

# AZ9871

## 30 AMP MICRO AUTOMOTIVE RELAY

### FEATURES

- Up to 30 Amp switching capability in a compact size
- Form A and C contacts available (single or twin relay)
- Vibration and shock resistant
- Epoxy sealed version available
- Designed for high in-rush applications
- Cost effective
- Single and Dual (Twin) relay versions
- ISO/TS 16949, ISO14001
- Tested in accordance with SAE J2544



### CONTACTS

|                    |  |
|--------------------|--|
| <b>Arrangement</b> | SPST (1 Form A) DPST (2 Form A)<br>SPDT (1 Form C) DPDT (2 Form C)   |
| <b>Ratings</b>     | Resistive load:<br>Max. switched power: 280 W<br>Max. switched current: 30 A / 25A N.O. / N.C.<br>Max. switched voltage: 24 VDC<br><br>Rated load: 20 A at 14 VDC (Form A)<br>20/15 A at 14 VDC (Form C) |
| <b>Material</b>    | Silver tin oxide (silver nickel available - contact factory)   |
| <b>Resistance</b>  | < 50 milliohms initially<br>(3 milliohms at 10A)   |

### COIL

|  |                                     |
|--|-------------------------------------|
| <b>Power At Pickup Voltage (typical)</b> | 187 mW                              |
| <b>Max. Continuous Dissipation</b>       | 2.6 W at 20°C (68°F) ambient        |
| <b>Temperature Rise</b>                  | 34°C (61°F) at nominal coil voltage |
| <b>Max Temperature</b>                   | 155°C (311°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.

### GENERAL DATA

|  |   |
|--|---|
| <b>Life Expectancy</b><br><b>Mechanical</b><br><b>Electrical</b> | Minimum operations<br>1 x 10 <sup>7</sup><br>1 x 10 <sup>5</sup> at 20 A 14 VDC Res.        |
| <b>Operate Time</b>  | 3 ms typical at nominal coil voltage  |
| <b>Release Time)</b>   | 1.5 ms typical at nominal coil voltage<br>(with no coil suppression)                        |
| <b>Dielectric Strength (at sea level for 1 min.)</b>             | 500 Vrms coil to contact<br>500 Vrms between open contacts                                  |
| <b>Insulation Resistance</b>                                     | 1000 megohms min. at 20°C, 500 VDC<br>50% RH  |
| <b>Dropout</b>   | Greater than 12.5% of nominal coil voltage  |
| <b>Ambient Temperature</b><br><b>Operating</b><br><b>Storage</b> | At nominal coil voltage<br>-40°C (-40°F) to 105°C (221°F)<br>-40°C (-40°F) to 155°C (311°F) |
| <b>Vibration</b>   | 6 g at 10-500 Hz  |
| <b>Shock</b>   | 30 g, 6 ms  |
| <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>  | 4 grams (single) 8 grams (twin)   |



**AMERICAN ZETTLER, INC.**

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

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5/23/07W

# AZ9871

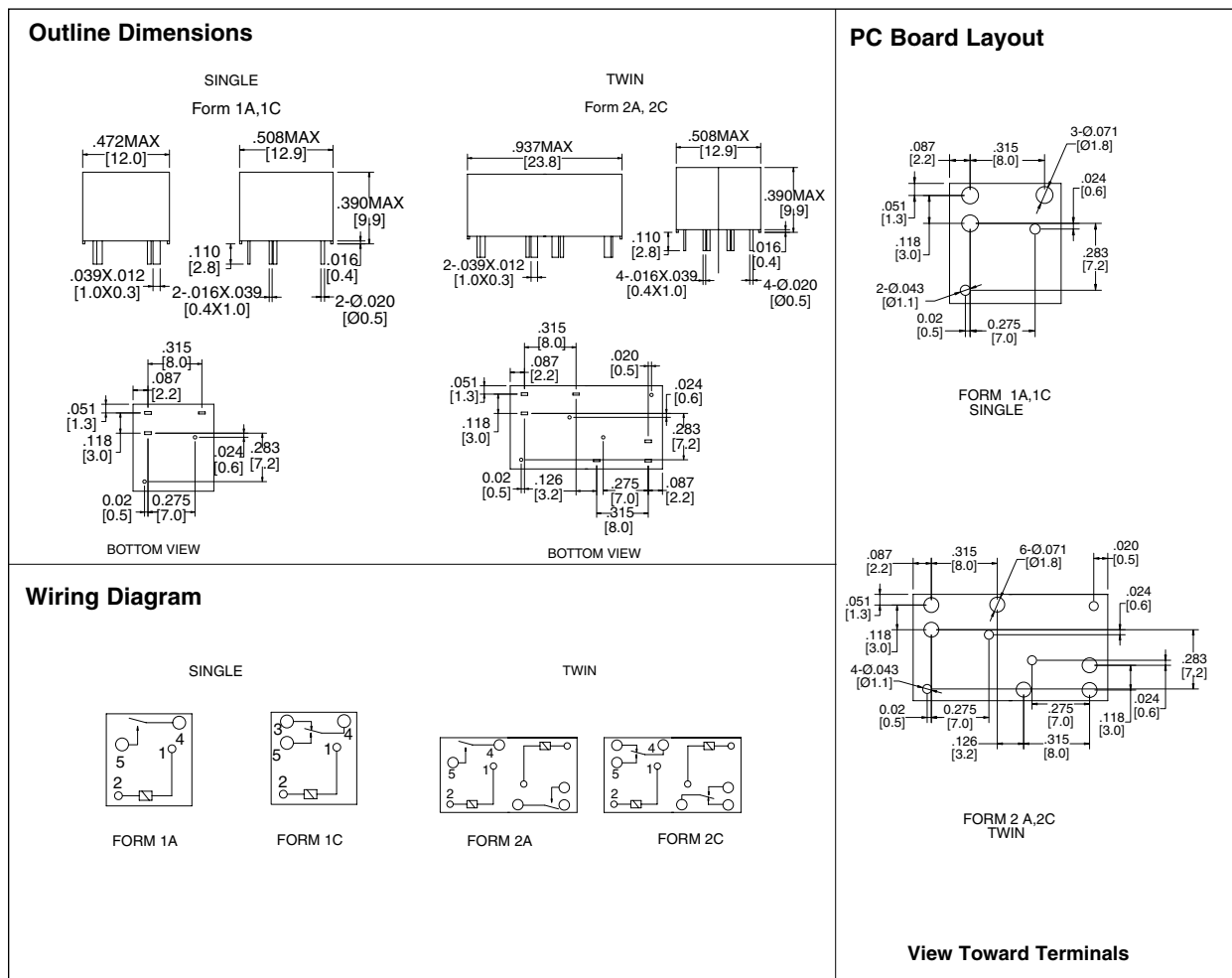
## RELAY ORDERING DATA

| STANDARD RELAYS - 1 FORM A, 1 FORM C (SINGLE) |                  |                     |                            |                 |                 |
|---|------------------|---------------------|----------------------------|-----------------|-----------------|
| COIL SPECIFICATIONS                           |                  |                     |                            | ORDER NUMBER*   |                 |
| Nominal Coil VDC                              | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | 1 Form A (SPST) | 1 Form C (SPDT) |
| 10  | 5.7              | 22.0                | 181                        | AZ9871-1A-10DT  | AZ9871-1C-10DT  |
| 12  | 6.9              | 26.0                | 254                        | AZ9871-1A-12DT  | AZ9871-1C-12DT  |

| STANDARD RELAYS - 2 FORM A, 2 FORM C (TWIN) |                  |                     |                            |                 |                 |
|---|------------------|---------------------|----------------------------|-----------------|-----------------|
| COIL SPECIFICATIONS                         |                  |                     |                            | ORDER NUMBER*   |                 |
| Nominal Coil VDC                            | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | 2 Form A (DPST) | 2 Form C (DPDT) |
| 10  | 5.7              | 22.0                | 181                        | AZ9871-2A-10DT  | AZ9871-2C-10DT  |
| 12  | 6.9              | 26.0                | 254                        | AZ9871-2A-12DT  | AZ9871-2C-12DT  |

\*Change "D" to "DE" for sealed version. Add suffix "A" for gold plated contacts.

## MECHANICAL DATA



Dimensions in inches with millimeters in brackets below. Tolerance:  $\pm .010$ "



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