

# AZ743

## 10 AMP DPDT MINIATURE POWER RELAY

### FEATURES

- Dielectric strength 5000 Vrms
- Low cost
- Epoxy sealed version available
- 10 Amp switching — double pole contacts
- AC and DC coils
- Class B (130°C) standard
- Class F (155°C) versions available
- Isolation spacing greater than 10 mm
- UL, CUR file E44211, VDE file 40006031



### CONTACTS

|                               |   |
|-------------------------------|---|
| <b>Arrangement</b>            | DPST (2 Form A, 2 Form B)<br>DPDT(2 Form C)   |
| <b>Ratings</b>                | Resistive load:<br>Max. switched power: 240 W or 2500 VA<br>Max. switched current: 10 A<br>Max. switched voltage: 150* VDC or 400 VAC<br><br>*Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.     |
| <b>Rated Load<br/>UL, CUR</b> | 10 A at 250 VAC Resistive, 30k cycles (N.O.)/<br>6k (N.C.) [1]<br>8 A at 277 VAC Resistive, 30k cycles [1]<br>8 A at 277 VAC Resistive, 75k cycles [2]<br>8 A at 277 VAC Resistive, 100k cycles [3]<br>1/2 HP at 250 VAC (N.O.) [1]<br>1/4 HP at 125 VAC (N.O.) [1] |
| <b>VDE</b>                    | 8 A at 250 VAC Resistive, 30k cycles [1]<br>Contact factory for additional VDE ratings<br><br>[1] Silver cadmium oxide, [2] Silver tin oxide<br>[3] Silver nickel   |
| <b>Material</b>               | Silver cadmium oxide, silver tin oxide, or silver nickel. Gold plating available  |
| <b>Resistance</b>             | < 50 milliohms initially (using 6 V 1 A method)   |

### COIL

|   |   |
|---|---|
| <b>Power<br/>At Pickup Voltage<br/>(typical)</b>            | 196 mW (DC)<br>0.43 VA (AC)   |
| <b>Max. Continuous<br/>Dissipation<br/>Temperature Rise</b> | 1.7 W at 20°C (68°F) ambient<br>26°C (47°F) at nominal coil voltage |
| <b>Max. Temperature</b>                                     | 130°C (266°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 8 A 240 VAC Res.           |
| <b>Operate Time (typical)</b>                            | 7 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> | 5000 Vrms coil to contact<br>3000 Vrms between contact sets<br>1000 Vrms between open contacts |
| <b>Insulation<br/>Resistance</b>                         | 1000 megohms min. at 500 VDC,<br>20°C, 50% RH  |
| <b>Dropout</b>   | Greater than 10% of nominal coil voltage (DC)<br>Greater than 15% of nominal coil voltage (AC) |
| <b>Ambient Temperature<br/>Operating<br/>Storage</b>     | At nominal coil voltage<br>-40°C (-40°F) to 100°C (212°F)<br>-40°C (-40°F) to 130°C (266°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>  | 16 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.

**AMERICAN ZETTLER, INC.**

1/15/13

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## RELAY ORDERING DATA

| COIL SPECIFICATIONS - DC COIL |                  |                     |                            | ORDER NUMBER* |                |
|-------------------------------|------------------|---------------------|----------------------------|---------------|----------------|
| Nominal Coil VDC              | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Unsealed      | Sealed         |
| 5                             | 3.5              | 10.2                | 62                         | AZ743-2C-5D   | AZ743-2C-5DE   |
| 6                             | 4.2              | 12.3                | 90                         | AZ743-2C-6D   | AZ743-2C-6DE   |
| 12                            | 8.4              | 24.7                | 360                        | AZ743-2C-12D  | AZ743-2C-12DE  |
| 15                            | 10.5             | 30.9                | 562                        | AZ743-2C-15D  | AZ743-2C-15DE  |
| 18                            | 12.6             | 37.0                | 810                        | AZ743-2C-18D  | AZ743-2C-18DE  |
| 24                            | 16.8             | 49.4                | 1,440                      | AZ743-2C-24D  | AZ743-2C-24DE  |
| 48                            | 33.6             | 98.0                | 5,760                      | AZ743-2C-48D  | AZ743-2C-48DE  |
| 60                            | 42.0             | 112.9               | 7,500                      | AZ743-2C-60D  | AZ743-2C-60DE  |
| 110                           | 77.0             | 206.9               | 25,200                     | AZ743-2C-110D | AZ743-2C-110DE |

| COIL SPECIFICATIONS - AC COIL |                  |                     |                   |                   | ORDER NUMBER*  |                 |
|-------------------------------|------------------|---------------------|-------------------|-------------------|----------------|-----------------|
| Nominal Coil VAC              | Must Operate VAC | Max. Continuous VAC | Coil Current (mA) | Coil Resistance   | Unsealed       | Sealed          |
| 24                            | 18.0             | 31.2                | 31.6              | 350 $\pm 10\%$    | AZ743-2C-24AF  | AZ743-2C-24AEF  |
| 115                           | 86.3             | 149.5               | 6.6               | 8,100 $\pm 15\%$  | AZ743-2C-115AF | AZ743-2C-115AEF |
| 230                           | 172.5            | 299.0               | 3.2               | 32,500 $\pm 15\%$ | AZ743-2C-230AF | AZ743-2C-230AEF |

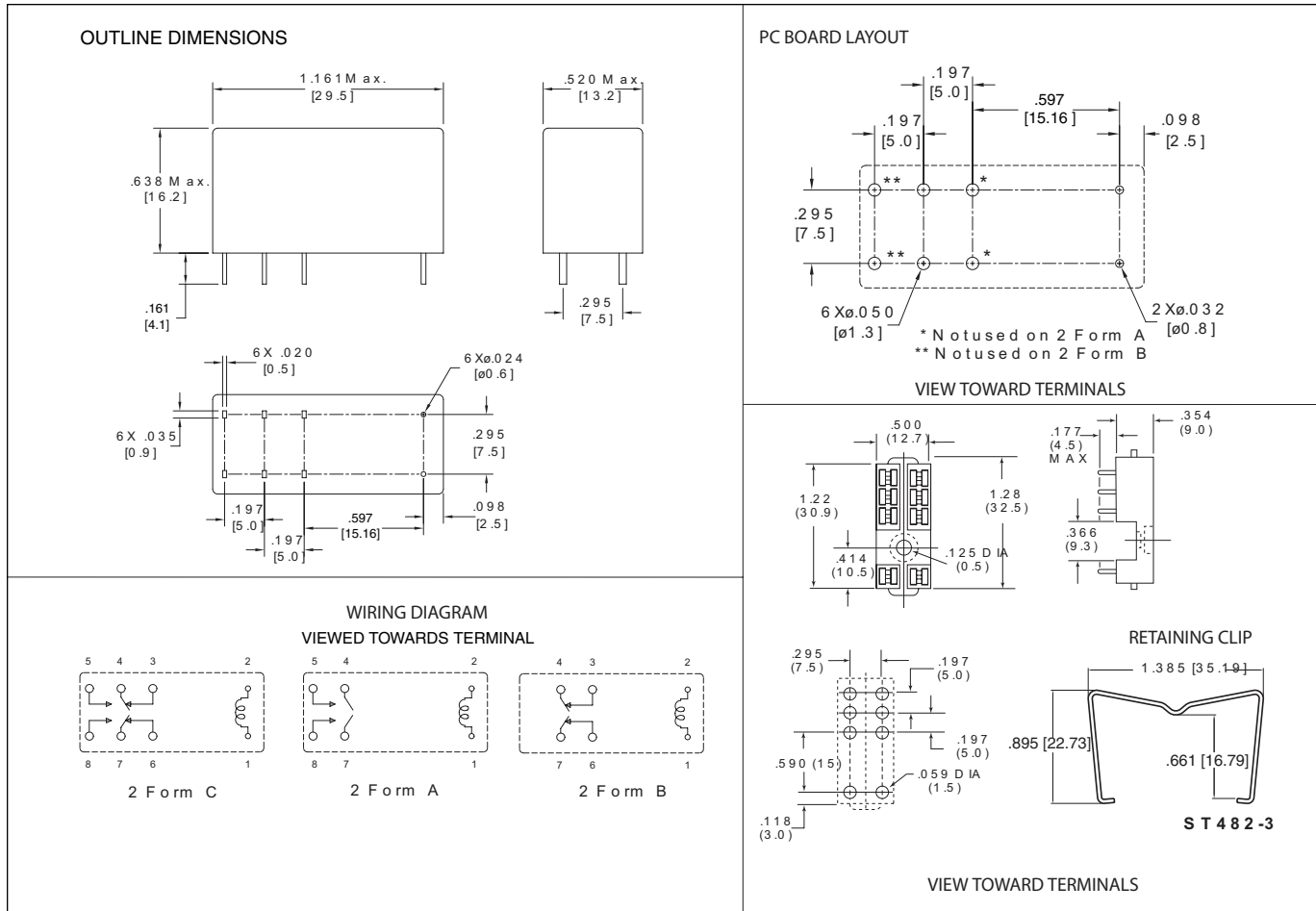
\* Substitute "2A" or "2B" in place of "2C" for Form A or B respectively. Add suffix "E" to "2A" or "2B" or "2C" for silver tin oxide contacts. Add suffix "B" to "2A" or "2B" or "2C" for silver nickel contacts. Add suffix "A" for gold plated contacts. Add suffix "F" for Class F version (DC coils only). 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.

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## HARDWARE ORDERING DATA

| DESCRIPTION | ORDER NUMBER | DESCRIPTION | ORDER NUMBER |
|-------------|--------------|-------------|--------------|
| Socket      | ST484-U1     | Retainer    | ST482-3      |

## MECHANICAL DATA



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