

## 8 A SPST / 5 A DPST POLARIZED SUBMINIATURE POWER RELAY MONOSTABLE OR LATCHING

### FEATURES

- Dielectric strength 4000 Vrms
- Single and dual coil latching versions available
- Epoxy sealed version available
- 8 Amp switching
- Class F (155°C) insulation available
- UL, CUR file E44211



### CONTACTS

|                               |  |
|-------------------------------|--|
| <b>Arrangement</b>            | SPST (1 Form A), DPST (2 Form A)<br>DPST (1 Form A and 1 Form B)   |
| <b>Ratings</b>                | Resistive load:<br>Max. switched power: 150 W or 2000 VA (SPST)<br>150 W or 1250 VA (DPST)<br>Max. switched current: 8 A (SPST)<br>5 A (DPST)<br>Max. switched voltage: 150 VDC or 380 VAC*<br>* Note: If switching voltage is greater than 30 VDC,<br>special precautions must be taken.<br>Please contact the factory. |
| <b>Rated Load<br/>UL, CUR</b> | SPST<br>8 A at 250 VAC resistive, 100k cycles<br>5 A at 30 VDC resistive, 100k cycles<br>1/6 HP at 250 VAC<br>DPST<br>5 A at 250 VAC resistive, 100k cycles<br>5 A at 30 VDC resistive, 100k cycles<br>1/6 HP at 250 VAC   |
| <b>Material</b>               | Silver nickel, gold plating optional   |
| <b>Resistance</b>             | < 50 milliohms initially   |

### GENERAL DATA

|  |  |
|--|--|
| <b>Life Expectancy<br/>Mechanical<br/>Electrical</b> | Minimum operations<br>1 x 10 <sup>7</sup><br>1 x 10 <sup>5</sup> at 8 A 250 VAC resistive (SPST) |
| <b>Operate Time (typical)</b>                        | 5 ms at nominal coil voltage   |
| <b>Release Time (typical)</b>                        | 3 ms at nominal coil voltage<br>(with no coil suppression)                                       |
| <b>Set Time (typical)</b>                            | 5 ms at nominal coil voltage<br>Recommended coil pulse: 20 ms                                    |
| <b>Reset Time (typical)</b>                          | 4 ms at nominal coil voltage<br>Recommended coil pulse: 20 ms                                    |
| <b>Dielectric Strength<br/>(at sea level)</b>        | 4000 Vrms contact to coil<br>1000 Vrms between open contacts<br>2000 Vrms between contact sets   |
| <b>Insulation Resistance</b>                         | 1000 megohms min. at 20°C<br>500 Vdc 50% RH  |
| <b>Dropout</b>                                       | Greater than 10% of nominal coil voltage   |
| <b>Ambient Temperature<br/>Operating<br/>Storage</b> | At nominal coil voltage<br>-40°C (-40°F) to 70°C (158°F)<br>-40°C (-40°F) to 130°C (266°F)       |
| <b>Vibration</b>                                     | 0.078" DA at 10 to 55 Hz   |
| <b>Shock</b>   | 20 g functional<br>100 g destructive   |
| <b>Enclosure</b>                                     | P.B.T. polyester   |
| <b>Terminals</b>                                     | Tinned copper alloy, P.C.  |
| <b>Max. Solder Temp.</b>                             | 270°C (518°F)  |
| <b>Max. Solder Time</b>                              | 5 seconds  |
| <b>Max. Solvent Temp.</b>                            | 80°C (176°F)   |
| <b>Max. Immersion Time</b>                           | 30 seconds   |
| <b>Weight</b>  | 5 grams  |
| <b>Packing unit in pcs</b>                           | 50 per plastic tube / 2000 per carton box  |

### COIL

|  |   |
|--|---|
| <b>Power<br/>At Pickup Voltage<br/>(typical)</b> | 192 mW (monostable, 2 coil latching)<br>96 mW (1 coil latching) |
| <b>Max. Continuous<br/>Dissipation</b>           | 0.75 W at 20°C (68°F) ambient                                   |
| <b>Temperature Rise</b>                          | 30°C (54°F) at nominal coil voltage                             |
| <b>Max. Temperature</b>                          | 130°C (266°F) Class B, 155°C (311°F) Class F                    |

### NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Relay has fixed coil polarity.
4. For complete isolation between the relay's magnetic fields, it is recommended that a .197" (5.0 mm) space be provided between adjacent relays.
5. Relay adjustment may be affected if undue pressure is exerted on relay case.
6. Specifications subject to change without notice.

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# AZ881

## RELAY ORDERING DATA

### AZ881

| COIL SPECIFICATIONS - MONOSTABLE |                  |                                   |                 | ORDER NUMBER* |              |                      |
|----------------------------------|------------------|-----------------------------------|-----------------|---------------|--------------|----------------------|
| Nominal Coil VDC                 | Must Operate VDC | Max. Continuous VDC Ohm $\pm$ 10% | Coil Resistance | 1 Form A      | 2 Form A     | 1 Form A<br>1 Form B |
| 3                                | 2.4              | 4.7                               | 30              | AZ881-1A-3D   | AZ881-2A-3D  | AZ881-1AB-3D         |
| 5                                | 4.0              | 7.9                               | 83              | AZ881-1A-5D   | AZ881-2A-5D  | AZ881-1AB-5D         |
| 6                                | 4.8              | 9.6                               | 120             | AZ881-1A-6D   | AZ881-2A-6D  | AZ881-1AB-6D         |
| 9                                | 7.2              | 14.4                              | 270             | AZ881-1A-9D   | AZ881-2A-9D  | AZ881-1AB-9D         |
| 12                               | 9.6              | 19.2                              | 480             | AZ881-1A-12D  | AZ881-2A-12D | AZ881-1AB-12D        |
| 24                               | 19.2             | 37.9                              | 1920            | AZ881-1A-24D  | AZ881-2A-24D | AZ881-1AB-24D        |

\*Add suffix "E" for epoxy sealed version. Add suffix "A" for gold plated contacts. Add suffix "R" for reversed polarity coil. Add suffix "F" for class F insulation.

### AZ881P1

| COIL SPECIFICATIONS - SINGLE COIL LATCHING |                  |                                   |                 | ORDER NUMBER*  |                |                      |
|--|------------------|-----------------------------------|-----------------|----------------|----------------|----------------------|
| Nominal Coil VDC                           | Must Operate VDC | Max. Continuous VDC Ohm $\pm$ 10% | Coil Resistance | 1 Form A       | 2 Form A       | 1 Form A<br>1 Form B |
| 3  | 2.4              | 6.7                               | 60              | AZ881P1-1A-3D  | AZ881P1-2A-3D  | AZ881P1-1AB-3D       |
| 5  | 4.0              | 11.2                              | 167             | AZ881P1-1A-5D  | AZ881P1-2A-5D  | AZ881P1-1AB-5D       |
| 6  | 4.8              | 13.4                              | 240             | AZ881P1-1A-6D  | AZ881P1-2A-6D  | AZ881P1-1AB-6D       |
| 9  | 7.2              | 20.1                              | 540             | AZ881P1-1A-9D  | AZ881P1-2A-9D  | AZ881P1-1AB-9D       |
| 12   | 9.6              | 26.8                              | 960             | AZ881P1-1A-12D | AZ881P1-2A-12D | AZ881P1-1AB-12D      |

\*Add suffix "E" for epoxy sealed version. Add suffix "A" for gold plated contacts. Add suffix "R" for reversed polarity coil. Add suffix "F" for class F insulation.

### AZ881P2

| COIL SPECIFICATIONS - DUAL COIL LATCHING |                  |                                   |                 | ORDER NUMBER*  |                |                      |
|--|------------------|-----------------------------------|-----------------|----------------|----------------|----------------------|
| Nominal Coil VDC                         | Must Operate VDC | Max. Continuous VDC Ohm $\pm$ 10% | Coil Resistance | 1 Form A       | 2 Form A       | 1 Form A<br>1 Form B |
| 3  | 2.4              | 4.7                               | 30              | AZ881P2-1A-3D  | AZ881P2-2A-3D  | AZ881P2-1AB-3D       |
| 5  | 4.0              | 7.9                               | 83              | AZ881P2-1A-5D  | AZ881P2-2A-5D  | AZ881P2-1AB-5D       |
| 6  | 4.8              | 9.6                               | 120             | AZ881P2-1A-6D  | AZ881P2-2A-6D  | AZ881P2-1AB-6D       |
| 9  | 7.2              | 14.4                              | 270             | AZ881P2-1A-9D  | AZ881P2-2A-9D  | AZ881P2-1AB-9D       |
| 12                                       | 9.6              | 19.2                              | 480             | AZ881P2-1A-12D | AZ881P2-2A-12D | AZ881P2-1AB-12D      |
| 24                                       | 19.2             | 37.9                              | 1920            | AZ881P2-1A-24D | AZ881P2-2A-24D | AZ881P2-1AB-24D      |

\*Add suffix "E" for epoxy sealed version. Add suffix "A" for gold plated contacts. Add suffix "R" for reversed polarity coil. Add suffix "F" for class F insulation.

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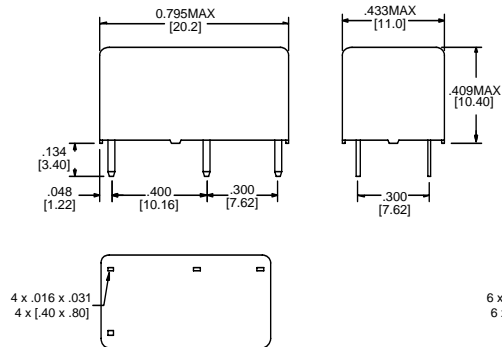
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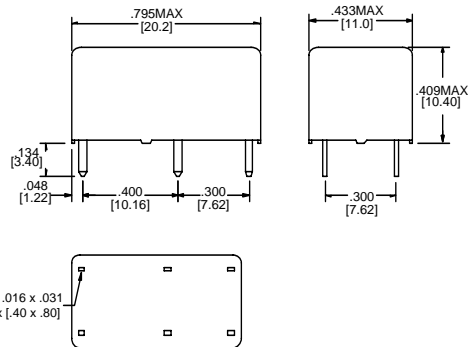
## MECHANICAL DATA

### Outline Dimensions

#### Monostable and 1 coil latching -1A

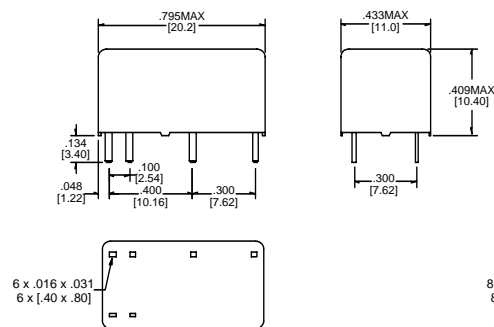


#### -2A, -1AB

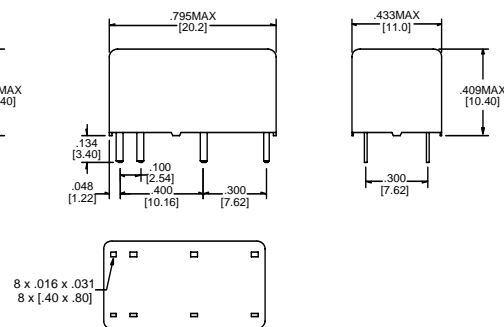


#### 2 coil latching

#### -1A

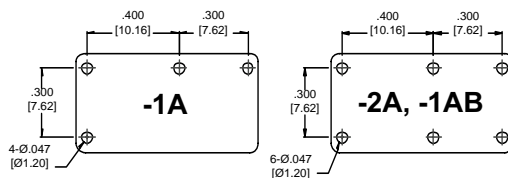


#### -2A, -1AB

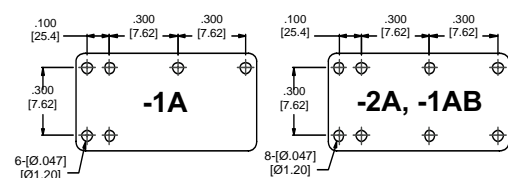


### PC Board Layout

#### Monostable and 1 coil latching



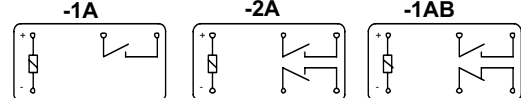
#### 2 coil latching



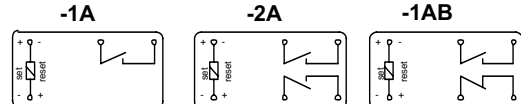
Viewed toward terminals

### Wiring Diagrams

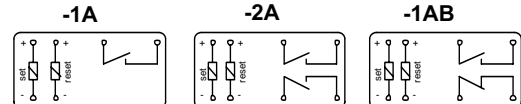
#### Monostable (Denergized condition)



#### 1 coil latching (Reset condition)



#### 2 coil latching (Reset condition)



Viewed toward terminals

Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm .010$ "