

# AZ942

## 16 AMP MINIATURE PC BOARD RELAY

### FEATURES

- Extremely low cost
- High switching capacity — 16 Amps
- DC coils to 48 VDC
- UL, CUR file E44211
- Class B insulation for high temperature operation
- Class F insulation available



### CONTACTS

|                    |                                                                                                                                                                                                                                               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Arrangement</b> | SPST (1 Form A)<br>SPDT (1 Form C)                                                                                                                                                                                                            |
| <b>Ratings</b>     | Resistive load                                                                                                                                                                                                                                |
| <b>Medium Duty</b> | Max. switched power: 150 W or 2770 VA<br>Max. switched current: 10 A<br>Max. switched voltage: 30 VDC or 300 VAC<br><b>UL Rating:</b> 5 A at 30 VDC<br>10 A at 277 VAC<br>1/3 HP at 125 VAC (1 Form A)<br>2.9 A 125 VAC Pilot Duty (1 Form A) |
| <b>Heavy Duty</b>  | Max. switched power: 480 W or 4000 VA<br>Max. switched current: 16 A<br>Max. switched voltage: 30 VDC or 300 VAC<br><b>UL Rating:</b> 12 A at 28 VDC<br>12 A at 277 VAC<br>16A at 250 VAC (SPDT)<br>2.0 A at 240 VAC Pilot Duty               |
| <b>Material</b>    | Medium Duty: Silver cerium<br>Heavy Duty: Silver tin oxide                                                                                                                                                                                    |
| <b>Resistance</b>  | <100 milliohms initially<br>(24 V, 1 A voltage drop method)                                                                                                                                                                                   |

### COIL

|                                    |                                                                                |
|------------------------------------|--------------------------------------------------------------------------------|
| <b>Power</b>                       |                                                                                |
| <b>At Pickup Voltage (typical)</b> | 230 mW                                                                         |
| <b>Max Continuous Dissipation</b>  | Class B: 1.8 W at 20°C (68°F) ambient<br>Class F: 2.4 W at 20°C (68°F) ambient |
| <b>Temperature Rise</b>            | 23°C (42°F) at nominal coil voltage                                            |
| <b>Temperature</b>                 | Class B: Max. 130°C (266°F)<br>Class F: Max. 155°C (311°F)                     |

### GENERAL DATA

|                                                                      |                                                                                                                                                                                             |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Life Expectancy</b><br><b>Mechanical</b><br><b>Electrical</b>     | Minimum operations<br>1x10 <sup>7</sup><br>1 x 10 <sup>5</sup> at 10 A 277 VAC Res.                                                                                                         |
| <b>Operate Time (typical)</b>                                        | 10 ms at nominal coil voltage                                                                                                                                                               |
| <b>Release Time (typical)</b>                                        | 5 ms at nominal coil voltage<br>(with no coil suppression)                                                                                                                                  |
| <b>Dielectric Strength (at sea level for 1 min.)</b>                 | 1750 Vrms contact to coil<br>1000 Vrms across contacts                                                                                                                                      |
| <b>Insulation Resistance</b>                                         | 100 megohms min. at 20°C, 500 VDC, 50% RH                                                                                                                                                   |
| <b>Dropout</b>                                                       | Greater than 10% of nominal coil voltage                                                                                                                                                    |
| <b>Ambient Temperature</b><br><b>Operating</b><br><br><b>Storage</b> | At nominal coil voltage<br>Class B: -40°C(-40°F) to 100°C(212°F)<br>Class F: -40°C(-40°F) to 120°C(248°F)<br>Class B: -55°C(-67°F) to 130°C(266°F)<br>Class F: -55°C(-67°F) to 155°C(311°F) |
| <b>Vibration</b>                                                     | 0.062" DA at 10–55Hz                                                                                                                                                                        |
| <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>                                                        | 13 g                                                                                                                                                                                        |

### NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Unsealed relays should not be dip cleaned.
4. Specifications subject to change without notice.

# AMERICAN ZETTLER, INC.

# AZ942

## RELAY ORDERING DATA

| STANDARD RELAYS: Medium Duty Type (10 Amp Contact) |                  |                     |                            | ORDER NUMBER* |                |
|----------------------------------------------------|------------------|---------------------|----------------------------|---------------|----------------|
| COIL SPECIFICATIONS                                |                  |                     |                            | ORDER NUMBER* |                |
| Nominal Coil VDC                                   | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Unsealed      | Sealed         |
| 3                                                  | 2.4              | 6.7                 | 25                         | AZ942-1CH-3D  | AZ942-1CH-3DE  |
| 5                                                  | 4.0              | 11.2                | 70                         | AZ942-1CH-5D  | AZ942-1CH-5DE  |
| 6                                                  | 4.8              | 13.4                | 100                        | AZ942-1CH-6D  | AZ942-1CH-6DE  |
| 9                                                  | 7.2              | 20.1                | 225                        | AZ942-1CH-9D  | AZ942-1CH-9DE  |
| 12                                                 | 9.6              | 26.8                | 400                        | AZ942-1CH-12D | AZ942-1CH-12DE |
| 18                                                 | 14.4             | 40.2                | 900                        | AZ942-1CH-18D | AZ942-1CH-18DE |
| 24                                                 | 19.2             | 53.6                | 1,600                      | AZ942-1CH-24D | AZ942-1CH-24DE |
| 48                                                 | 38.4             | 107.3               | 6,400                      | AZ942-1CH-48D | AZ942-1CH-48DE |

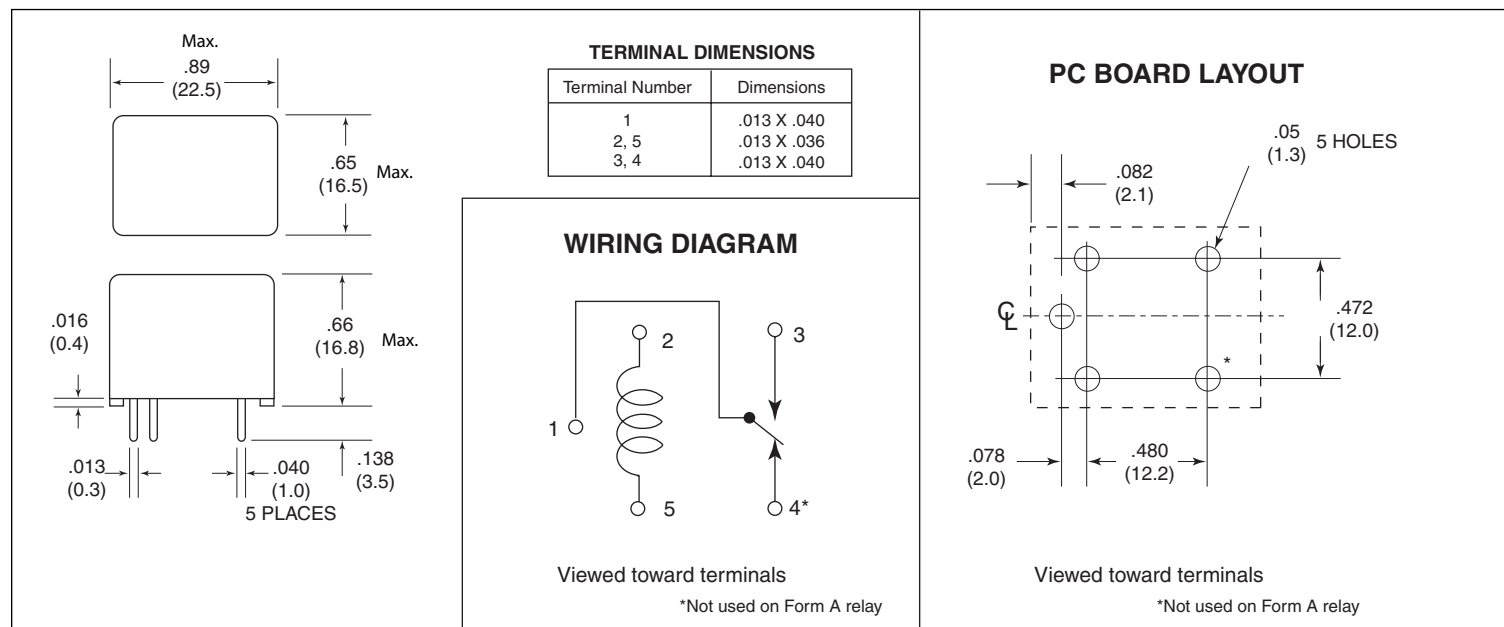
\*Substitute "1AT" in place of "1CH" to indicate 1 Form A contact. To indicate Class F version, add suffix "F."

## RELAY ORDERING DATA

| STANDARD RELAYS: Heavy Duty Type (16 Amp Contact) |                  |                     |                            | ORDER NUMBER* |                |
|---------------------------------------------------|------------------|---------------------|----------------------------|---------------|----------------|
| COIL SPECIFICATIONS                               |                  |                     |                            | ORDER NUMBER* |                |
| Nominal Coil VDC                                  | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Unsealed      | Sealed         |
| 3                                                 | 2.4              | 6.7                 | 25                         | AZ942-1CT-3D  | AZ942-1CT-3DE  |
| 5                                                 | 4.0              | 11.2                | 70                         | AZ942-1CT-5D  | AZ942-1CT-5DE  |
| 6                                                 | 4.8              | 13.4                | 100                        | AZ942-1CT-6D  | AZ942-1CT-6DE  |
| 9                                                 | 7.2              | 20.1                | 225                        | AZ942-1CT-9D  | AZ942-1CT-9DE  |
| 12                                                | 9.6              | 26.8                | 400                        | AZ942-1CT-12D | AZ942-1CT-12DE |
| 18                                                | 14.4             | 40.2                | 900                        | AZ942-1CT-18D | AZ942-1CT-18DE |
| 24                                                | 19.2             | 53.6                | 1,600                      | AZ942-1CT-24D | AZ942-1CT-24DE |
| 48                                                | 38.4             | 107.3               | 6,400                      | AZ942-1CT-48D | AZ942-1CT-48DE |

\*Substitute "1AW" in place of "1CT" to indicate 1 Form A contact. To indicate Class F version, add suffix "F."

## MECHANICAL DATA



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

# AMERICAN ZETTLER, INC.

3/30/12

PHONE: (949) 831-5000

[www.azettler.com](http://www.azettler.com)

E-MAIL: [SALES@AZETTLER.COM](mailto:SALES@AZETTLER.COM)

This specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.