

# AZ944

## 16 AMP LOW PROFILE POWER RELAY

### FEATURES

- High power switching (2000 VA)
- High sensitivity, 128 mW pickup
- Low profile (less than .5" height)
- SPST (1 Form A), SPDT (1 Form C)
- DC coils up to 100 VDC
- Class B (130°C) and Class F (155°C) insulation systems available
- UL, CUR file E44211



### CONTACTS

|  |  |
|--|--|
| <b>Arrangement</b>                     | SPST (1 Form A)<br>SPDT (1 Form C)   |
| <b>Ratings</b>                         | <b>Resistive load:</b><br>Max. switched power: 300 W, 2000 VA (SPST)<br>150 W, 1250 VA (SPDT)<br>Max. switched current: 16 A (SPST), 10 A (SPDT)<br>Max. switched voltage: 250 VAC/125 VDC*<br><br>*Note: If switching voltage is greater than 30VDC, special precautions must be taken. Please contact the factory. |
| <b>Rated Load<br/>UL, CUR<br/>SPST</b> | 16 A at 125 VAC, resistive<br>8 A at 250 VAC, resistive<br><br>10 A at 30 VDC, resistive<br>1/4 HP 125 VAC<br>1/10 HP 277 VAC  |
| <b>SPDT</b>                            | 10 A at 125 VAC, resistive<br>5 A at 277 VAC, 30 VDC, resistive<br>1/10 HP 277 VAC   |
| <b>Material</b>                        | Silver cadmium oxide   |
| <b>Resistance</b>                      | < 50 milliohms initially<br>(24 V, 1 A voltage drop method)  |

### COIL

|  |  |
|--|--|
| <b>Power<br/>At Pickup Voltage<br/>(typical)</b> | Form A: 128 mW<br>Form C: 256 mW   |
| <b>Max. Continuous<br/>Dissipation</b>           | 1.5 W at 20°C (68°F)   |
| <b>Temperature Rise</b>                          | Form A: 16°C (29°F) at nominal coil voltage<br>Form C: 28°C (50°F) at nominal coil voltage |
| <b>Temperature</b>                               | Max. 115°C (239°F)   |

### 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 10 A 120 VAC Res.                     |
| <b>Operate Time (typical)</b>                            | 10 ms at nominal coil voltage   |
| <b>Release Time (typical)</b>                            | 4 ms at nominal coil voltage<br>(with no coil suppression)  |
| <b>Dielectric Strength<br/>(at sea level for 1 min.)</b> | 1500 Vrms coil to contact<br>1000 Vrms contact to contact   |
| <b>Insulation<br/>Resistance</b>                         | 100 megohms min. at 20°C, 500 VDC,<br>50% RH  |
| <b>Dropout</b>   | Greater than 5% of nominal coil voltage   |
| <b>Ambient Temperature<br/>Operating</b>                 | At nominal coil voltage<br>-40°C (-40°F) to 85°C (185°F), Form C<br>-40°C (-40°F) to 95°C (203°F), Form A |
| <b>Storage</b>   | -40°C (-40°F) to 115°C (239°F)  |
| <b>Vibration</b>   | 0.062" DA at 10–55 Hz   |
| <b>Shock</b>   | 10 g  |
| <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>  | 8 grams   |

### NOTES

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

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9/19/02W

# AZ944

## RELAY ORDERING DATA

| COIL SPECIFICATIONS SPST-NO (1 Form A) |                  |                     |                            | ORDER NUMBER*  |                 |
|--|------------------|---------------------|----------------------------|----------------|-----------------|
| Nominal Coil VDC                       | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Unsealed       | Sealed          |
| 5                                      | 4.0              | 13.7                | 125                        | AZ944-1AH-5D   | AZ944-1AH-5DE   |
| 6                                      | 4.8              | 16.4                | 180                        | AZ944-1AH-6D   | AZ944-1AH-6DE   |
| 9                                      | 7.2              | 24.6                | 405                        | AZ944-1AH-9D   | AZ944-1AH-9DE   |
| 12                                     | 9.6              | 32.8                | 720                        | AZ944-1AH-12D  | AZ944-1AH-12DE  |
| 18                                     | 14.4             | 49.3                | 1620                       | AZ944-1AH-18D  | AZ944-1AH-18DE  |
| 24                                     | 19.2             | 65.7                | 2,880                      | AZ944-1AH-24D  | AZ944-1AH-24DE  |
| 48                                     | 38.4             | 131.4               | 11,520                     | AZ944-1AH-48D  | AZ944-1AH-48DE  |
| 100                                    | 80.0             | 157.8               | 16,600                     | AZ944-1AH-100D | AZ944-1AH-100DE |

  

| COIL SPECIFICATIONS SPDT-NO (1 Form C) |                  |                     |                            | ORDER NUMBER* |                |
|--|------------------|---------------------|----------------------------|---------------|----------------|
| Nominal Coil VDC                       | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Unsealed      | Sealed         |
| 5                                      | 4.0              | 9.7                 | 62.5                       | AZ944-1C-5D   | AZ944-1C-5DE   |
| 6                                      | 4.8              | 11.6                | 90                         | AZ944-1C-6D   | AZ944-1C-6DE   |
| 9                                      | 7.2              | 17.4                | 202                        | AZ944-1C-9D   | AZ944-1C-9DE   |
| 12                                     | 9.6              | 23.2                | 360                        | AZ944-1C-12D  | AZ944-1C-12DE  |
| 18                                     | 14.4             | 34.8                | 810                        | AZ944-1C-18D  | AZ944-1C-18DE  |
| 24                                     | 19.2             | 46.4                | 1,440                      | AZ944-1C-24D  | AZ944-1C-24DE  |
| 48                                     | 38.4             | 92.9                | 5,760                      | AZ944-1C-48D  | AZ944-1C-48DE  |
| 100                                    | 80.0             | 157.7               | 16,600                     | AZ944-1C-100D | AZ944-1C-100DE |

\*Add suffix "B" for Class B insulation system or "F" for Class F insulation system.

## MECHANICAL DATA

### PC BOARD LAYOUT

Hole 5 not needed for SPST-NO model

### WIRING DIAGRAM

#### 1 Form A

#### 1 Form C

Viewed toward terminals

Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm 0.010$ "