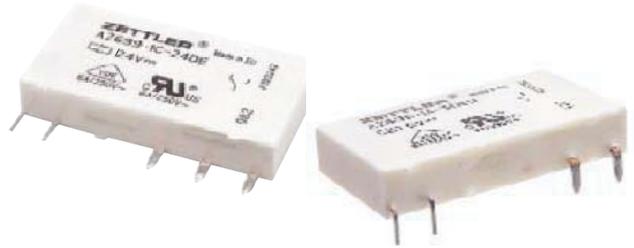


# AZ6991

## SENSITIVE SUBMINIATURE RELAY

### FEATURES

- Small footprint, extremely small width of only 5 mm
- 8 A switching capability
- High sensitivity with 95 mW pickup power
- Dielectric strength of 4000 VRMS between coil and contacts Isolation
- spacing greater than 8 mm
- Horizontal and vertical versions available
- Epoxy sealed version available
- Reinforced insulation, EN 60730-1, EN 60335-1
- UL, CUR file E43203
- VDE certificate 40020561



### CONTACTS

|                              |  |
|------------------------------|--|
| <b>Arrangement</b>           | SPST (1 Form A)<br>SPDT (1 Form C)   |
| <b>Ratings</b>               | Resistive load:<br>Max. switched power: 180W or 2216VA<br>Max. switched current: 8A<br>Max. switched voltage: 125VDC* or 400VAC<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> | <b>1 Form A</b><br>8 A at 277 VAC, resistive, 85°C, 10k cycles [1][2]<br>6 A at 277 VAC, resistive, 85°C, 60k cycles [1][2]<br>6 A at 277 VAC, general use, 85°C, 30k cycles [1]<br>6 A at 277 VAC, general use, 85°C, 20k cycles [2]<br>B300, R300 pilot duty, 85°C [1][2]<br>C300, R300 pilot duty, 28°C, 30k cycles [1][2]<br>6 A at 30 VDC, 85°C, 6k cycles [1][2]<br><b>1 Form C</b><br>8 A at 277 VAC, res., 85°C, 10k cycles (N.O.) [1][2]<br>6 A at 277 VAC, res., 85°C, 30k cycles (N.O.) [1][2]<br>6 A at 277 VAC, res., 85°C, 10k cycles (N.C.) [1][2]<br>6 A at 277 VAC, gen.use, 85°C, 30k cycles (N.O.) [1]<br>6 A at 277 VAC, gen.use, 85°C, 20k cycles (N.O.) [2]<br>6 A at 277 VAC, gen.use, 85°C, 20k cyc. (N.C.) [1][2]<br>C300, R300 pilot duty, 28°C, 30k cycles (N.O.) [1][2]<br>6 A at 30 VDC, 85°C, 6k cycles [1][2]<br>B300, R300 pilot duty, 85°C [1][2] |
| <b>VDE</b>                   | <b>1 Form A</b><br>6 A at 250 VAC, 85°C, 50k cycles [1][2]<br>6 A at 30 VDC, 85°C, 60k cycles [1][2]<br><b>1 Form C</b><br>6 A at 250 VAC, 85°C, 10k cycles [1][2]<br>6 A at 30 VDC, 85°C, 60k cycles [1][2]   |
| <b>Material</b>              | Silver nickel [1], Silver Tin [2]<br>Optional gold plating   |
| <b>Resistance</b>            | <100 milliohms initially (at 1A, 6VDC)   |

### GENERAL DATA

|  |  |
|--|--|
| <b>Life Expectancy</b><br><b>Mechanical</b><br><b>Electrical</b> | Minimum operations<br>10 million operations<br>3 X 10 <sup>5</sup> at 5A, 50VAC Res.       |
| <b>Operate Time (typical)</b>                                    | 8ms at nominal coil voltage  |
| <b>Release Time (typical)</b>                                    | 4ms at nominal coil voltage<br>(with no coil suppression)                                  |
| <b>Dielectric Strength<br/>(at sea level for 1 min.)</b>         | 1000Vrms between open contacts<br>4000Vrms contact to coil                                 |
| <b>Insulation<br/>Resistance</b>                                 | 1000 megohms min. at 20°C, 500<br>VDC, 50% RH  |
| <b>Dropout</b>   | Greater than 5% of nominal coil voltage  |
| <b>Ambient Temperature<br/>Operating<br/>Storage</b>             | At nominal coil voltage<br>-40°C (-40°F) to 85°C (158°F)<br>-40°C (-40°F) to 105°C (221°F) |
| <b>Vibration</b>   | 0.062" DA 10–55 Hz   |
| <b>Shock</b>   | 5 g  |
| <b>Enclosure</b>   | P.B.T. polyester 94V-0   |
| <b>Terminals</b>   | Tinned copper alloy, P.C.  |
| <b>Max. Solder Temp.</b>   | 260°C (500°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 (approx.)</b>  | 5 grams  |

### COIL

|  |                                     |
|--|-------------------------------------|
| <b>Power</b>                           |                                     |
| <b>At Pickup Voltage<br/>(typical)</b> | 95mW                                |
| <b>Max. Continuous<br/>Dissipation</b> | 1.0W at 20°C (68°F) ambient         |
| <b>Temperature Rise</b>                | 20°C (36°F) at nominal coil voltage |
| <b>Temperature</b>                     | Max. 105°C (221°F)                  |

### 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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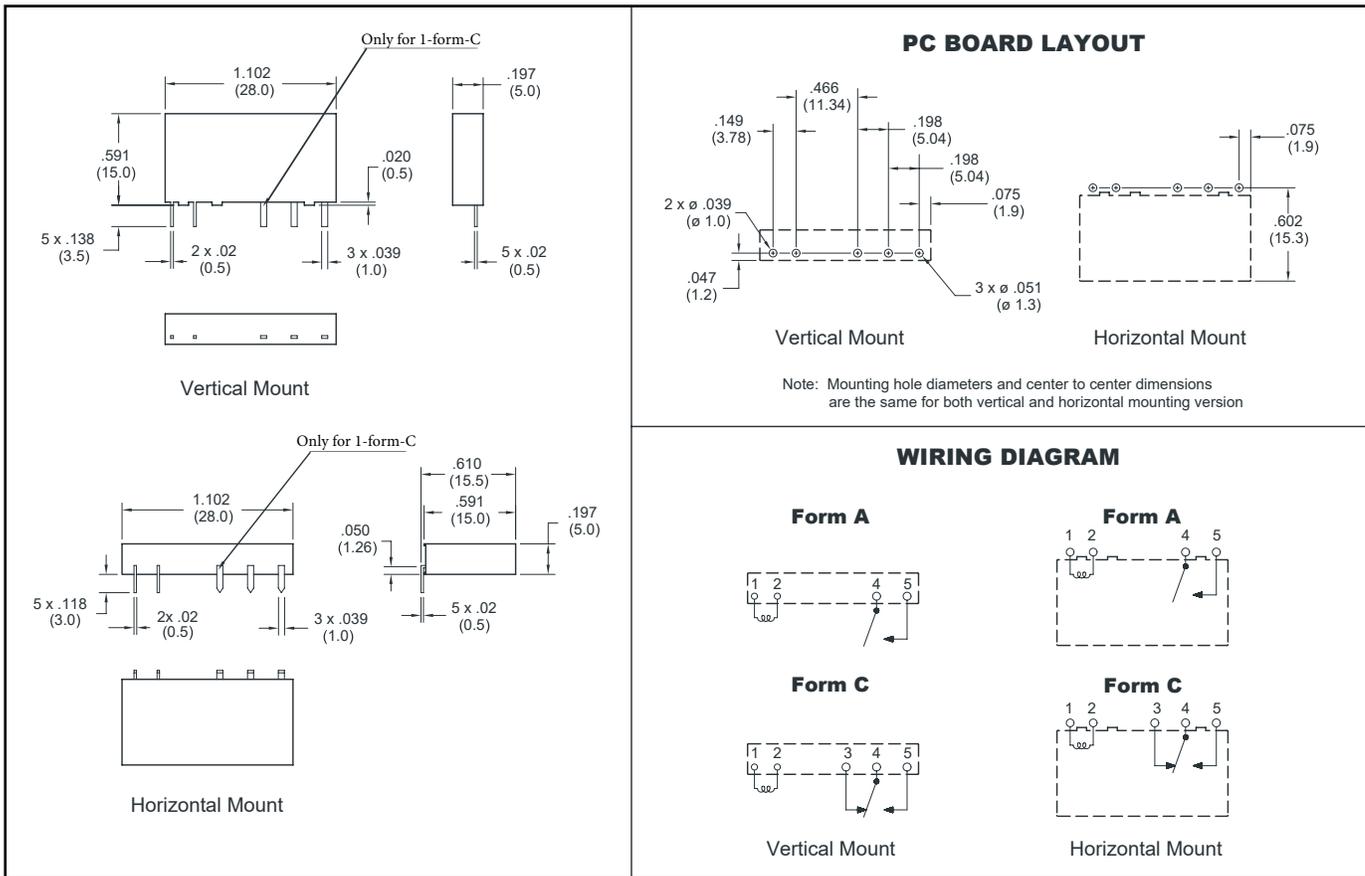
# AZ6991

## RELAY ORDERING DATA

| COIL SPECIFICATIONS |                  |                     |                 | ORDER NUMBER* |                |
|---------------------|------------------|---------------------|-----------------|---------------|----------------|
| Nominal Coil VDC    | Must Operate VDC | Max. Continuous VDC | Coil Resistance | Unsealed      | Sealed         |
| 5                   | 3.75             | 11.5                | 147 ± 10%       | AZ6991-1A-5D  | AZ6991-1A-5DE  |
| 6                   | 4.50             | 13.8                | 212 ± 10%       | AZ6991-1A-6D  | AZ6991-1A-6DE  |
| 9                   | 6.75             | 20.7                | 476 ± 10%       | AZ6991-1A-9D  | AZ6991-1A-9DE  |
| 12                  | 9.00             | 27.6                | 848 ± 10%       | AZ6991-1A-12D | AZ6991-1A-12DE |
| 18                  | 13.5             | 41.4                | 1906 ± 15%      | AZ6991-1A-18D | AZ6991-1A-18DE |
| 24                  | 18.0             | 55.2                | 3390 ± 15%      | AZ6991-1A-24D | AZ6991-1A-24DE |
| 48                  | 36.0             | 97.7                | 10600 ± 15%     | AZ6991-1A-48D | AZ6991-1A-48DE |
| 60                  | 45.0             | 122.2               | 16600 ± 15%     | AZ6991-1A-60D | AZ6991-1A-60DE |

\*Substitute "-1C" for "-1A" to indicate 1 Form C contacts. Add "E" after 1A or 1C for Silver Tin contacts. Add suffix "A" for gold plated contacts. Add suffix "H" for horizontal version.

## MECHANICAL DATA



Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010"

# AMERICAN ZETTLER, INC.

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E-MAIL: 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.