>Vibration                  | 0,062" (1,6mm) DA at 10-55 Hz   |
| 冲击<br>Shock                      | 10g   |
| 外壳<br>Enclosure                  | P,B,T, Polyester  |
| 端子<br>Terminals                  | Tinned copper alloy, P,C.   |
| 最大焊接温度<br>Max. Solder Temp.      | 270°C (518°F)   |
| 最大焊接时间<br>Max. solder time       | 5 seconds   |
| 最大溶剂温度<br>Max. Solvent Temp.     | 80°C (176°F)  |
| 最大浸泡时间<br>Max. Immersion Time    | 30 seconds  |
| 重量<br>Weight                     | Approx. 18 grams  |

ORDERING DATA 订货号

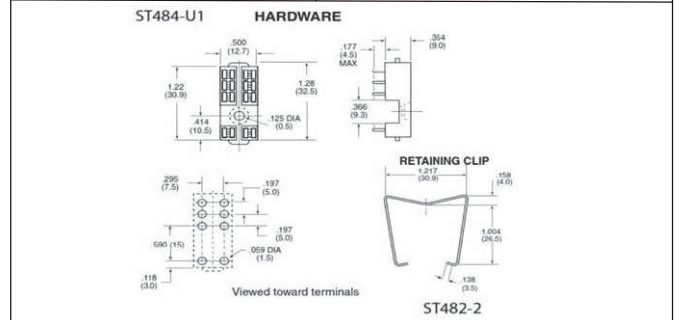
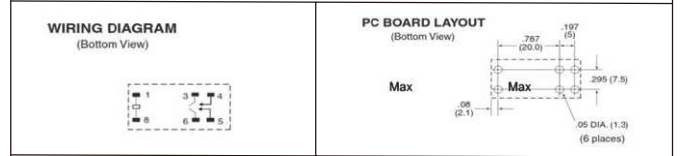
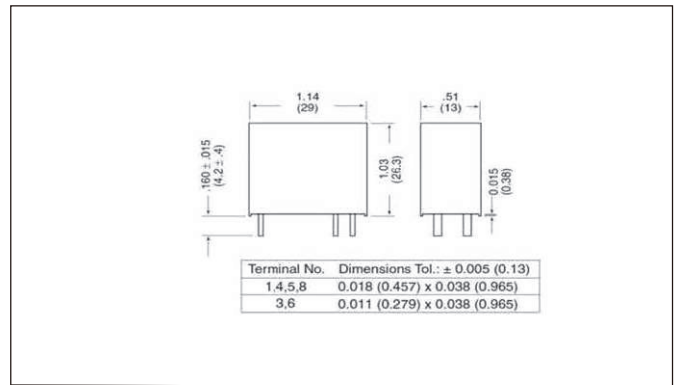
| 线圈参数<br>COIL SPECIFICATIONS |                             |                                   |  |       | 订货号<br>ORDER NUMBER* |                 |
|-----------------------------|-----------------------------|-----------------------------------|--|-------|----------------------|-----------------|
| 额定电压<br>Nominal<br>Coil VDC | 动作电压<br>Must Operate<br>VDC | 最大电压<br>Max.<br>Continuous<br>VDC | 线圈电阻<br>Coil Resistance<br>Ohms ±10%<br>1.5mm 2.0mm<br>gap |       | 非密封<br>Unsealed      | 密封<br>Sealed    |
| 3                           | 2.25                        | 4.7                               | 11.3   | -     | AZ733W-2A-3D         | AZ733W-2A-3DE   |
| 5                           | 3.8                         | 7.9                               | 31   | 18    | AZ733W-2A-5D         | AZ733W-2A-5DE   |
| 6                           | 4.5                         | 9.5                               | 45   | 26    | AZ733W-2A-6D         | AZ733W-2A-6DE   |
| 9                           | 6.8                         | 14.2                              | 101  | 58    | AZ733W-2A-9D         | AZ733W-2A-9DE   |
| 12                          | 9.0                         | 18.9                              | 180  | 102   | AZ733W-2A-12D        | AZ733W-2A-12DE  |
| 18                          | 13.5                        | 28.4                              | 405  | -     | AZ733W-2A-18D        | AZ733W-2A-18DE  |
| 24                          | 18.0                        | 37.9                              | 720  | 410   | AZ733W-2A-24D        | AZ733W-2A-24DE  |
| 30                          | 22.5                        | 47.3                              | 1125   | -     | AZ733W-2A-30D        | AZ733W-2A-30DE  |
| 48                          | 36.0                        | 75.9                              | 2,880  | 1,650 | AZ733W-2A-48D        | AZ733W-2A-48DE  |
| 60                          | 45.0                        | 94.8                              | 4,500  | -     | AZ733W-2A-60D        | AZ733W-2A-60DE  |
| 110                         | 82.5                        | 183.3                             | 16,800   | -     | AZ733W-2A-110D       | AZ733W-2A-110DE |

\*在“2A”加后缀“E”表示银氧化锡触点。在“2A”加后缀“B”表示银镍触点。添加后缀“F”表示F级绝缘等级。添加后缀“A”表示镀金触点。当后缀“E”指定为环氧密封时，请参阅AZ网站上的“继电器技术说明”——产品资源。咨询工厂其他可能适用的PCB工艺条件。

\*Add suffix “E” to “2A” for silver tin oxide contacts. Add suffix “B” to “2A” for silver nickel contacts. Add suffix “F” for Class F insulation system. Add suffix “A” for gold plated contacts. When suffix “E” is specified for Epoxy Seal, refer to AZ “Relay Technical Notes” on AZ website - Product Resources. Consult factory for other PCB process conditions that may apply.


HARDWARE ORDERING DATA 五金件订货号

| 描述<br>DESCRIPTION | 订货号<br>ORDER NUMBER | 描述<br>DESCRIPTION | 订货号<br>ORDER NUMBER |
|-------------------|---------------------|-------------------|---------------------|
| 底座<br>Socket      | ST484-U1            | 定位器<br>Retainer   | ST482-2             |



尺寸单位为英寸与括号中公制相等，公差为± .010°  
Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010°

**AZ2150W 30Amp Solar Relay**

|  |  |  |
|--|--|--|
|  <p>File No.: E44211<br/>File No.: 40023154<br/>File No.: 18002204286</p> | <p><b>特征</b></p> <ul style="list-style-type: none"> <li>1,75 mm 触点间距</li> <li>直流线圈可达 48V</li> <li>可提供高介质耐压版本</li> <li>所有塑件均为 PBT 250</li> <li>可提供环氧树脂密封版本</li> <li>Class F (155°C) 符合 UL 标准</li> </ul> | <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>1,75 mm contact gap</li> <li>DC coils up to 48V</li> <li>High dielectric strength version available</li> <li>All plastics PBT 250</li> <li>Epoxy sealed versions available</li> <li>UL Class F (155°C) standard</li> </ul> |
|--|--|--|

**CONTACTS 触点参数**

|   |  |                     |
|---|--|---------------------|
| 触点形式<br>Arrangement   | SPST (1 Form A)  |                     |
| 负载<br>Ratings   | 阻性负载<br>Resistive Load                                 |                     |
|   | 最大切换功率<br>Max. switched power                          | 900W or 8310VA      |
|   | 最大切换电流<br>Max. switched current                        | 30A                 |
|   | 最大切换电压<br>Max. switched voltage                        | 250 VDC* or 440 VAC |
| 备注: 如果切换电压大于 30VDC, 必须采取特殊的预防措施, 请联系工厂。<br>*Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory. |  |                     |
| 认证负载<br>Rated Load  |  |                     |
| UL  | 30A at 277 VAC, General Use, Resistive                 |                     |
| VDE   | 20A at 263 VAC, AC7a, 8K, 85°C (T version only)        |                     |
| 触点材料<br>Materials   | Silver tin oxide                                       |                     |
| 接触电阻<br>Resistance  | < 50 milliohms initially (24V, 1A voltage drop method) |                     |

**GENERAL DATA 基本参数**

|  |  |
|--|--|
| 预期寿命<br>Life Expectancy                                      | Minimum operations   |
| 机械寿命<br>Mechanical Life                                      | 2 x 10 <sup>7</sup>  |
| 电寿命<br>Electrical Life                                       | 3 x 10 <sup>4</sup> at 30 A 250 VAC RES.   |
| 吸合时间<br>Operate Time   | 15 msec max. at nominal coil voltage   |
| 释放时间<br>Release Time   | 10 msec max. at nominal coil voltage (without suppression)   |
| 介电强度 (1 分钟)<br>Dielectric Strength (at sea level for 1 min.) | 1500Vrms between open contacts<br>2500 Vrms contact to coil<br>4000 Vrms contact to coil "T" Version |
| 保持电压<br>Holding Voltage                                      | Greater than 50% of nominal coil voltage   |
| 绝缘电阻<br>Insulation Resistance                                | 1000 megohms min. at 20°C, 500VDC, 50% RH  |
| dropout<br>Dropout   | Greater than 10% of nominal coil voltage   |
| 环境温度<br>Ambient Temperature                                  | at nominal coil voltage  |
| 工作温度<br>Operating Temperature                                | -40°C (-40°F) to 85°C (185°F) - DC coils   |
| 储存温度<br>Storage Temperature                                  | -40°C (-40°F) to 85°C (185°F) - DC coils   |
| 振动<br>Vibration  | 0.062" (1.5 mm) DA at 10-55 Hz   |
| 冲击<br>Shock  | 10g  |
| 外壳<br>Enclosure  | P-B-T, Polyester   |
| 端子<br>Terminals  | Tinned copper alloy, P.C.  |
| 最大焊接温度<br>Max. Solder Temp.                                  | 270°C (518°F)  |
| 最大焊接时间<br>Max. solder time                                   | 5 seconds  |
| 最大焊接温度<br>Max. Solvent Temp.                                 | 80°C (176°F)   |
| 最大浸渍时间<br>Max. Immersion Time                                | 30 seconds   |
| 重量<br>Weight   | 25 grams   |
| 包装<br>Packing  | 40 per plastic tray / 280 per carton box   |

**COIL 线圈参数**

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| 额定电压下功率<br>Power At Pickup Voltage    | 625mW                               |
| 最大连续耗散<br>Max. Continuous Dissipation | 1,7W at 20°C (68°F) ambient         |
| 温升<br>Temperature Rise                | 43°C (77°F) at nominal coil voltage |
| 绝缘等级<br>Temperature                   | 155°C (311°F) Class F               |

**NOTES**

- All values at 20°C (68°F).
- Relay may pull in with less than "Must Operate" value.
- Specifications subject to change without notice.
- If higher electrical loads are to be switched by the relay contacts, the vent nub has to be opened prior to use of the relay.

**备注**

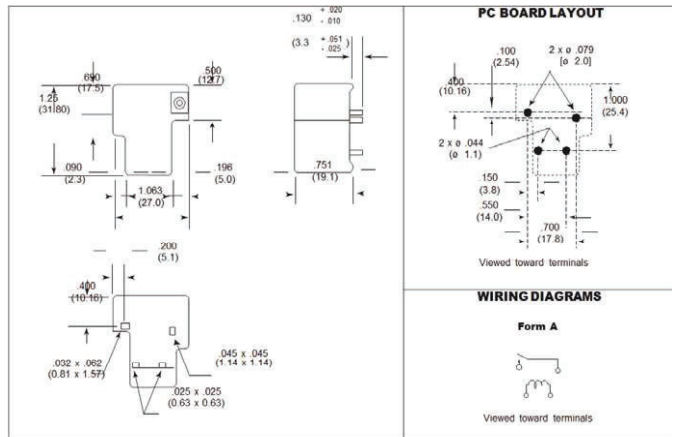
- 所有值的测试温度为 20°C (68°F)。
- 继电器有可能在小于“最大动作电压”值下吸合
- 规格如有变动, 恕不另行通知
- 如果继电器要切换较高的负载, 则在使用继电器之前必须打开排气孔

**ORDERING DATA 订货号**

| 线圈参数 - DC 线圈<br>COIL SPECIFICATIONS - DC Coil |             |             |                             |                   | 订货号<br>ORDER NUMBER* |
|---|-------------|-------------|-----------------------------|-------------------|----------------------|
| 额定电压<br>VDC                                   | 动作电压<br>VDC | 最大电压<br>VDC | 最小电压<br>Min. Holding<br>VDC | 线圈电阻<br>Ohm ± 10% |                      |
| 5   | 3,75        | 6,0         | 2,5                         | 22,5              | AZ2150W-1AE-5DF      |
| 6   | 4,50        | 7,2         | 3,0                         | 32,5              | AZ2150W-1AE-6DF      |
| 9   | 6,75        | 10,8        | 4,5                         | 73                | AZ2150W-1AE-9DF      |
| 12  | 9,0         | 14,4        | 6,0                         | 130               | AZ2150W-1AE-12DF     |
| 24  | 18,0        | 38,8        | 12,0                        | 520               | AZ2150W-1AE-24DF     |
| 48  | 36,0        | 57,6        | 24,0                        | 2,080             | AZ2150W-1AE-48DF     |

用“DEF”代替“DF”代表环氧树脂密封版。  
Substitute "DEF" in place of "DF" for epoxy sealed version.  
4000Vrms介电强度在零件号末尾添加“T”。  
Add "T" at the end of part number for 4000Vrms dielectric strength version.  
线圈5VDC, 6VDC, 48VDC, 未取得VDE认证。  
Coils 5VDC, 6VDC, 48VDC, not VDE approved.

**MECHANICAL DATA 外形图、接线图、脚位图**



尺寸单位为英寸与括号中公制相等, 公差为±.010"  
Dimensions in inches with metric equivalents in parentheses, Tolerance: ± .010"

AZ2704 30Amp Solar Relay

|   |   |  |
|---|---|--|
|  <p>File No. E44211<br/>TUW<br/>File No. R50164753</p> | <p><b>特征</b></p> <ul style="list-style-type: none"> <li>30 Amp 切换电流</li> <li>30 Amp AC7a 认证</li> <li>900 Amp 短路电流 (负载)</li> <li>PC 和快速连接安装端子</li> <li>介电耐压 4000Vrms</li> <li>标准 (2.4mm) 和宽触点间隙 (3.0mm)</li> </ul> | <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>30 Amp switching</li> <li>30 Amp AC7a approved</li> <li>900 Amp Short circuit current (carrying)</li> <li>PC mount and quick connect terminals</li> <li>Dielectric strength 4000Vrms</li> <li>Standard (2.4mm) and wide contact gap</li> </ul> |
|---|---|--|

| CONTACTS 触点参数   |  | GENERAL DATA 基本参数  |   |
|---|--|--|---|
| 触点形式<br>Arrangement   | SPST (1 Form X) DPST (2 Form X)                            | 预期寿命<br>Life Expectancy  | Minimum operations  |
| 负载<br>Ratings   | 阻性负载<br>Resistive Load                                     | 机械寿命<br>Mechanical Life  | 1 x 10 <sup>6</sup>   |
|   | 最大切换功率<br>Max. switched power                              | 电寿命<br>Electrical Life   | 1 x 10 <sup>5</sup> at rated load   |
|   | 最大切换电流<br>Max. switched current                            | 操作时间 (最大)<br>Operate Time(max)   | 30ms at nominal coil voltage  |
|   | 最大切换电压<br>Max. switched voltage                            | 释放时间 (最大)<br>Release Time(max)   | 30ms at nominal coil voltage (with no coil suppression)   |
| 备注: 如果切换电压大于 30VDC, 必须采取特殊的预防措施, 请联系工厂。<br>*Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory. |  | 介电耐压 (1分钟)<br>Dielectric Strength (at sea level for 1 min.)  | 4000Vrms coil to contact<br>2000Vrms between open contacts  |
| 认证负载<br>Rated Load  |  | 绝缘电阻<br>Insulation Resistance  | 1000 megohms min., at 20°C, 500 VDC, 50% RH   |
| UL, CUR   | 30A at 277VAC, resistive 30k cycles [1][2]                 | Dropout<br>释放  | Greater than 5% of nominal coil voltage (DC)  |
|   | 25A at 277 VAC, resistive, 100k cycles [2]                 | 环境温度<br>Ambient Temperature  | at nominal coil voltage   |
|   | 25A at 240 VAC, resistive, 100k cycles [1]                 | 工作温度<br>Operating Temperature  | -40°C (-40°F) to 70°C (158°F) at nominal<br>-40°C (-40°F) to 85°C (185°F) at 50% or less of nominal holding voltage |
|   | 3HP at 240 VAC, 6k cycles [1]                              | 储存温度<br>Storage Temperature  | -40°C (-40°F) to 105°C (221°F)  |
|   | 1.5HP at 120 VAC, 100k cycles [2]                          | 振动<br>Vibration  | 0.062" DA at 10-55 Hz   |
| 10A at 120 VAC, tungsten, 6k cycles [1][2]  | 冲击 (磁合 & 乘磁合)<br>Shock<br>Operating<br>Non-Operating       | 10g, 11ms, 1/2 sine (no false operation)<br>100g, 11ms, 1/2 sine (no damage)   |   |
| 3HP at 240 VAC, 100k cycles [2]   | 外壳<br>Enclosure  | P,B,T, Polyester   |   |
| 1.5HP at 120 VAC, 100k cycles [2]   | 端子<br>Terminals  | Tinned copper alloy, Quick connect tabs<br>Note: Allow sufficient slack on leads when wiring, and do not subject the terminals to excessive force. |   |
| 10A at 277 VAC, tungsten, 6k cycles [2]   |  |  |   |
| 10A at 277 VAC, tungsten, 6k cycles [1]   |  |  |   |
| 2HP at 277 VAC, 75k cycles [2]  |  |  |   |
| 3HP at 125 VAC, 30k cycles [2]  |  |  |   |
| 17A at 240VAC, cos phi 0.8, 50k cycles [1][2]   |  |  |   |
| 25A at 240VAC, cos phi 0.4, 50k cycles [1][2]   |  |  |   |
| TUV   |  |  |   |
| 触点材料<br>Material  | [1] Silver cadmium oxide, [2] silver tin oxide             | 重量 (大约)<br>Weight (Approx)   | 120 grams   |
| 接触电阻<br>Resistance  | < 100 milliohms initially<br>(24V, 1A voltage drop method) |  |   |

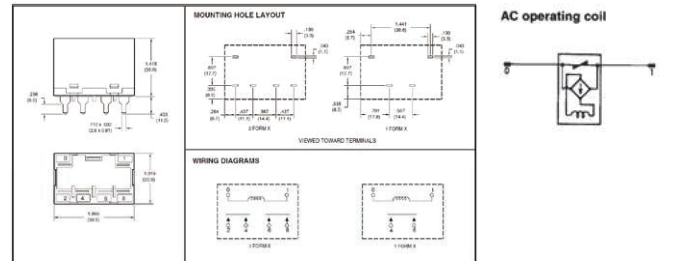
| COIL 线圈参数                             |  | NOTES   |  |
|---------------------------------------|--|---|--|
| 额定电压下的功率<br>Power At pickup Voltage   | 1.08W (DC)<br>1.7VA (AC)                                     | 1. All values at 20°C (68°F).                             |  |
| 最大连续耗散<br>Max. Continuous Dissipation | 3.8W at 20°C (68°F) ambient                                  | 2. Relay may pull in with less than "Must Operate" value. |  |
| 温升<br>Temperature Rise                | 50°C (90°F) at nominal coil voltage                          | 3. Specifications subject to change without notice.       |  |
| 绝缘等级<br>Temperature                   | Max. 130°C (266°F) - Class B<br>Max. 155°C (311°F) - Class F | <b>备注</b>   |  |
|                                       |  | 1. 所有值的测试温度为 20°C (68°F).                                 |  |
|                                       |  | 2. 继电器有可能在小于 "最大动作电压" 值下吸合                                |  |
|                                       |  | 3. 规格如有变动, 恕不另行通知   |  |

ORDERING DATA 订货号

| 线圈电压 - DC 线圈<br>COIL SPECIFICATIONS - DC COIL |                          |                             |                                  | 订货号<br>ORDER NUMBER* |                |
|---|--------------------------|-----------------------------|----------------------------------|----------------------|----------------|
| 额定电压  | 动作电压<br>Must Operate VDC | 最大电压<br>Max. Continuous VDC | 线圈电阻<br>Coil Resistance<br>± 10% | 1 Form X             | 2 Form X       |
| 3   | 2.25                     | 4.2                         | 5                                | AZ2704-1A-3D         | AZ2704-2A-3D   |
| 6   | 4.50                     | 8.4                         | 19                               | AZ2704-1A-6D         | AZ2704-2A-6D   |
| 12  | 9.00                     | 16.8                        | 75                               | AZ2704-1A-12D        | AZ2704-2A-12D  |
| 24  | 18.00                    | 33.7                        | 300                              | AZ2704-1A-24D        | AZ2704-2A-24D  |
| 48  | 36.0                     | 67.5                        | 1200                             | AZ2704-1A-48D        | AZ2704-2A-48D  |
| 100   | 75.0                     | 140.5                       | 5200                             | AZ2704-1A-100D       | AZ2704-2A-100D |
| 110   | 82.5                     | 154.7                       | 6300                             | AZ2704-1A-110D       | AZ2704-2A-110D |
| 200   | 150.0                    | 282.4                       | 21000                            | AZ2704-1A-200D       | AZ2704-2A-200D |

后缀加 "T" 表示锡氧化锡触点; 后缀加 "W" 表示宽触点; 后缀加 "F" 表示 F 等级产品  
\*For silver tin oxide add suffix "T". For wide contact gap add "W". For Class F add suffix "F".

MECHANICAL DATA 外形图、接线图、脚位图



The diagram shows the physical dimensions and electrical connections of the relay. It includes a top view of the mounting hole layout with dimensions in inches and millimeters. A side view shows the AC operating coil. A wiring diagram shows the terminal connections for the coil and contacts. The relay is shown in a perspective view with dimensions for its height and width.

尺寸单位为英寸与括号中公制相等, 公差为 ±.010"  
Dimensions in inches with metric equivalents in parentheses. Tolerance: ±.010"

**AZSR131 35 AMP MINIATURE POWER RELAY**

|  |  |  |
|--|--|--|
|  | <b>特征</b>  | <b>FEATURES</b>  |
|  | <ul style="list-style-type: none"> <li>35A 触点切换能力</li> <li>触点间距: 1.8 mm / 2.3 mm</li> <li>分断能力: 4500VRMS, 10kV 浪涌</li> <li>UL class F 绝缘系统</li> <li>可适用于 GWT (IEC60335-1) 的版本</li> <li>UL / CUR E365652</li> <li>TUV B0887930015</li> <li>CQC 17002168255</li> </ul> | <ul style="list-style-type: none"> <li>35 Amp switching capability</li> <li>Contact gap: 1.8 mm / 2.3 mm</li> <li>Dielectric strength 4500VRMS, 10kV Surge</li> <li>UL class F insulation</li> <li>GWT (IEC60335-1) version available</li> <li>UL / CUR E365652</li> <li>TUV B0887930015</li> <li>CQC 17002168255</li> </ul> |

**CONTACTS 触点参数**

|   |   |
|---|---|
| Arrangement 触点形式  | SPST-N.O. (1 Form A)  |
| Ratings (max.) 负载 (最大) switched power 切换功率<br>switched current 切换电流<br>continuous current 连续电流<br>switched voltage 切换电压 | (resistive load) 阻性负载<br>9695 VA<br>35 A<br>35 A<br>277 VAC   |
| Rated Loads 认证负载<br>ULCUR/TUV/CQC   | 26A at 277 VAC, resistive, 85°C, 50k cycles<br>35A at 277 VAC, resistive, 85°C, 30k cycles<br>22A at 277 VAC, resistive, 70°C, 100k cycles<br>26A at 277 VAC, resistive, 85°C, 50k cycles<br>33A at 277 VAC, cosphi 0.8, 85°C, 50k cycles<br>35A at 277 VAC, cosphi 0.8, 85°C, 30k cycles |
| Contact material 触点材质   | AgSnO <sub>2</sub> (silver tin oxide)   |
| Contact gap 触点间隙<br>standard version<br>option (200) version  | 1.8 mm<br>2.3 mm  |
| Contact resistance 接触电阻<br>initial<br>typical   | (load contact)<br>≤ 100 mΩ<br>< 3 mΩ  |

**GENERAL DATA 基本参数**

|   |   |
|---|---|
| Life Expectancy 预期寿命<br>Mechanical                                      | (minimum operations)<br>1 x 10 <sup>7</sup> (2.3mm gap)<br>3 x 10 <sup>7</sup> (1.8mm gap)<br>see ULCUR/TUV/CQC ratings |
| Electrical  |   |
| Operate Time 动作时间   | 20 ms (max.) at nominal coil voltage  |
| Release Time 释放时间   | 10 ms (max.) at nominal coil voltage, without coil suppression  |
| Dielectric Strength 介电耐压<br>coil to load contacts<br>open load contacts | (at sea level for 1 min.)<br>4500 V <sub>AC</sub><br>2500 V <sub>DC</sub><br>3500 V <sub>DC</sub> (200 version)         |
| Surge Voltage 冲击电压  | 10kV @12/50µs (coil to contacts)  |
| Insulation Resistance 绝缘电阻  | 1000 MΩ (min.) at 23°C, 500 VDC, 50% RH   |
| Temperature Range 温度范围<br>Operating<br>Storage                          | (at nominal coil voltage)<br>-40°C (-40°F) to 85°C (185°F)<br>-40°C (-40°F) to 105°C (221°F)                            |
| Vibration resistance 抗振动  | 0.062" (1.5 mm) DA at 10-55 Hz  |
| Shock 冲击  | 20 g  |
| Enclosure 封装<br>protection category<br>material group<br>flammability   | P.B.T., polyester<br>RT II, flux proof<br>IIIIa<br>UL94 V-0   |
| Terminals 端子  | Tinned copper alloy, P. C.  |
| Soldering 焊接<br>max. temperature<br>max. time                           | 270 °C<br>5 s   |
| Dimensions 尺寸<br>length<br>width<br>height                              | 30.4 mm (1.20")<br>15.9 mm (0.63")<br>25.15 mm (1.00")  |
| Weight 重量   | 25 grams (approx.)  |
| Compliance 符合法规   | UL 508, IEC 61810-1, RoHS, REACH  |
| Packing unit in pcs 包装  | 50 per plastic tray / 500 per carton box  |

**COIL 线圈参数**

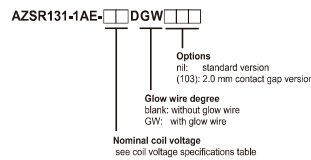
|  |  |
|--|--|
| Nominal coil DC voltages<br>线圈额定电压                               | 5, 9, 12, 18, 24, 48                         |
| Dropout voltage 释放电压   | > 5% of nominal coil voltage                 |
| Holding voltage 保持电压   | > 35% of nominal coil voltage                |
| Coil power 线圈功耗<br>nominal<br>holding power<br>at pickup voltage | (at 23 °C)<br>1.4 W<br>172 mW<br>790 mW      |
| Temperature Rise 温升  | 70 K (128°F) at nom. coil voltage, 35A, 85°C |
| Max. temperature 最大温度  | Class F insulation - 155°C (311°F)           |

**COIL VOLTAGE SPECIFICATIONS 线圈参数**

| Nominal Coil VDC | Must Operate VDC | Min. Holding VDC | Max. Cont. VDC | Resistance Ohm ± 10% |
|------------------|------------------|------------------|----------------|----------------------|
| 5                | 3.75             | 1.75             | 6.0            | 18                   |
| 9                | 6.75             | 3.2              | 10.8           | 58                   |
| 12               | 9.0              | 4.2              | 14.4           | 103                  |
| 18               | 13.5             | 6.3              | 21.6           | 230                  |
| 24               | 18.0             | 8.4              | 28.8           | 410                  |
| 48               | 36.0             | 16.8             | 57.6           | 1650                 |

Note: All values at 23°C (73°F), upright position, terminals downward.  
备注: 所有值是在23°C (73°F)下测试, 垂直位置并且端子向下。

**ORDERING DATA 订货号**

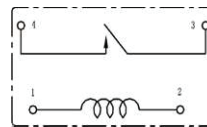


**Example ordering data**

|                      |  |
|----------------------|--|
| AZSR131-IAE-12D      | 12 VDC nominal coil voltage, 1.8 mm contact gap. |
| AZSR131-IAE-12DGW    | 12 VDC nominal coil voltage, 1.8 mm contact gap. |
| AZSR131-IAE-12D(200) | 12 VDC nominal coil voltage, 2.3 mm contact gap. |

**WIRING DIAGRAMS 接线图**

Viewed towards terminals

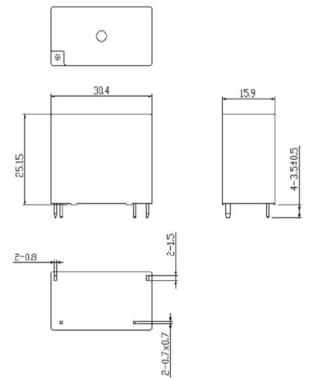


**NOTES**

- All values at 23°C (73°F).
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on terminals.
- Specifications subject to change without notice.

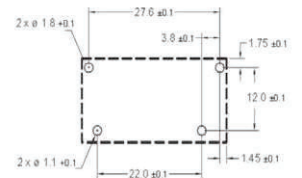
**MECHANICAL DATA 外形尺寸**

Dimensions in mm. Tolerance: ±0.3mm



**PC BOARD LAYOUT 脚位图**

Viewed towards terminals. Dimensions in mm.



**备注**

- 所有值的测试温度为 23° C (73° F)。
- 继电器有可能在小于“最大动作电压”值下吸合
- 提供足够的PCB导电截面积以辅助端子散热
- 规格如有变动, 恕不另行通知

**AZSR143 50 AMP MINIATURE POWER RELAY**

|  |  |   |
|--|--|---|
|  <p>Illustration similar</p> | <p><b>特征</b></p> <ul style="list-style-type: none"> <li>50A 触点切换能力</li> <li>触点间距: 标准 1.8mm / 2.0mm 可选</li> <li>分断能力: 4.5 kVRMS</li> <li>10kV 抗浪涌电压</li> <li>UL Class F 绝缘系统</li> <li>UL / CUR E365652</li> <li>TUV B0887930015</li> <li>CQC 19002227975</li> </ul> | <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>50 Amp switching capability</li> <li>Contact gap: 1.8mm standard / 2.0mm available</li> <li>Dielectric strength 4.5 kVRMS</li> <li>10kV Surge</li> <li>UL Class F insulation</li> <li>UL / CUR E365652</li> <li>TUV B0887930015</li> <li>CQC 19002227975</li> </ul> |
|  | <p>CCC</p> <p>RoHS</p> <p>TUV</p>  |   |

**CONTACTS 触点参数**

|  |   |
|--|---|
| Arrangement 触点形式   | SPST-NO. (1 Form A)   |
| Ratings (max.) 负载 (最大) switched power 切换功率 continuous current 连续电流 switched voltage 切换电压 | (resistive load)<br>19200 VA<br>50 A<br>50 A<br>480 VAC   |
| Rated Loads 认证负载 UL/CUR/CQC  | 43 A at 277 VAC, resistive, 85°C, 30k cycles<br>33 A at 277 VAC, resistive, 105°C, 30k cycles<br>50 A at 277 VAC, resistive, 85°C, 6k cycles<br>20 A make, 50 A carry, 20 A break at 277 VAC, resistive, 85°C, 50k cycles   |
| TUV  | 43 A at 277 VAC, resistive, 85°C, 30k cycles<br>40 A at 480 VAC, resistive, 85°C, 30k cycles<br>33 A at 277 VAC, resistive, 105°C, 30k cycles<br>50 A at 277 VAC, resistive, 85°C, 6k cycles<br>20 A make, 50 A carry, 20 A break at 480 VAC, resistive, 85°C, 50k cycles |
| Contact material 触点材料  | Ag3SnO2 (silver tin oxide)  |
| Contact gap 触点间距 standard version 标准版本 option (103) version 选项 (103) 版本                  | ≥ 1.8 mm<br>≥ 2.0 mm  |
| Contact resistance 接触电阻 initial 初始 typical 典型  | ≤ 100 mΩ<br>< 3 mΩ  |

**GENERAL DATA 基本参数**

|   |   |
|---|---|
| Life Expectancy 预期寿命 Mechanical 机械 electrical 电气                                      | (minimum operations)<br>1 x 10 <sup>5</sup><br>see UL/CUR/TUV/CQC ratings   |
| Operate Time 吸合时间   | 20 ms (max.) at nominal coil voltage  |
| Release Time 释放时间   | 10 ms (max.) at nominal coil voltage, without coil suppression  |
| Dielectric Strength 介电耐压 coil to load contacts 线圈到负载触点 open load contacts 开路负载触点      | (at sea level for 1 min.)<br>4500 Vrms<br>2500 Vrms   |
| Surge Voltage 冲击电压 coil to contacts   | 10kV @1.2/50µs  |
| Insulation Resistance 绝缘电阻  | 1000 MΩ (min.) at 23°C, 500 VDC, 50% RH   |
| Insulation Type 绝缘类型 coil to contacts   | Reinforced insulation (rated voltage ≤ 300 VAC, pollution degree: 2, overvoltage category: II)<br>Basic insulation (rated voltage > 300 VAC, pollution degree: 2, overvoltage category: II) |
| Temperature Range 温度范围 operating 运行   | (at nominal coil voltage)<br>-40°C (-40°F) to 85°C (185°F)  |
| Vibration Resistance 抗震动  | 0.062" (1.5 mm) DA at 10-55 Hz  |
| Shock 冲击  | 20 g  |
| Enclosure 封装 material 材料 protection category 防护等级 material group 材料组 flammability 阻燃性 | P.B.T. polyester<br>RT II, flux proof<br>Ila<br>UL94 V-0  |
| Terminals 端子  | Tinned copper alloy, P. C.  |
| Soldering 焊接 max. temperature 最高温度 max. time 最高时间                                     | 270°C<br>5 s  |
| Dimensions 尺寸 length 长度 width 宽度 height 高度  | 30.4 mm (1.20")<br>15.9 mm (0.63")<br>25.15 mm (0.99")  |
| Weight 重量   | 25 grams (approx.)  |
| Compliance 符合法规   | UL 508, IEC 61810-1, RoHS, REACH  |
| Packing unit in pcs 包装  | 50 per plastic tray / 500 per carton box  |

**COIL 线圈参数**

|  |   |
|--|---|
| Nominal coil DC voltages 线圈额定电压                                      | 5, 9, 12, 18, 24, 48                    |
| Dropout voltage 释放电压   | > 5% of nominal coil voltage            |
| Holding voltage 保持电压   | > 35% of nominal coil voltage           |
| Coil power 线圈功耗 nominal 额定 holding power 保持功率 at pickup voltage 吸合电压 | (at 23°C)<br>1.6 W<br>196 mW<br>900 mW  |
| Temperature Rise 温升  | 70 K (126°F) at nom. coil voltage, 85°C |
| Max. temperature 最大温度  | Class F insulation = 155°C (311°F)      |

**COIL VOLTAGE SPECIFICATIONS 线圈参数**

| Nominal Coil VDC | Must Operate VDC | Min. Holding VDC | Max. Cont. VDC | Resistance Ohm ± 10% |
|------------------|------------------|------------------|----------------|----------------------|
| 5                | 3.75             | 1.75             | 6.0            | 15.5                 |
| 9                | 6.75             | 3.15             | 10.8           | 50.5                 |
| 12               | 9.0              | 4.2              | 14.4           | 90.0                 |
| 18               | 13.5             | 6.3              | 21.6           | 202.5                |
| 24               | 18.0             | 8.4              | 28.8           | 360.0                |
| 48               | 36.0             | 16.8             | 57.6           | 1440                 |

Note: All values at 23°C (73°F), upright position, terminals downward.  
备注: 所有值是在23°C (73°F)下测试, 垂直位置并且端子向下。

**ORDERING DATA 订货号**

AZSR143-1AE-□□□□□□□□

Options:  
nit: standard version  
(103): 2.0 mm contact gap version

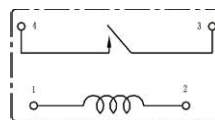
Nominal coil voltage see coil voltage specifications table

**Example ordering data**

|                      |   |
|----------------------|---|
| AZSR143-1AE-24D      | 24 VDC nominal coil voltage, 1.8 mm contact gap |
| AZSR143-1AE-24D(103) | 24 VDC nominal coil voltage, 2.0 mm contact gap |

**WIRING DIAGRAMS 接线图**

Viewed towards terminals

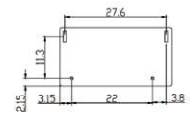
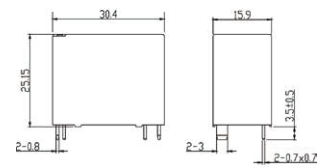


**NOTES**

- All values at reference temperature of 23°C (73°F) unless stated otherwise.
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on load terminals.
- Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.
- Relay adjustment may be affected if excessive shock is applied to the relay.
- Specifications subject to change without notice.

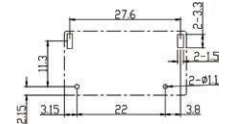
**MECHANICAL DATA 外形尺寸**

Dimensions in mm. Tolerance: ±0.3mm



**PC BOARD LAYOUT 脚位图**

Layout recommendation. Viewed towards terminals. Dimensions in mm.



**备注**

- 除非另有说明, 所有值的参考温度为23°C (73°F)
- 继电器有可能在小于“最大动作电压”值下吸合
- 提供足够的PCB承载面积以辅助端子散热
- 线圈抑制电路, 如线圈上并联二极管等将延长释放时间
- 如果对继电器施加过多的冲击电压, 可能会影响继电器的调整
- 规格如有变动, 恕不另行通知

**AZSR250 30A 50A POWER RELAY**

|  |  |   |
|--|--|---|
|  | <b>特征</b><br>• 35A触点切换能力 (AZSR235)<br>• 50A触点切换能力 (AZSR250)<br>• 触点间距 > 2.05 mm (AZSR235), > 1.85 mm (AZSR250)<br>• 保持功耗 < 100 mW<br>• 介电耐压: 5000 VRMS<br>• 绝缘爬电距离 > 10 mm<br>• 双重绝缘, IEC 60730-1 (VDE 0631, part 1)<br>• 加强绝缘, IEC 60335-1 (VDE 0700, part 1)<br>• UL, CUR E44211<br>• VDE certificate 40033251 | <b>FEATURES</b><br>• 35 Amp switching (AZSR235)<br>• 50 Amp switching (AZSR250)<br>• Contact gap > 2.05 mm (AZSR235), > 1.85 mm (AZSR250)<br>• Holding power < 100 mW<br>• Dielectric strength 5000 VRMS<br>• Insulation spacing greater than 10 mm<br>• Double insulation, IEC 60730-1 (VDE 0631, part 1)<br>• Reinforced insulation, IEC 60335-1 (VDE 0700, part 1)<br>• UL, CUR E44211 |
|  | <b>CONTACTS 触点参数</b>   |   |

|   |  |
|---|--|
| <b>Arrangement 触点形式</b>   | SPST-1A/0 (1 Form A)<br>DPST (2 Form A)  |
| <b>Ratings (max.)</b><br>AZSR235<br>switched power<br>switched current<br>switched voltage<br>AZSR250<br>switched power<br>switched current<br>switched voltage | (resistive load)<br>1050 W or 9695 VA<br>35 A<br>150 VDC* or 440 VAC<br>1500 W or 13650 VA<br>50 A<br>150 VDC* or 440 VAC<br>* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory. |
| <b>Rated Loads 认证负载</b>   | AZSR235: 35 A at 277 VAC, resistive load<br>AZSR250: 50 A at 277 VAC, resistive load<br><br>AZSR235: 35 A at 263 VAC, referring AC-7a, 85°C<br>AZSR250: 50 A at 263 VAC, referring AC-7a, 85°C   |
| <b>Contact material 触点材质</b>  | AgSnO2 - silver/nickel-oxide   |
| <b>Contact gap</b><br>AZSR235<br>AZSR250  | > 2.05 mm<br>> 1.85 mm   |
| <b>Contact resistance 接触电阻</b>  | < 50 mΩ  |

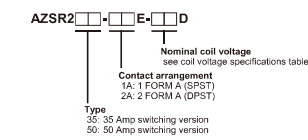
|  |                                       |
|--|---------------------------------------|
| <b>COIL 线圈参数</b>   |                                       |
| <b>Nominal coil DC voltages 线圈额定电压</b>   | see coil voltage specifications table |
| <b>Dropout voltage 释放电压</b>  | > 5% of nominal coil voltage          |
| <b>Coil power 线圈功耗</b><br>nominal<br>at pickup voltage<br>holding power<br>max. continuous dissipation | 480 mW<br>270 mW<br>< 84 mW<br>2 W    |
| <b>Temperature Rise 温升</b>   | 15 K (27°F) at nominal coil voltage   |
| <b>Max. temperature 最大温度</b>   | 155°C (311°F) - class F               |

|  |  |
|--|--|
| <b>GENERAL DATA 基本参数</b>   |  |
| <b>Life Expectancy 预期寿命</b><br>mechanical<br>electrical                        | (minimum operations)<br>1 x 10 <sup>6</sup><br>AZSR235: 5 x 10 <sup>4</sup> at 35 A 250 VAC resistive<br>AZSR250: 5 x 10 <sup>4</sup> at 50 A 250 VAC resistive  |
| <b>Operate Time 吸合时间</b>   | 40 ms (typ.) at nominal coil voltage   |
| <b>Release Time 释放时间</b>   | 5 ms (typ.) at nominal coil voltage, without coil suppression<br><br>(at sea level for 1 min.)<br>5000 VRMS coil to contact<br>2500 VRMS between contact sets<br>2500 VRMS between open contacts   |
| <b>Dielectric Strength 介电耐压</b><br>coil to load contacts<br>open load contacts | 5000 VRMS coil to contact<br>2500 VRMS between contact sets<br>2500 VRMS between open contacts   |
| <b>Insulation Resistance 绝缘电阻</b>  | 1000 MΩ (min.) at 20°C, 500 VDC 50% RH   |
| <b>Isolation spacing 绝缘间隙</b>  | > 10 mm  |
| <b>Insulation 绝缘</b>   | C250<br>Overvoltage category: III<br>Pollution degree: 3<br>Nominal voltage: 250 VAC<br>(according to DIN VDE 0110, IEC 60664-1)<br>Double insulation according to IEC 60730-1 (VDE 0631, part 1)<br>Reinforced insulation according to IEC 60335-1 (VDE 0700, part 1) |
| <b>Temperature Range 温度范围</b><br>operating                                     | -40°C (-40°F) to 85°C (185°F) ambient<br>(at nominal coil voltage)   |
| <b>Vibration resistance 抗振动</b>  | 1.5 mm (0.062") DA at 10-55 Hz   |
| <b>Shock 冲击</b>  | 10 g   |
| <b>Enclosure 封装</b><br>type<br>material group<br>flamability                   | PA<br>RT II, flux proof<br>II<br>UL94 V-0  |
| <b>Terminals 端子</b>  | Tinned copper alloy, P. C.   |
| <b>Soldering</b><br>max. temperature<br>max. time                              | 270 °C (518°F)<br>5 seconds  |
| <b>Dimensions 尺寸</b><br>length<br>width<br>height                              | 48.0 mm (1.85")<br>25.0 mm (0.98")<br>49.2 mm (1.94")  |
| <b>Weight 重量</b>   | 105 grams (approx.)  |
| <b>Compliance 符合法规</b>   | IEC 61810-1, UL 508, RoHS, REACH   |
| <b>Packing unit in pcs 包装</b>  | 10 per inner carton / 100 per carton box   |

**COIL VOLTAGE SPECIFICATIONS 线圈参数**

| Nominal Coil VDC | Must Operate VDC | Min. Holding VDC |               | Max. Cont. VDC | Resistance Ohm ± 10% |
|------------------|------------------|------------------|---------------|----------------|----------------------|
|                  |                  | 1 Form A SPSP    | 2 Form A DPST |                |                      |
| 5                | 3.75             | 1.7              | 2.1           | 10.0           | 50                   |
| 9                | 6.75             | 3.1              | 3.8           | 18.0           | 170                  |
| 12               | 9.0              | 4.0              | 5.0           | 24.0           | 300                  |
| 18               | 13.5             | 6.5              | 7.5           | 36.0           | 675                  |
| 24               | 18.0             | 8.0              | 10.0          | 48.0           | 1200                 |

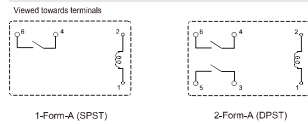
**ORDERING DATA 订货号**



**Example ordering data**

|                 |   |
|-----------------|---|
| AZSR235-2AE-12D | 35 Amp switching, 2 Form A (DPST), 12VDC nominal coil voltage |
| AZSR250-2AE-24D | 50 Amp switching, 2 Form A (DPST), 24VDC nominal coil voltage |
| AZSR250-1AE-12D | 50 Amp switching, 1 Form A (SPST), 12VDC nominal coil voltage |

**WIRING DIAGRAMS 接线图**

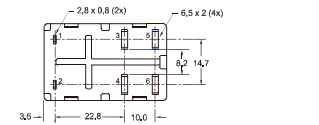
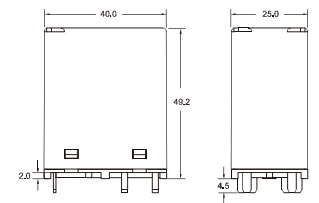


**NOTES**

- Specifications subject to change without notice.
- All values at 20°C (68°F).
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on load terminals.
- Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.

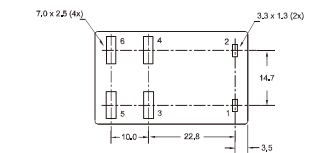
**MECHANICAL DATA 外形尺寸**

Viewed towards terminals. Dimensions in mm. Tolerance: ± 0.25 mm  
Note: Terminals 3 and 5 are not used on 1-Form-A (SPST) versions.



**PC BOARD LAYOUT 脚位图**

Viewed towards terminals.  
Note: Terminals 3 and 5 are not used on 1-Form-A (SPST) versions.



**备注**

- 规格如有变动, 恕不另行通知
- 所有值的测试温度为 20°C (68°F)
- 继电器有可能在小于“最大动作电压”值下吸合
- 提供足够的PCB导电面积以辅助端子散热
- 线圈抑制电路, 如线圈上并联二极管将延长释放时间。

**AZSR165 65 AMP POWER RELAY**

|   |  |  |
|---|--|--|
|  | <b>特征</b>  | <b>FEATURES</b>  |
|   | <ul style="list-style-type: none"> <li>最大80A触点切换能力</li> <li>线圈额定电压 ≥ 3.0 mm</li> <li>爬电距离 ≥ 10 mm</li> <li>5 kV 介电耐压</li> <li>10 kV 浪涌耐冲击电压</li> <li>UL Class F 绝缘等级(155°C)</li> <li>UL / CUR E365652</li> <li>TÜV B0887930008</li> <li>CQC 17002178200</li> </ul> | <ul style="list-style-type: none"> <li>Up to 80 AP switching capability</li> <li>Wide contact gap of ≥ 3.0 mm</li> <li>Clearance and creepage of ≥ 10 mm</li> <li>5 kV dielectric strength</li> <li>10 kV surge withstand voltage</li> <li>UL Class F insulation(155°C)</li> <li>UL / CUR E365652</li> <li>TÜV B0887930008</li> <li>CQC 17002178200</li> </ul> |

**CONTACTS 触点参数**

|   |   |
|---|---|
| <b>Arrangement 触点形式</b>   | SPST-NO. (1 Form A)   |
| <b>Ratings (max.) 负载 (最大)</b><br>switched power<br>switched current<br>continuous current<br>switched voltage | (resistive load)<br>43200 VA<br>80A<br>65A<br>650VAC  |
| <b>Rated Loads 认证负载</b><br>UL/CUR/TÜV/CQC   | 80A at 540 VAC, resistive, 85°C, 1k cycles <sup>(1)</sup><br>10 A make - 65 A carry - 10 A break at 690 VAC, resistive, 85°C, 100k cycles <sup>(1)</sup><br>20 A make - 65 A carry - 20 A break at 690 VAC, resistive, 85°C, 30k cycles <sup>(1)</sup><br>20 A make - 65 A carry - 20 A break at 690 VAC, resistive, 85°C, 100k cycles <sup>(1)</sup> |
| <b>Contact material 触点材质</b>  | AgNi - silver nickel <sup>(1)</sup><br>AgSnO <sub>2</sub> - silver tin oxide <sup>(2)</sup>   |
| <b>Contact gap 触点间隙</b>   | ≥ 3.0 mm  |
| <b>Contact resistance 接触电阻</b><br>initial<br>typical  | (load contact)<br>≤ 100 mΩ (at 6V, 1A, voltage drop method)<br>≤ 10 mΩ (at 10A, voltage drop method)<br>< 3 mΩ (at 6V, 1A, voltage drop method)   |

**GENERAL DATA 基本参数**

|  |   |
|--|---|
| <b>Life Expectancy 预期寿命</b><br>mechanical<br>electrical                      | (minimum operations)<br>1 x 10 <sup>9</sup><br>see UL/CUR/TÜV/CQC ratings   |
| <b>Operate Time 吸合时间</b><br>max.<br>typical                                  | (at nominal coil voltage)<br>40 ms<br>< 25ms  |
| <b>Release Time 释放时间</b><br>max.<br>typical                                  | (at nominal coil voltage)<br>10 ms (without coil suppression)<br>< 5 ms (suppression with Z-diode at 2 x Unom.)   |
| <b>Dielectric Strength 介电耐压</b>  | (at sea level for 1 min.)<br>5000 V <sub>RMS</sub> coil to contact<br>2500 V <sub>RMS</sub> between open contacts |
| <b>Surge Voltage 冲击电压</b><br>coil to contact                                 | 10 kV ( at 1.2 x 50µs )   |
| <b>Insulation Resistance 绝缘电阻</b>  | 1000 MΩ (min.) at 23°C, 500 VDC, 50% RH   |
| <b>Creepage 爬电距离</b><br>coil to contact                                      | ≥ 10.0 mm   |
| <b>Clearance 空气间隙</b><br>coil to contact                                     | ≥ 10.0 mm   |
| <b>Temperature Range 温度范围</b><br>operating                                   | (at nominal coil voltage)<br>-40°C (-40°F) to 85°C (185°F)  |
| <b>Vibration resistance 抗震动</b>  | 0.062" (1.5 mm) DA at 10-55 Hz  |
| <b>Shock 冲击</b>  | 10 g  |
| <b>Enclosure 封装</b><br>protection category<br>material group<br>flammability | P.B.T. polyester<br>RT II, flux proof<br>Illa<br>UL94 V-0   |
| <b>Terminals 端子</b>  | Tinned copper alloy, P. C.  |
| <b>Soldering 焊接</b><br>max. temperature<br>max. time                         | 270°C (518°F)<br>5 seconds  |
| <b>Dimensions 尺寸</b><br>length<br>width<br>height                            | 38.0 mm (1.50")<br>33.0 mm (1.30")<br>41.5 mm (1.63")   |
| <b>Weight 重量</b>   | 76 grams (approx.)  |
| <b>Compliance 符合法规</b>   | UL 508, IEC 61810-1, RoHS, REACH  |
| <b>Packing unit in pcs 包装</b>  | 10 per plastic tube / 150 per carton box  |

**COIL 线圈参数**

|   |   |
|---|---|
| <b>Nominal coil DC voltages 线圈额定电压</b>                                  | 6, 9, 12, 24.                           |
| <b>Dropout voltage 释放电压</b>   | ≥ 5% of nominal coil voltage            |
| <b>Holding voltage 保持电压</b>   | ≥ 40% of nominal coil voltage           |
| <b>Coil power 线圈功耗</b><br>nominal<br>holding power<br>at pickup voltage | 2.2 W<br>36mW<br>1.25 W                 |
| <b>Temperature Rise 温升</b>  | 70 K (128°F) at nom. coil voltage, 85°C |
| <b>Max. temperature 最大温度</b>  | Class F insulation - 155°C (311°F)      |

**COIL VOLTAGE SPECIFICATIONS 线圈参数**

| Nominal Coil VDC | Must Operate VDC | Min. Holding VDC | Max. Cont. VDC | Resistance Ohm ± 10% |
|------------------|------------------|------------------|----------------|----------------------|
| 6                | 4.5              | 2.4              | 6.6            | 16.5                 |
| 9                | 6.75             | 3.6              | 9.9            | 37                   |
| 12               | 9                | 4.8              | 13.2           | 65                   |
| 24               | 18               | 9.6              | 26.4           | 260                  |

Note: All values at 23°C (73°F), upright position, terminals downward.  
备注: 所有值是在23°C (73°F)下测试, 垂直位置并且端子向下。

**ORDERING DATA 订货号**

AZSR165-1A-□-□DL

Nominal coil voltage  
See coil voltage specifications table

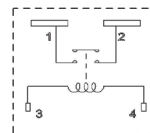
Contact material  
Ni: silver nickel  
E: silver tin oxide

**Example ordering data**

|                 |   |
|-----------------|---|
| AZSR165-1A-12DL | Contact material: silver nickel, 12 VDC nom. coil voltage   |
| AZSR165-1AE-9DL | Contact material: silver tin oxide, 9 VDC nom. coil voltage |

**WIRING DIAGRAMS 接线图**

Viewed towards terminals.  
Note: Provide sufficient PCB cross section on load terminals. Recommended cross section according to IEC 61810-1 at 65A is 16 mm<sup>2</sup>.

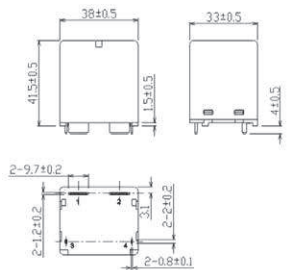


**NOTES**

- Specifications subject to change without notice.
- All values at 23°C (73°F).
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section on load terminals.
- Recommended cross section according to IEC 61810-1 at 65A: 16mm<sup>2</sup>
- Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.

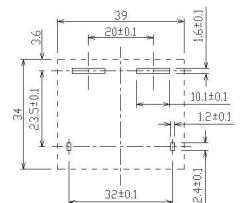
**MECHANICAL DATA 外形尺寸**

Dimensions in mm. Tolerance: ± 0.5 mm unless otherwise stated



**PC BOARD LAYOUT 脚位图**

Recommendation for PC board layout.  
Dimensions in mm. Viewed towards terminals.



**备注**

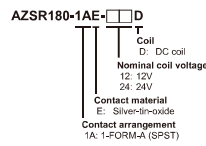
- 规格如有变动, 恕不另行通知
- 所有值的测试温度为 23° C (73° F)。
- 继电器有可能在小于“最大动作电压”值下吸合
- 提供足够的PCB导电截面积以辅助端子散热, 依据IEC 61810-1, 推荐电流达65A时截面积16平方毫米以上
- 线圈抑制电路, 如线圈上串联二极管将延长释放时间。

**AZSR180 80AMP POWER RELAY**

|  |   |  |
|--|---|--|
|  | <b>特征</b>   | <b>FEATURES</b>  |
|  | <ul style="list-style-type: none"> <li>80A触点切换能力</li> <li>宽触点间距 &gt; 2.05 mm</li> <li>额定功率 &lt; 100 mW</li> <li>介电耐压 5000 VRMS</li> <li>绝缘程高大于 10 mm</li> <li>双重绝缘, IEC 60730-1 (VDE 0631, part 1)</li> <li>强化绝缘, IEC 60335-1 (VDE 0700, part 1)</li> <li>UL, CUR E44211</li> <li>VDE certificate 40044305</li> </ul> | <ul style="list-style-type: none"> <li>80 Amp switching</li> <li>Wide contact gap &gt; 2.05 mm</li> <li>Rating power &lt; 100 mW</li> <li>Dielectric strength 5000 VRMS</li> <li>Isolation spacing greater than 10 mm</li> <li>Double insulation, IEC 60730-1 (VDE 0631, part 1)</li> <li>Reinforced insulation, IEC 60335-1 (VDE 0700, part 1)</li> <li>UL, CUR E44211</li> <li>VDE certificate 40044305</li> </ul> |

| CONTACTS 触点参数   |   | GENERAL DATA 基本参数   |  |
|---|---|---|--|
| Arrangement 触点形式  | SPST(1 Form A)  | (minimum operations)  |  |
| Ratings (max.)<br>switched power<br>switched current<br>continuous current<br>switched voltage                                | (resistive load)<br>2400 W or 22160 VA<br>80 A (1k cycles)<br>80 A<br>150 VDC* or 440 VAC<br>* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.              | Life Expectancy 预期寿命<br>electrical                                      | 1 x 10 <sup>6</sup><br>1 x 10 <sup>3</sup> at 80 A 277 VAC resistive<br>3 x 10 <sup>4</sup> at 30 A 283 VAC AC-7a  |
| Rated Loads 认证负载  | 80 A at 277 VAC, resistive load, 1k cycles<br>80 A at 277 VAC, resistive load, 1k cycles, 85°C<br>30 A at 263 VAC, AC-7a, 30k cycles, 85°C  | Operate Time 吸合时间   | 40 ms (typ.) at nominal coil voltage   |
| Contact material 触点材质   | AgSnO <sub>2</sub> -silver- $\text{In}$ -oxide  | Release Time 释放时间   | 5 ms (typ.) at nominal coil voltage, without coil suppression  |
| Contact gap   | > 2.05 mm   | Dielectric Strength 介电耐压<br>coil to load contacts<br>open load contacts | 5000 VRMS (at sea level for 1 min.)<br>5000 VRMS coil to contact<br>2500 VRMS between open contacts  |
| Contact resistance<br>接触电阻  | < 50 m $\Omega$   | Insulation Resistance<br>绝缘电阻   | 1000 M $\Omega$ (min.) at 20°C, 500 VDC 50% RH   |
| <b>COIL 线圈参数</b>  |   | Isolation spacing 绝缘间距  | > 10 mm  |
| Nominal coil DC voltages<br>线圈额定电压  | 12.0 VDC 24.0 VDC<br>must operate voltage<br>9.0 VDC 18.0 VDC<br>min. holding voltage<br>4.0 VDC 8.0 VDC<br>max. continuous voltage<br>24.0 VDC 48.0 VDC<br>coil resistance<br>300 $\Omega$ $\pm$ 10% 1200 $\Omega$ $\pm$ 10% | Insulation 绝缘   | C250<br>Overvoltage category: III<br>Pollution degree: 3<br>Nominal voltage: 250 VAC<br>(according to DIN VDE 0110, IEC 60664-1)<br>Double insulation according to IEC 60730-1 (VDE 0631, part 1)<br>Reinforced insulation according to IEC 60335-1 (VDE 0700, part 1) |
| Dropout voltage 释放电压  | > 5% of nominal coil voltage  | Temperature Range 温度范围<br>operating                                     | -40°C (-40°F) to 85°C (185°F) ambient<br>(at nominal coil voltage)   |
| Power at pickup voltage   | 270 mW (typ.)   | Vibration resistance 抗振动  | 1.5 mm (0.062") DA at 10-55 Hz   |
| Holding power   | < 100 mW  | Shock 冲击  | 10 g   |
| Max. continuous dissipation   | 2.0 W at 20°C (68°F) ambient  | Enclosure 封装  | PA   |
| Temperature Rise 温升   | 15 K (27°F) at nominal coil voltage   | Terminals 端子  | Tinned copper alloy, P. C.   |
| Max. temperature 最大温度   | 155°C (311°F) - class F   | Soldering<br>max. temperature<br>max. time                              | 270°C (518°F)<br>5 seconds   |
| <b>NOTES</b>  |   | Dimensions 尺寸<br>length<br>width<br>height                              | 40.0 mm (1.57")<br>25.0 mm (0.98")<br>49.2 mm (1.94")  |
| 1. All values at 20°C (68°F).   |   | Weight 重量   | 105 grams (approx.)  |
| 2. Relay may pull in with less than "Must Operate" value.   |   | Compliance 符合法规   | IEC 61810-1, UL 508, RoHS, REACH   |
| 3. Provide sufficient PCB cross section as heat spreader on terminals.<br>Recommended PCB cross section > 16mm <sup>2</sup> . |   | Packing unit in pcs 包装  | 10 per inner carton / 100 per carton box   |
| 4. Specifications subject to change without notice.   |   |   |  |

**ORDERING DATA 订货号**

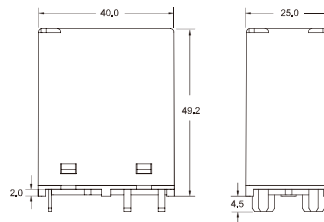


**Orderable parts:**

|                 |   |
|-----------------|---|
| AZSR180-1AE-12D | Arrangement 1-FORM-A, contact material: silver- $\text{In}$ -oxide, coil voltage: 12VDC |
| AZSR180-1AE-24D | Arrangement 1-FORM-A, contact material: silver- $\text{In}$ -oxide, coil voltage: 24VDC |

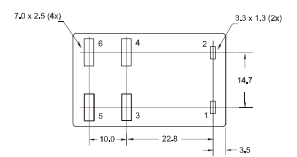
**MECHANICAL DATA 外形尺寸**

Viewed towards terminals. Dimensions in mm. Tolerance:  $\pm$  0.25 mm



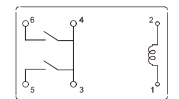
**PC BOARD LAYOUT 脚位图**

Viewed towards terminals.



**WIRING DIAGRAM 接线图**

Viewed towards terminals.



**Note:**  
To ensure proper operation of the relay, a connection on the PCB of pins 3 and 4 and also of pins 5 and 6 is necessary. Not doing so may result in malfunction of the relay.  
Recommended PCB cross section > 16 mm<sup>2</sup>.

**备注**

- 所有值的测试温度为 20°C (68°F)。
- 继电器有可能在小于“最大动作电压”值下吸合。
- 提供足够的PCB导电截面积以辅助端子散热。
- 规格如有变动, 恕不另行通知。

**备注**

- 为了确保继电器的正常工作, PCB上引脚3和引脚4, 以及引脚5和引脚6必须连接起来。不这样做可能会导致继电器故障。推荐PCB截面 > 16mm<sup>2</sup>。

**AZSR190 90/100 AMP POWER RELAY**

|  |   |   |
|--|---|---|
|  | <b>特征</b>   | <b>FEATURES</b>   |
|  | <ul style="list-style-type: none"> <li>最大100A 峰值切换能力</li> <li>高触点间隙 ≥ 3.6 mm</li> <li>爬电距离 ≥ 10 mm</li> <li>5 kV 有源前压, 10 kV 浪涌冲击电压</li> <li>UL Class F 绝缘等级 (155°C)</li> <li>UL E365652</li> <li>TÜV B0887930008</li> <li>CQC 17002178200</li> </ul> | <ul style="list-style-type: none"> <li>Up to 100 Amp switching capability</li> <li>Wide contact gap of ≥ 3.6 mm</li> <li>Clearance and creepage of ≥ 10 mm</li> <li>5 kV dielectric strength, 10 kV surge withstand voltage</li> <li>UL Class F insulation (155°C)</li> <li>UL E365652</li> <li>TÜV B0887930008</li> <li>CQC 17002178200</li> </ul> |

**CONTACTS 触点参数**

|   |  |
|---|--|
| <b>Arrangement 触点形式</b>                           | SPST-4I, O, (1 Form A)   |
| <b>Ratings (最大) 负载 (最大) standard version/标准版本</b> | (resistive load)<br>44000 VA<br>switched power 切换功率<br>90 A<br>switched current 切换电流   |
| <b>high current version 高电流版本</b>                 | 89000 VA<br>switched power 切换功率<br>100 A<br>switched current 切换电流<br>800 VAC<br>switched voltage 切换电压  |
| <b>Rated Loads 认证负载 UL/ICUR/</b>                  | 55A at 480 VAC, resistive, 85°C, 50k cycles <sup>(1)</sup><br>55A at 690 VAC, resistive, 85°C, 20k cycles <sup>(2)</sup><br>55A at 800 VAC, resistive, 85°C, 1k cycles <sup>(1)(3)</sup><br>55A at 690 VAC, resistive, 85°C, 30k cycles <sup>(2)</sup><br>80A at 277 VAC, resistive, 85°C, 10k cycles <sup>(2)</sup>   |
| <b>high current version 高电流版本</b>                 | 100A at 480 VAC, resistive, 85°C, 1k cycles <sup>(1)</sup><br>100A at 690 VAC, resistive, 85°C, 1k cycles <sup>(2)</sup>   |
| <b>TÜVQCQC</b>                                    | 30A at 480 VAC, resistive, 85°C, 50k cycles <sup>(1)</sup><br>55A at 480 VAC, resistive, 85°C, 30k cycles <sup>(2)</sup><br>55A at 690 VAC, resistive, 85°C, 20k cycles <sup>(2)</sup><br>55A at 690 VAC, resistive, 85°C, 30k cycles <sup>(2)</sup><br>55A at 690 VAC, resistive, 85°C, 10k cycles <sup>(1)(3)</sup><br>80A at 277 VAC, resistive, 85°C, 10k cycles <sup>(2)</sup><br>90A at 480 VAC, resistive, 85°C, 1k cycles <sup>(1)</sup> |
| <b>high current version 高电流版本</b>                 | 100A at 480 VAC, resistive, 85°C, 1k cycles <sup>(1)</sup><br>100A at 690 VAC, resistive, 85°C, 1k cycles <sup>(2)</sup>   |
| <b>Contact material 触点材质</b>                      | AgNi + silver nickel <sup>(1)</sup><br>AgSnO <sub>2</sub> + silver tin oxide <sup>(2)</sup>  |
| <b>Contact gap 触点间隙</b>                           | ≥ 3.6 mm   |
| <b>Contact resistance 接触电阻</b>                    | (load contact)<br>≤ 100 mΩ (at 6V, 1A, voltage drop method)<br>≤ 10 mΩ (at 10A, voltage drop method)<br>≤ 3 mΩ (at 6V, 1A, voltage drop method)  |

**COIL 线圈参数**

|  |   |
|--|---|
| <b>Nominal coil DC voltages 线圈额定电压</b> | 6, 9, 12, 24.   |
| <b>Dropout voltage 释放电压</b>            | ≥ 5% of nominal coil voltage  |
| <b>Holding voltage 保持电压</b>            | ≥ 40% of nominal coil voltage   |
| <b>Coil power 线圈功耗</b>                 | (at 23°C)<br>nominal<br>1.9 W<br>holding power<br>310mW<br>at pickup voltage<br>1.1 W |
| <b>Temperature Rise 温升</b>             | 70 K (126°F) at nom. coil voltage, 85°C   |
| <b>Max. temperature 最大温度</b>           | Class F insulation + 155°C (311°F)  |

**GENERAL DATA 基本参数**

|                                   |  |
|-----------------------------------|--|
| <b>Life Expectancy 预期寿命</b>       | (minimum operations)<br>mechanical<br>1 x 10 <sup>6</sup><br>electrical<br>see UL/CUR/TÜV/CQC ratings  |
| <b>Operate Time 吸合时间</b>          | 40 ms (max.) at nominal coil voltage   |
| <b>Release Time 释放时间</b>          | 10 ms (max.) at nominal coil voltage, without coil suppression   |
| <b>Dielectric Strength 介电耐压</b>   | (at sea level for 1 min.)<br>coil to load contacts<br>5000 Vrms<br>open load contacts<br>2500 Vrms   |
| <b>Surge Voltage 冲击电压</b>         | 10kV (at 1.2 x 50µs)<br>coil to contacts   |
| <b>Insulation Resistance 绝缘电阻</b> | 1000 MΩ (min.) at 23°C, 500 VDC, 50% RH  |
| <b>Creepage 爬电距离</b>              | coil to contact<br>≥ 10.0 mm   |
| <b>Clearance 空气间隙</b>             | coil to contact<br>≥ 10.0 mm   |
| <b>Temperature Range 温度范围</b>     | (at nominal coil voltage)<br>operating<br>-40°C (-40°F) to 85°C (185°F)  |
| <b>Vibration resistance 抗振动</b>   | 0.062" (1.5 mm) DA at 10-55 Hz   |
| <b>Shock 冲击</b>                   | 10 g   |
| <b>Enclosure 封装</b>               | P.B.T. polyester<br>protection category<br>RT II, flux proof<br>material group<br>IIla<br>UL94 V-0<br>flammability                               |
| <b>Terminals 端子</b>               | Tinned copper alloy, P. C.   |
| <b>Soldering</b>                  | max. temperature<br>270 °C (518°F)<br>max. time<br>5 seconds   |
| <b>Dimensions 尺寸</b>              | length<br>38.0 mm (1.50")<br>width<br>33.0 mm (1.30")<br>height<br>standard version<br>43.0 mm (1.69")<br>low profile version<br>41.5 mm (1.63") |
| <b>Weight 重量</b>                  | 85 grams (approx.)   |
| <b>Compliance 符合法规</b>            | UL 508, IEC 61810-1, RoHS, REACH   |
| <b>Packing unit in pcs 包装</b>     | 10per plastic tube / 150 per carton box  |

**COIL VOLTAGE SPECIFICATIONS 线圈参数**

| Nominal Coil VDC | Must Operate VDC | Min. Holding VDC | Max. Cont. VDC | Resistance Ohm ± 10% |
|------------------|------------------|------------------|----------------|----------------------|
| 6                | 4.5              | 2.4              | 6.6            | 18.8                 |
| 9                | 6.75             | 3.6              | 9.9            | 42.2                 |
| 12               | 9                | 4.8              | 13.2           | 75                   |
| 24               | 18               | 9.6              | 28.4           | 300                  |

Note: All values at 23°C (73°F), upright position, terminals downward.  
备注: 所有值是在23°C (73°F)下测试, 垂直位置并且端子向下。

**ORDERING DATA 订货号**

**AZSR190-1A-12DL**

Height  
n: standard height (43.0mm)  
L: low profile (41.5mm)  
Nominal coil voltage  
See coil voltage specifications table

Contact material  
n: silver nickel  
E: silver tin oxide

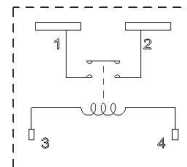
Switching capacity  
n: standard version  
T: high current version

**Example ordering data**

|                 |   |
|-----------------|---|
| AZSR190-1A-12DL | Standard version, contact material: silver nickel, 12 VDC nominal coil voltage, low profile         |
| AZSR190T-1A-12D | High current version, contact material: silver nickel, 12 VDC nominal coil voltage, standard height |
| AZSR190-1AE-9DL | Standard version, contact material: silver tin oxide, 9 VDC nominal coil voltage, low profile       |

**WIRING DIAGRAMS 接线图**

Viewed towards terminals.  
Note: Provide sufficient PCB cross section on lead terminals. Recommended cross section according to IEC 61810-1 at 90A is 35mm<sup>2</sup>.

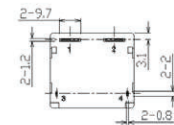
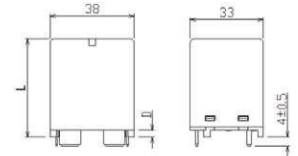


**NOTES**

- Specifications subject to change without notice.
- All values at 20°C (68°F) unless otherwise stated.
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section on lead terminals. Recommended cross section according to IEC 61810-1 at 90A: 35mm<sup>2</sup>.
- Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.

**MECHANICAL DATA 外形尺寸**

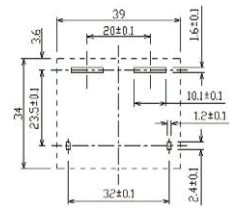
Dimensions in mm. Tolerance: ±0.5mm



| Version     | L    | D   |
|-------------|------|-----|
| Standard    | 43.0 | 3.0 |
| Low profile | 41.5 | 1.5 |

**PC BOARD LAYOUT 脚位图**

Dimensions in mm. Tolerance: ±0.1mm unless otherwise stated  
Viewed towards terminals.



**备注**

- 规格如有变动, 恕不另行通知
- 所有值的测试温度为 20°C (68°F) 除非另有说明
- 继电器有可能在小于“最大动作电压”值下吸合
- 提供足够的PCB导电截面积以辅助端子散热, 依据IEC 61810-1, 推荐电流达90A时截面积35平方毫米以上
- 线圈抑制电路, 如线圈上并联二极管将延长释放时间。

**AZSR1160 160 AMP POWER RELAY**

|  |  |   |
|--|--|---|
|  | <b>特征</b>  | <b>FEATURES</b>   |
|  | <ul style="list-style-type: none"> <li>160A 触点切换能力</li> <li>触点间距: <math>\geq 3.2\text{mm}</math></li> <li>介电强度: 4 kVRMS</li> <li>10kV 浪涌</li> <li>UL class F 绝缘等级</li> <li>UL / CUR E365652</li> <li>TUV B0887930013</li> <li>CQC 18002210952</li> </ul> | <ul style="list-style-type: none"> <li>160 Amp switching capability</li> <li>Contact gap: <math>\geq 3.2\text{mm}</math></li> <li>Dielectric strength 4 kVRMS</li> <li>10kV Surge</li> <li>UL class F insulation</li> <li>UL / CUR E365652</li> <li>TUV B0887930013</li> <li>CQC 18002210952</li> </ul> |

**CONTACTS 触点参数**

|   |   |
|---|---|
| Arrangement 触点形式  | SPST-NO, (1 Form A)   |
| Ratings (max.) 额定 (最大) switched power 切换功率<br>switched current 切换电流<br>continuous current 连续电流<br>switched voltage 切换电压 | (resistive load)<br>110400 VA<br>160 A<br>690 VAC<br>690 VAC  |
| Rated Loads 认证负载<br><b>ULCURTUV/CQC</b>   | 160A at 690VAC, resistive, 85°C, 1k cycles<br>60 A Making, 160A carrying, 60A Breaking, at 690 VAC, resistive, 85°C, 30k cycles |
| Contact material 触点材质   | Ag3SnO <sub>2</sub> (silver tin oxide)  |
| Contact gap 触点间距  | 3.6 mm  |
| Contact resistance 接触电阻<br>initial<br>typical   | (load contact)<br>$\leq 100\text{ m}\Omega$<br>$< 10\text{ m}\Omega$  |

**GENERAL DATA 基本参数**

|   |   |
|---|---|
| Life Expectancy 预期寿命<br>mechanical<br>electrical                        | (minimum operations)<br>$1 \times 10^6$<br>see UL/CUR/TUV/CQC ratings |
| Operate Time 吸合时间   | 40 ms (max.) at nominal coil voltage                                  |
| Release Time 释放时间   | 15 ms (max.) at nominal coil voltage, without coil suppression        |
| Dielectric Strength 介电耐压<br>coil to load contacts<br>open load contacts | (at sea level for 1 min.)<br>4000 Vrms<br>2000 Vrms                   |
| Surge Voltage 冲击电压  | 10kV @1.2/50 $\mu$ s (coil to contacts)                               |
| Insulation Resistance 绝缘电阻  | 1000 M $\Omega$ (min.) at 23°C, 500 VDC, 50% RH                       |
| Temperature Range 温度范围<br>operating                                     | (at nominal coil voltage)<br>-40°C (-40°F) to 85°C (185°F)            |
| Vibration resistance 抗振动  | 0.062" (1.5 mm) DA at 10-55 Hz  |
| Shock 冲击  | 10 g  |
| Enclosure 封装<br>protection category<br>material group<br>flammability   | P.B.T, polyester<br>RT II, flux proof<br>Illa<br>UL94 V-0             |
| Terminals 端子  | Tinned copper alloy, P. C.  |
| Soldering 焊接<br>max. temperature<br>max. time                           | 270 °C<br>5 s   |
| Dimensions 尺寸<br>length<br>width<br>height                              | 63.3 mm (2.49")<br>62 mm (2.44")<br>41.7 mm (1.64")                   |
| Weight 重量   | 265 grams (approx.)   |
| Compliance 符合法规   | UL 508, IEC 61810-1, RoHS, REACH                                      |
| Packing unit in pcs 包装  | 5 per plastic tray / 50 per carton box                                |

**COIL 线圈参数**

|   |   |
|---|---|
| Nominal coil DC voltages 线圈额定电压                                 | 6, 9, 12, 24, 48                        |
| Dropout voltage 释放电压  | > 5% of nominal coil voltage            |
| Holding voltage 保持电压  | > 40% of nominal coil voltage           |
| Coil power 线圈功耗<br>nomina<br>holding power<br>at pickup voltage | (at 23 °C)<br>3 W<br>480 mW<br>1.7W     |
| Temperature Rise 温升   | 70 K (126°F) at nom. coil voltage, 85°C |
| Max. temperature 最大温度   | Class F insulation - 155°C (311°F)      |

**COIL VOLTAGE SPECIFICATIONS 线圈参数**

| Nominal Coil VDC | Must Operate VDC | Min. Holding VDC | Max. Cont. VDC | Resistance Ohm $\pm$ 10% |
|------------------|------------------|------------------|----------------|--------------------------|
| 6                | 4.5              | 2.4              | 6.6            | 12                       |
| 9                | 6.7              | 3.6              | 9.9            | 27                       |
| 12               | 9.0              | 4.8              | 13.2           | 48                       |
| 24               | 18.0             | 9.6              | 26.4           | 192                      |
| 48               | 36.0             | 19.2             | 52.8           | 768                      |

Note: All values at 23°C (73°F), upright position, terminals downward.  
备注: 所有值是在23°C (73°F)下测试, 垂直位置并且端子向下。

**ORDERING DATA 订货号**

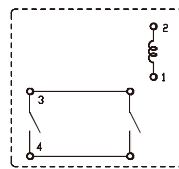
**AZSR1160-1AE-□□D**  
Nominal coil voltage  
see coil voltage specifications table

**Example ordering data**

|                  |                  |
|------------------|------------------|
| AZSR1160-1AE-12D | With 12 VDC coil |
|------------------|------------------|

**WIRING DIAGRAMS 接线图**

Viewed towards terminals



**NOTES**

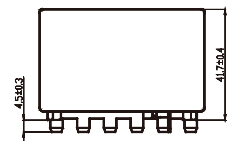
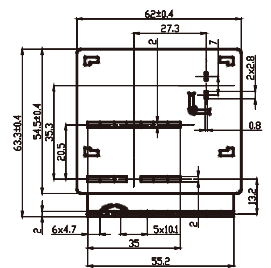
- All values at 23°C (73°F).
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on terminals.
- Specifications subject to change without notice.

**备注**

- 所有值的测试温度为 23°C (73°F)。
- 继电器有可能在小于“最大动作电压”值下吸合
- 提供足够的PCB导电截面积以辅助端子散热
- 规格如有变动, 恕不另行通知

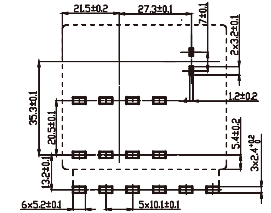
**MECHANICAL DATA 外形尺寸**

Dimensions in mm. Tolerance:  $\pm 0.3\text{mm}$



**PC BOARD LAYOUT 脚位图**

Viewed towards terminals. Dimensions in mm.



**AZSR1180 180 AMP POWER RELAY**

|  |  |  |
|--|--|--|
|  | <b>特征</b>  | <b>FEATURES</b>  |
|  | <ul style="list-style-type: none"> <li>180A触点切换能力</li> <li>触点间距: 3.6 mm</li> <li>介电强度: 4 kV/RMS</li> <li>10kV 浪涌</li> <li>UL class F 绝缘等级</li> <li>UL / CUR E365652</li> <li>TÜV B0887930013</li> <li>CQC 18002210952</li> </ul> | <ul style="list-style-type: none"> <li>180 Amp switching capability</li> <li>Contact gap: 3.6 mm</li> <li>Dielectric strength 4 kV/RMS</li> <li>10kV Surge</li> <li>UL class F insulation</li> <li>UL / CUR E365652</li> <li>TÜV B0887930013</li> <li>CQC 18002210952</li> </ul> |

**CONTACTS 触点参数**

|  |   |
|--|---|
| Arrangement 触点形式   | SPST-1A, 0, (1 Form A)  |
| Ratings (max.) 负载 (最大) switched power 切换功率<br>continuous current 连续电流<br>switched voltage 切换电压 | (resistive load) 阻性负载<br>144000 VA<br>180 A<br>180 A<br>800 VAC   |
| Rated Loads 认证负载<br>ULCUR/TÜV/CQC  | 180A at 800VAC, resistive, 85°C, 1k cycles<br>40 A Making, 180A carrying, 40A Breaking, at 800 VAC, resistive, 85°C, 30k cycles |
| Contact material 触点材质  | AgSnO <sub>2</sub> (silver tin oxide)   |
| Contact gap 触点间距   | 3.6 mm  |
| Contact resistance 接触电阻<br>initial<br>typical  | (load contact)<br>≤ 100 mΩ<br>≤ 3 mΩ  |

**GENERAL DATA 基本参数**

|   |   |
|---|---|
| Life Expectancy 预期寿命<br>mechanical<br>electrical                        | (minimum operations)<br>1 x 10 <sup>7</sup><br>see ULCUR/TÜV/CQC ratings    |
| Operate Time 操作时间   | 40 ms (max.) at nominal coil voltage  |
| Release Time 释放时间   | 15 ms (max.) at nominal coil voltage, without coil suppression              |
| Dielectric Strength 介电耐压<br>coil to load contacts<br>open load contacts | (at sea level for 1 min.)<br>4000 V <sub>ase</sub><br>2600 V <sub>ase</sub> |
| Surge Voltage 冲击电压  | 10kV @ 1.2/50µs (coil to contacts)  |
| Insulation Resistance 绝缘电阻  | 1000 MΩ (min.) at 23°C, 500 VDC, 50% RH                                     |
| Temperature Range 温度范围<br>operating                                     | (at nominal coil voltage)<br>-40°C (-40°F) to 85°C (185°F)                  |
| Vibration resistance 抗震动  | 0.052" (1.5 mm) DA at 10-55 Hz  |
| Shock 冲击  | 10 g  |
| Enclosure 封装<br>protection category<br>material group<br>flammability   | P.B.T. polyester<br>RT II, flux proof<br>IIIa<br>UL94 V-0                   |
| Terminals 端子  | Tinned copper alloy, P. C.  |
| Soldering 焊接<br>max. temperature<br>max. time                           | 270 °C<br>5 s   |
| Dimensions 尺寸<br>length<br>width<br>height                              | 63.3 mm (2.49")<br>62 mm (2.44")<br>41.7 mm (1.64")                         |
| Weight 重量   | 265 grams (approx.)   |
| Compliance 符合性  | UL 508, IEC 61810-1, RoHS, REACH  |
| Packing unit in pcs 包装  | 5 per plastic tray / 50 per carton box                                      |

**COIL 线圈参数**

|  |   |
|--|---|
| Nominal coil DC voltages 线圈额定电压                                  | 6, 9, 12, 24, 48                        |
| Dropout voltage 释放电压   | > 5% of nominal coil voltage            |
| Holding voltage 保持电压   | > 40% of nominal coil voltage           |
| Coil power 线圈功耗<br>nominal<br>holding power<br>at pickup voltage | (at 23 °C)<br>3 W<br>480 mW<br>1.7 W    |
| Temperature Rise 温升  | 70 K (126°F) at nom. coil voltage, 85°C |
| Max. temperature 最大温度  | Class F insulation - 155°C (311°F)      |

**COIL VOLTAGE SPECIFICATIONS 线圈参数**

| Nominal Coil VDC | Must Operate VDC | Min. Holding VDC | Max. Cont. VDC | Resistance Ohm ± 10% |
|------------------|------------------|------------------|----------------|----------------------|
| 6                | 4.5              | 2.4              | 6.6            | 12                   |
| 9                | 6.7              | 3.6              | 9.9            | 27                   |
| 12               | 9.0              | 4.8              | 13.2           | 48                   |
| 24               | 18.0             | 9.6              | 26.4           | 192                  |
| 48               | 36.0             | 19.2             | 52.8           | 768                  |

Note: All values at 23°C (73°F), upright position, terminals downward.  
备注: 所有值是在23°C (73°F)下测试, 垂直位置并且端子向下。

**ORDERING DATA 订货号**

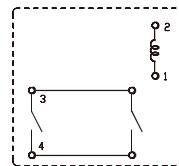
AZSR1180-1AE-□□D  
Nominal coil voltage  
see coil voltage specifications table

**Example ordering data**

|                  |                  |
|------------------|------------------|
| AZSR1180-1AE-12D | With 12 VDC coil |
|------------------|------------------|

**WIRING DIAGRAMS 接线图**

Viewed towards terminals



**NOTES**

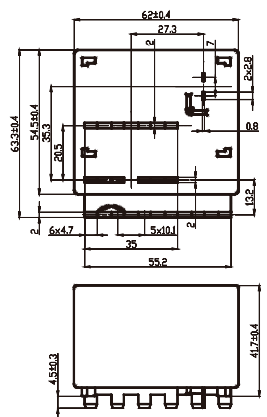
- All values at 23°C (73°F).
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on terminals.
- Specifications subject to change without notice.

**备注**

- 所有值的测试温度为 23°C (73°F)。
- 继电器有可能在小于“最大动作电压”值下吸合。
- 提供足够的PCB导电截面积以辅助端子散热。
- 规格如有变动, 恕不另行通知。

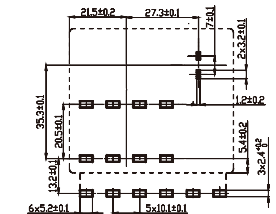
**MECHANICAL DATA 外形尺寸**

Dimensions in mm. Tolerance: ±0.3mm



**PC BOARD LAYOUT 脚位图**

Viewed towards terminals. Dimensions in mm.



AZSR1200 200 AMP POWER RELAY

|  |   |  |  |
|--|---|--|--|
|  |  | <b>特征</b> <ul style="list-style-type: none"> <li>200A 触点切换能力</li> <li>触点间距: 3.6 mm</li> <li>介电强度: 4 kV RMS</li> <li>10kV 抗浪涌</li> <li>UL class F 绝缘等级</li> <li>UL / CUR E365652</li> <li>TUV B0887930013</li> <li>CQC 18002210952</li> </ul> | <b>FEATURES</b> <ul style="list-style-type: none"> <li>200 Amp switching capability</li> <li>Contact gap: 3.6 mm</li> <li>Dielectric strength 4 kV RMS</li> <li>10kV Surge</li> <li>UL class F insulation</li> <li>UL / CUR E365652</li> <li>TUV B0887930013</li> <li>CQC 18002210952</li> </ul> |
|--|---|--|--|

CONTACTS 触点参数

|  |   |
|--|---|
| Arrangement 触点形式   | SPST-NO, (1 Form A)   |
| Ratings (max.) 负载 (最大)<br>switched power 切换功率<br>switched current 切换电流<br>continuous current 连续电流<br>switched voltage 切换电压 | (resistive load) 阻性负载<br>160000 VA<br>200 A<br>200 A<br>800 VAC   |
| Rated Loads 认证负载<br>UL/CUR/TUV/CQC   | 200A at 800VAC, resistive, 85°C, 1k cycles<br>40 A Making, 200A carrying, 40A Breaking,<br>at 800<br>VAC, resistive, 85°C, 30k cycles |
| Contact material 触点材质  | AgSnO <sub>2</sub> (silver tin oxide)   |
| Contact gap 触点间距   | 3.6 mm  |
| Contact resistance 接触电阻<br>initial<br>typical  | (load contact)<br>≤ 100 mΩ<br>< 10 mΩ   |

GENERAL DATA 基本参数

|   |   |
|---|---|
| Life Expectancy 预期寿命<br>Mechanical<br>Electrical                        | (minimum operations)<br>1 x 10 <sup>8</sup><br>see UL/CUR/TUV/CQC ratings |
| Operate Time 动作时间   | 40 ms (max.) at nominal coil voltage                                      |
| Release Time 释放时间   | 15 ms (max.) at nominal coil voltage, without coil suppression            |
| Dielectric Strength 介电耐压<br>coil to load contacts<br>open load contacts | (at sea level for 1 min.)<br>4000 V <sub>as</sub><br>2600 V <sub>as</sub> |
| Surge Voltage 冲击电压  | 10kV @1.2/50µs (coil to contacts)   |
| Insulation Resistance 绝缘电阻  | 1000 MΩ (min.) at 23°C, 50% VDC, 50% RH                                   |
| Temperature Range 温度范围<br>Operating                                     | (at nominal coil voltage)<br>-40°C (-40°F) to 85°C (185°F)                |
| Vibration resistance 抗振动  | 0.062" (1.5 mm) DA at 10-55 Hz  |
| Shock 冲击  | 10 g  |
| Enclosure 封装<br>protection category<br>material group<br>flammability   | P.B.T., polyester<br>RT II, flux proof<br>I IIIa<br>UL94 V-0              |
| Terminals 端子  | Tinned copper alloy, P. C.  |
| Soldering 焊接<br>max. temperature<br>max. time                           | 270 °C<br>5 s   |
| Dimensions 尺寸<br>length<br>width<br>height                              | 63.3 mm (2.49")<br>62 mm (2.44")<br>41.7 mm (1.64")                       |
| Weight 重量   | 265 grams (approx.)   |
| Compliance 符合法规   | UL 508, IEC 61810-1, RoHS, REACH  |
| Packing unit in pcs 包装  | 5 per plastic tray / 50 per carton box                                    |

COIL 线圈参数

|  |   |
|--|---|
| Nominal coil DC voltages<br>线圈额定电压                               | 6, 9, 12, 24, 48                        |
| Dropout voltage 释放电压   | > 5% of nominal coil voltage            |
| Holding voltage 保持电压   | > 40% of nominal coil voltage           |
| Coil power 线圈功耗<br>nominal<br>holding power<br>at pickup voltage | (at 23 °C)<br>3 W<br>480 mW<br>1.7 W    |
| Temperature Rise 温升  | 70 K (126°F) at nom. coil voltage, 85°C |
| Max. temperature 最大温度  | Class F insulation - 155°C (311°F)      |

COIL VOLTAGE SPECIFICATIONS 线圈参数

| Nominal Coil VDC | Must Operate VDC | Min. Holding VDC | Max. Cont. VDC | Resistance Ohm ± 10% |
|------------------|------------------|------------------|----------------|----------------------|
| 6                | 4.5              | 2.4              | 6.6            | 12                   |
| 9                | 6.7              | 3.6              | 9.9            | 27                   |
| 12               | 9.0              | 4.8              | 13.2           | 48                   |
| 24               | 18.0             | 9.6              | 26.4           | 192                  |
| 48               | 36.0             | 19.2             | 52.8           | 768                  |

Note: All values at 23°C (73°F), upright position, terminals downward.  
备注: 所有值是在23°C (73°F)下测试, 直立位置并且端子向下。

ORDERING DATA 订货号

AZSR1200-1AE-□ D

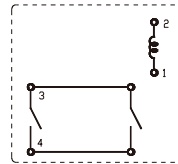
Nominal coil voltage  
see coil voltage specifications table

Example ordering data

|                  |                  |
|------------------|------------------|
| AZSR1200-1AE-12D | With 12 VDC coil |
|------------------|------------------|

WIRING DIAGRAMS 接线图

Viewed towards terminals



NOTES

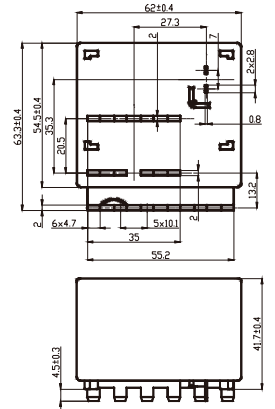
- All values at 23°C (73°F).
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on terminals.
- Specifications subject to change without notice.

备注

- 所有值的测试温度为 23 °C (73 °F)。
- 继电器有可能在小于“最大动作电压”值下吸合
- 提供足够的PCB导电截面积以辅助端子散热
- 规格如有变动, 恕不另行通知

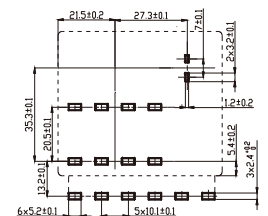
MECHANICAL DATA 外形尺寸

Dimensions in mm. Tolerance: ±0.3mm



PC BOARD LAYOUT 脚位图

Viewed towards terminals. Dimensions in mm.





**AZEV132 32 AMP POWER RELAY**

|   |   |  |
|---|---|--|
|  | <b>特征</b><br>• 32A 触点切换能力<br>• 具有独立的常开常闭触点用于监测触点粘连<br>• 抗短路电流1500A<br>• 触点间距≥2.25 mm<br>• 介电耐压 4 kV RMS<br>• UL / CUR E365652<br>• TÜV B0887930014<br>• CQC 19002216104 | <b>FEATURES</b><br>• 32 Amp nominal switching capability<br>• Isolated N.C., signal contact for welding monitoring<br>• Withstands up to 1500 Amp short circuit current<br>• Wide contact gap of ≥ 2.25 mm<br>• Dielectric strength 4 kV RMS<br>• UL / CUR E365652<br>• TÜV B0887930014<br>• CQC 19002216104 |
|   | CQC<br>TÜV<br>RoHS  |  |

**CONTACTS 触点参数**

|   |  |
|---|--|
| Arrangement 触点形式<br>load contact<br>signal contact  | SPST-NO, (1 Form A)<br>SPST-NC, (1 Form B) coupled to load contact   |
| Ratings (max.) 负载 (最大)<br>switched power 切换功率<br>switched current 切换电流<br>continuous current 连续电流<br>switched voltage 切换电压<br>signal contact 信号触点 | (resistive load) 阻性负载<br>12800 VA<br>32 A (40 A @ 45°C)<br>400 VAC<br>10 mA at 12 VDC  |
| Rated Loads 认证负载<br>UL/CUR<br>load contact<br>signal contact<br>TÜV<br>load contact<br>signal contact   | 32 A at 277 VAC, resistive, 85°C, 50k cycles<br>40 A at 277 VAC, resistive, 45°C, 6k cycles<br>10 mA at 12 VDC, 85°C, 50k cycles<br>32 A at 400 VAC, resistive, 85°C, 50k cycles<br>40 A at 277 VAC, resistive, 45°C, 6k cycles<br>10 mA at 12 VDC, 85°C, 50k cycles |
| Contact material 触点材质<br>load contact<br>signal contact   | Ag <sub>2</sub> SnO <sub>3</sub> (silver tin oxide)<br>AgNi+Au (silver nickel, gold plated)  |
| Contact gap 触点间隙<br>load contact  | ≥ 2.25 mm  |
| Contact resistance 接触电阻<br>initial<br>typical   | (load contact)<br>≤ 50 mΩ<br>< 3 mΩ  |

**COIL 线圈参数**

|  |   |
|--|---|
| Nominal coil DC voltages<br>线圈额定电压                               | 5, 9, 12, 24, 48                        |
| Dropout voltage 释放电压   | > 5% of nominal coil voltage            |
| Holding voltage 保持电压   | > 35% of nominal coil voltage           |
| Coil power 线圈功耗<br>nominal<br>holding power<br>at pickup voltage | (at 23°C)<br>1.55 W<br>190 mW<br>875 mW |
| Temperature Rise 温升  | 70 K (126°F) at nom. coil voltage, 85°C |
| Max. temperature 最大温度  | Class F insulation - 155°C (311°F)      |

**GENERAL DATA 基本参数**

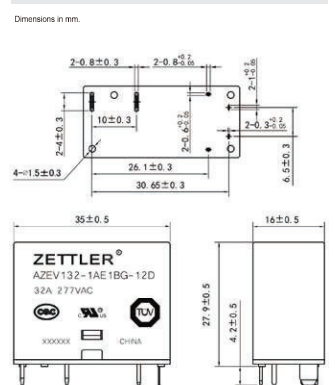
|   |  |
|---|--|
| Life Expectancy 预期寿命<br>Mechanical<br>Electrical  | (minimum operations)<br>1 x 10 <sup>7</sup><br>see UL/CUR/TÜV ratings  |
| Operate Time 动作时间   | 30 ms (max.) at nominal coil voltage   |
| Release Time 释放时间   | 10 ms (max.) at nominal coil voltage, without coil suppression   |
| Dielectric Strength 介电耐压<br>Between open Form A contacts<br>Between Form A contact and coil<br>Between open Form B contacts<br>Between Form B contact and coil<br>Between Form A contact and Between Form B contact | (at sea level for 1 min.)<br>2500 V <sub>eff</sub><br>4000 V <sub>eff</sub><br>500 V <sub>eff</sub><br>500 V <sub>eff</sub><br>4000 V <sub>eff</sub> |
| Pulse current capability 脉冲电流能力<br>AZEVI32  | (based on requirements of IEC 62752)<br>> 1.50 kA; ≥ 6.0 kA <sup>2</sup> s   |
| Insulation Resistance 绝缘电阻  | 1000 MΩ (min.) at 23°C, 500 VDC, 50% RH  |
| Temperature Range 温度范围<br>operating   | (at nominal coil voltage)<br>-40°C (-40°F) to 85°C (185°F)   |
| Vibration resistance 抗震动  | 0.062" (1.5 mm) DA at 10-55 Hz   |
| Enclosure 封装<br>protection category<br>material group<br>flammability   | P.B.T., polyester<br>RT II, flux proof<br>Illa<br>UL94 V-0   |
| Terminals 端子  | Tinned copper alloy, P. C.   |
| Soldering 焊接<br>max. temperature<br>max. time   | 270 °C<br>5 s  |
| Dimensions 尺寸<br>length<br>width<br>height  | 35.0 mm (1.38")<br>16.0 mm (0.63")<br>27.9 mm (1.10")  |
| Weight 重量   | 35 grams (approx.)   |
| Compliance 符合法规   | UL 508, IEC 61810-1, RoHS, REACH designed to meet requirements of IEC 62752  |
| Packing unit in pcs 包装  | 50 per plastic tray / 400 per carton box   |

**COIL VOLTAGE SPECIFICATIONS 线圈参数**


| Nominal Coil VDC | Must Operate VDC | Min. Holding VDC | Max. Cont. VDC | Resistance Ohm ± 10% |
|------------------|------------------|------------------|----------------|----------------------|
| 5                | 3.75             | 1.75             | 6.0            | 16.15                |
| 9                | 6.75             | 3.15             | 10.8           | 52.3                 |
| 12               | 9.0              | 4.2              | 14.4           | 93.0                 |
| 24               | 18.0             | 8.4              | 28.8           | 372                  |
| 48               | 36.0             | 16.8             | 57.6           | 1488                 |

Note: All values at 23°C (73°F), upright position, terminals downward.  
各注: 所有值是在23°C (73°F)下测试, 垂直位置并且端子向下。

**MECHANICAL DATA 外形尺寸**



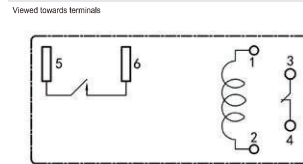
**ORDERING DATA 订货号**

**AZEVI32-1AE** 

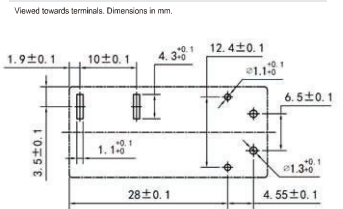
Nominal coil voltage see coil voltage specifications table  
Signal contact n/c: without signal contact  
1BG: equipped with 1 Form B signal contact

| Example ordering data |   |
|-----------------------|---|
| AZEVI32-1AE-24D       | Without signal contact, 24 VDC coil       |
| AZEVI32-1AE-1BG-12D   | With 1 Form B signal contact, 12 VDC coil |

**WIRING DIAGRAMS 接线图**



**PC BOARD LAYOUT 脚位图**



**NOTES**

- All values at 23°C (73°F).
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on terminals.
- Specifications subject to change without notice.

**备注**

- 所有值的测试温度为 23°C (73°F)。
- 继电器有可能在小于“最大动作电压”值下吸合。
- 提供足够的PCB导电截面积以辅助端子散热。
- 规格如有变动, 恕不另行通知。





**AZDC007 50 AMP MINIATURE POWER RELAY**

|  |   |   |
|--|---|---|
|  | <b>特性</b><br>• 50A 切换能力<br>• 触点间距: 1.8mm<br>• 介电耐压: 4.5 kVRMS<br>• 10kV 抗浪涌<br>• UL class F 绝缘等级<br>• CQC: 21002295387<br>• UL/TUV: Pending | <b>FEATURES</b><br>• 50 Amp switching capability<br>• Contact gap: 1.8mm<br>• Dielectric strength 4.5 kVRMS<br>• 10kV Surge<br>• UL class F insulation<br>• CQC: 21002295387<br>• UL/TUV: Pending |
|  | CCC<br>TÜV<br>RoHS  |   |

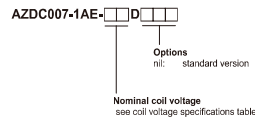
| CONTACTS 触点参数  |   | GENERAL DATA 基本参数          |  |
|--|---|----------------------------|--|
| Arrangement 触点形式   | SPST-N.O. (1 Form A)  | Life Expectancy 预期寿命       | 1 x 10 <sup>5</sup><br>see UL/CUR/TUV/CQC ratings  |
| Ratings (max.) 负载 (最大)<br>switched power 切换功率<br>switched current 切换电流<br>continuous current 连续电流<br>switched voltage 切换电压 | (resistive load) 阻性负载<br>3250 W<br>50 A<br>50 A<br>65 VDC                                 | Operate Time 动作时间          | 20 ms (max.) at nominal coil voltage   |
| Rated Loads 认证负载<br>UL/CUR/TUV/CQC   | 35 A at 65 VDC, resistive, 105°C, 6k cycles<br>50 A at 65 VDC, resistive, 85°C, 6k cycles | Release Time 释放时间          | 10 ms (max.) at nominal coil voltage, without coil suppression   |
| Contact material 触点材质  | AgSnO <sub>2</sub> (silver tin oxide)   | Dielectric Strength 介电耐压   | (at sea level for 1 min.)<br>4500 V <sub>air</sub><br>coil to load contacts<br>2500 V <sub>air</sub><br>open load contacts |
| Contact gap 触点间距   | 1.8 mm  | Surge Voltage 冲击电压         | 10kV @1.2/50µs (coil to contacts)  |
| Contact resistance 接触电阻  | (load contact)<br>initial ≤ 100 mΩ<br>typical < 3 mΩ                                      | Insulation Resistance 绝缘电阻 | 1000 MΩ (min.) at 23°C, 500 VDC, 50% RH  |
|  |   | Temperature Range 温度范围     | (at nominal coil voltage)<br>Operating -40°C (-40°F) to 105°C (221°F) @ 35A<br>-40°C (-40°F) to 85°C (185°F) @ 50A         |
|  |   | Vibration resistance 抗震动   | 0.062" (1.5 mm) DA at 10-55 Hz   |
|  |   | Shock 冲击                   | 20 g   |
|  |   | Enclosure 封装               | P.B.T., polyester<br>protection category IIIa<br>UL94 V-0  |
|  |   | Terminals 端子               | Tinned copper alloy, P. C.   |
|  |   | Soldering 焊接               | max. temperature 270 °C<br>max. time 5 s   |
|  |   | Dimensions 尺寸              | length 33.4 mm (1.31")<br>width 15.9 mm (0.63")<br>height 25.15 mm (0.99")   |
|  |   | Weight 重量                  | 25 grams (approx.)   |
|  |   | Compliance 符合法规            | UL 508, IEC 61810-1, RoHS, REACH   |
|  |   | Packing unit in pcs 包装     | 50 per plastic tray / 400 per carton box   |

**COIL VOLTAGE SPECIFICATIONS 线圈参数**

| Nominal Coil VDC | Must Operate VDC | Min. Holding VDC | Max. Cont. VDC | Resistance Ohm ± 10% |
|------------------|------------------|------------------|----------------|----------------------|
| 5                | 3.75             | 1.75             | 6.0            | 15.5                 |
| 9                | 6.75             | 3.15             | 10.8           | 50.5                 |
| 12               | 9.0              | 4.2              | 14.4           | 90.0                 |
| 18               | 13.5             | 6.3              | 21.6           | 202.5                |
| 24               | 18.0             | 8.4              | 28.8           | 360.0                |
| 48               | 36.0             | 16.8             | 57.6           | 1440.0               |
| 60               | 45.0             | 21.0             | 72.0           | 2250.0               |

Note: All values at 23°C (73°F), upright position, terminals downward.  
备注: 所有值是在23°C (73°F)下测试, 垂直位置并且端子向下。

**ORDERING DATA 订货号**

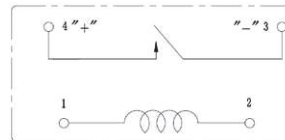


**Example ordering data**

|                 |   |
|-----------------|---|
| AZDC007-1AE-24D | 24 VDC nominal coil voltage, 1.8 mm contact gap |
|-----------------|---|

**WIRING DIAGRAMS 接线图**

Viewed towards terminals



**NOTES**

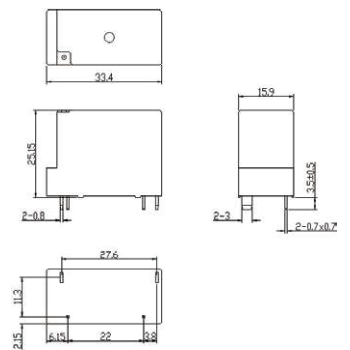
- All values at 23°C (73°F).
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on terminals.
- Specifications subject to change without notice.

**备注**

- 所有值的测试温度为 23° C (73° F)。
- 继电器有可能在小于“动作电压”值下吸合
- 提供足够的PCB导电截面积以辅助端子散热
- 规格如有变动, 恕不另行通知

**MECHANICAL DATA 外形尺寸**

Dimensions in mm. Tolerance: ±0.3mm



**PC BOARD LAYOUT 脚位图**

Viewed towards terminals. Dimensions in mm.

