

# AZ692/AZ693

## 10 AMP MINIATURE POWER RELAY

### FEATURES

- Isolation spacing greater than 8 mm
- Dielectric strength 4000 Vrms coil to contact
- Approvals/Standards include UL, VDE, IEC
- Single pole — Forms A, B, C available
- 10 Amp switching
- Life expectancy to 30 million operations
- Epoxy sealed version for automatic wave soldering and cleaning
- UL, CUR file E44211; VDE 40018299



### CONTACTS

|                    |  |
|--------------------|--|
| <b>Arrangement</b> | SPDT (1 Form C)<br>SPST (1 Form A and 1 Form B)  |
| <b>Ratings</b>     | Resistive load:<br>Max. switched power: 300 W or 2500 VA<br>Max. switched current: 10 A; 64 A for 2 ms<br>Max. switched voltage: 150* VDC or 380 VAC<br><b>UL Rating</b><br>10 A at 24 VDC or 115 VAC<br>1/4 HP 120 VAC motor load<br>10 A at 250 VAC<br>B 300 pilot duty<br><br>* If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory. |
| <b>Material</b>    | Silver cadmium oxide   |
| <b>Resistance</b>  | < 30 milliohms initially<br>(at rated current, voltage drop method)  |

### COIL

|   |   |
|---|---|
| <b>Power</b><br><b>At Pickup Voltage (typical)</b><br><b>Max. Continuous Dissipation</b><br><b>Temperature Rise</b> | Standard coil: 337 mW<br>Sensitive coil: 234 mW<br><br>1.9 W at 20°C (68°F) ambient<br>1.4 W at 40°C (104°F) ambient<br><br>Standard: 40°C (72°F) at nominal coil voltage<br>Sensitive: 26°C (47°F) at nominal coil voltage |
| <b>Temperature</b>  | Max. 110°C (230°F)  |

### GENERAL DATA

|  |  |
|--|--|
| <b>Life Expectancy</b><br><b>Mechanical</b><br><b>Electrical</b>     | Minimum operations<br>30 million operations<br>1 x 10 <sup>5</sup> at 10 A, 30 VDC or 115 VAC<br>2 x 10 <sup>5</sup> at 8 A, 250 VAC                   |
| <b>Operate Time (typical)</b>  | 6 ms at nominal coil voltage   |
| <b>Release Time (typical)</b>  | 2 ms at nominal coil voltage<br>(with no coil suppression)   |
| <b>Dielectric Strength (at sea level for 1 min.)</b>                 | 4000 Vrms coil to contact<br>1000 Vrms between open contacts   |
| <b>Insulation Resistance</b>   | 10,000 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>Standard: -55°C (-67°F) to 70°C (158°F)<br>Sensitive: -55°C (-67°F) to 80°C (176°F)<br>Both: -55°C (-67°F) to 110°C (230°F) |
| <b>Vibration</b>   | 0.062" DA at 10–55 Hz  |
| <b>Shock</b>   | 20 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>  | 17 grams   |

### 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.

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## INTERNATIONAL APPROVALS

|  |   |
|--|---|
| Passed International Electrical Code IEC 380 |   |
| <b>Germany</b>                               | VDE 0860/8.81 paragraphs 10, 14<br>VDE 0806/8.81 paragraphs 7, 11, 15, 16, 29<br>VDE 0631/9.77 paragraphs 9, 12, 14<br>VDE 0730/T.1/3.72 paragraph 22<br>VDE 0435/9.72 (with production monitoring) |
| <b>U.S.A.</b>                                | UL File E44211  |

## RELAY ORDERING DATA: Single Pole .138 Spacing

| STANDARD RELAYS: 1 Form C (SPDT) |                     |                            |                  | ORDER NUMBER* |              |
|----------------------------------|---------------------|----------------------------|------------------|---------------|--------------|
| COIL SPECIFICATIONS              |                     |                            |                  |               |              |
| Nominal Coil VDC                 | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Must Operate VDC | Unsealed      | Sealed       |
| 5                                | 8                   | 38                         | 3.5              | AZ692-125-2   | AZ2692-125-2 |
| 6                                | 10                  | 58                         | 4.2              | AZ692-112-2   | AZ2692-112-2 |
| 12                               | 19                  | 215                        | 8.4              | AZ692-08-2    | AZ2692-08-2  |
| 24                               | 35                  | 740                        | 16.8             | AZ692-560-2   | AZ2692-560-2 |
| 48                               | 74                  | 3,200                      | 33.6             | AZ692-04-2    | AZ2692-04-2  |

| SENSITIVE RELAYS: 1 Form C (SPDT) |                     |                            |                  | ORDER NUMBER* |               |
|-----------------------------------|---------------------|----------------------------|------------------|---------------|---------------|
| COIL SPECIFICATIONS               |                     |                            |                  |               |               |
| Nominal Coil VDC                  | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Must Operate VDC | Unsealed      | Sealed        |
| 5                                 | 8                   | 47                         | 3.5              | AZ692-118-52  | AZ2692-118-52 |
| 6                                 | 10                  | 80                         | 4.2              | AZ692-010-52  | AZ2692-010-52 |
| 12                                | 21                  | 330                        | 8.4              | AZ692-071-52  | AZ2692-071-52 |
| 24                                | 41                  | 1,200                      | 16.8             | AZ692-052-52  | AZ2692-052-52 |
| 48                                | 80                  | 4,700                      | 33.6             | AZ692-518-52  | AZ2692-518-52 |

\*Substitute "4 or 54," "6 or 56" in place of "2 or 52" to indicate 1 Form A and 1 Form B respectively.

## HARDWARE ORDERING DATA – AZ692†

| DESCRIPTION | ORDER NUMBER | DESCRIPTION | ORDER NUMBER |
|-------------|--------------|-------------|--------------|
| Socket      | ST482-U1     | Retainer    | ST482-2      |

† See following pages for diagram

## MECHANICAL DATA

|                         |  |   |                    |                         |                         |  |  |  |                         |  |  |
|-------------------------|--|---|--------------------|-------------------------|-------------------------|--|--|--|-------------------------|--|--|
|                         | <p style="text-align: center;"><b>AZ692</b><br/><b>PC BOARD LAYOUT</b><br/>Viewed toward terminals</p> | <p style="text-align: center;"><b>WIRING DIAGRAM</b></p> <table style="width: 100%; text-align: center;"> <tr> <td>1 FORM C<br/>(SPDT)</td> <td>1 FORM B<br/>(SPDT - NC)</td> <td>1 FORM A<br/>(SPDT - NC)</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="3">Viewed toward terminals</td> </tr> </table> | 1 FORM C<br>(SPDT) | 1 FORM B<br>(SPDT - NC) | 1 FORM A<br>(SPDT - NC) |  |  |  | Viewed toward terminals |  |  |
| 1 FORM C<br>(SPDT)      | 1 FORM B<br>(SPDT - NC)  | 1 FORM A<br>(SPDT - NC)   |                    |                         |                         |  |  |  |                         |  |  |
|                         |  |   |                    |                         |                         |  |  |  |                         |  |  |
| Viewed toward terminals |  |   |                    |                         |                         |  |  |  |                         |  |  |

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

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## RELAY ORDERING DATA: Single Pole .100 Spacing

| STANDARD RELAYS: 1 Form C (SPDT) |                     |                            |                  |               |              |
|----------------------------------|---------------------|----------------------------|------------------|---------------|--------------|
| COIL SPECIFICATIONS              |                     |                            |                  | ORDER NUMBER* |              |
| Nominal Coil VDC                 | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Must Operate VDC | Unsealed      | Sealed       |
| 5                                | 8                   | 38                         | 3.5              | AZ693-125-2   | AZ2693-125-2 |
| 6                                | 10                  | 58                         | 4.2              | AZ693-112-2   | AZ2693-112-2 |
| 12                               | 19                  | 215                        | 8.4              | AZ693-08-2    | AZ2693-08-2  |
| 24                               | 35                  | 740                        | 16.8             | AZ693-560-2   | AZ2693-560-2 |
| 48                               | 74                  | 3,200                      | 33.6             | AZ693-04-2    | AZ2693-04-2  |

| SENSITIVE RELAYS: 1 Form C (SPDT) |                     |                            |                  |               |               |
|-----------------------------------|---------------------|----------------------------|------------------|---------------|---------------|
| COIL SPECIFICATIONS               |                     |                            |                  | ORDER NUMBER* |               |
| Nominal Coil VDC                  | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Must Operate VDC | Unsealed      | Sealed        |
| 5                                 | 8                   | 47                         | 3.5              | AZ693-118-52  | AZ2693-118-52 |
| 6                                 | 10                  | 80                         | 4.2              | AZ693-010-52  | AZ2693-010-52 |
| 12                                | 21                  | 330                        | 8.4              | AZ693-071-52  | AZ2693-071-52 |
| 24                                | 41                  | 1,200                      | 16.8             | AZ693-052-52  | AZ2693-052-52 |
| 48                                | 80                  | 4,700                      | 33.6             | AZ693-518-52  | AZ2693-518-52 |

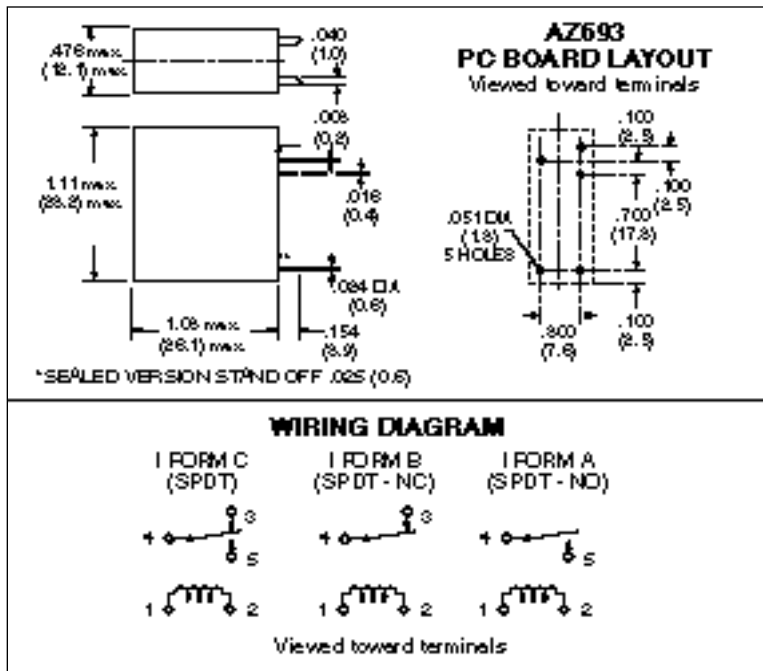
\*Substitute "4 or 54," "6 or 56" in place of "2 or 52" to indicate 1 Form A and 1 Form B respectively.

## HARDWARE ORDERING DATA – AZ693†

| DESCRIPTION | ORDER NUMBER | DESCRIPTION | ORDER NUMBER |
|-------------|--------------|-------------|--------------|
| Socket      | ST483-U1     | Retainer    | ST482-2      |

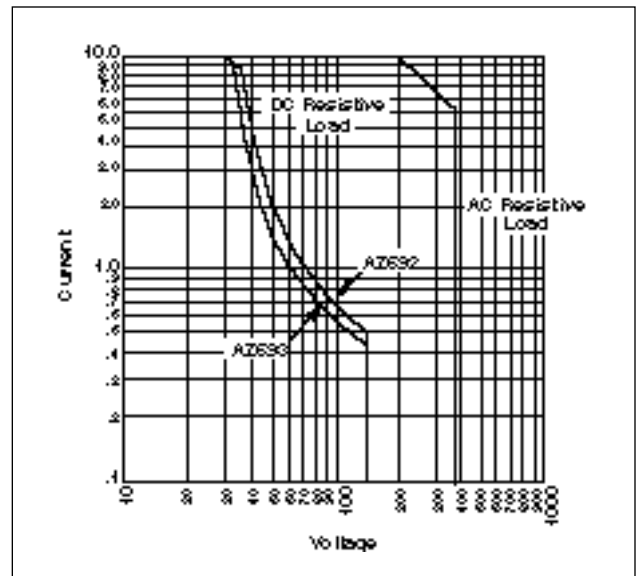
† See following pages for diagram

## MECHANICAL DATA



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

## MAXIMUM SWITCHING CAPACITY



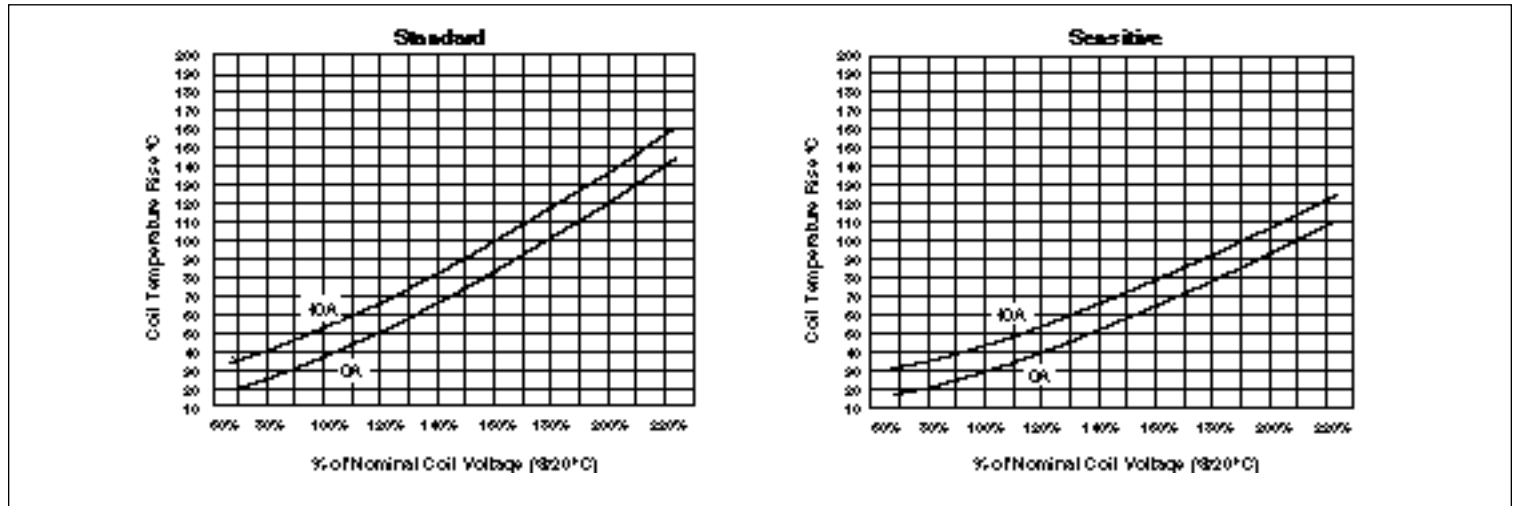
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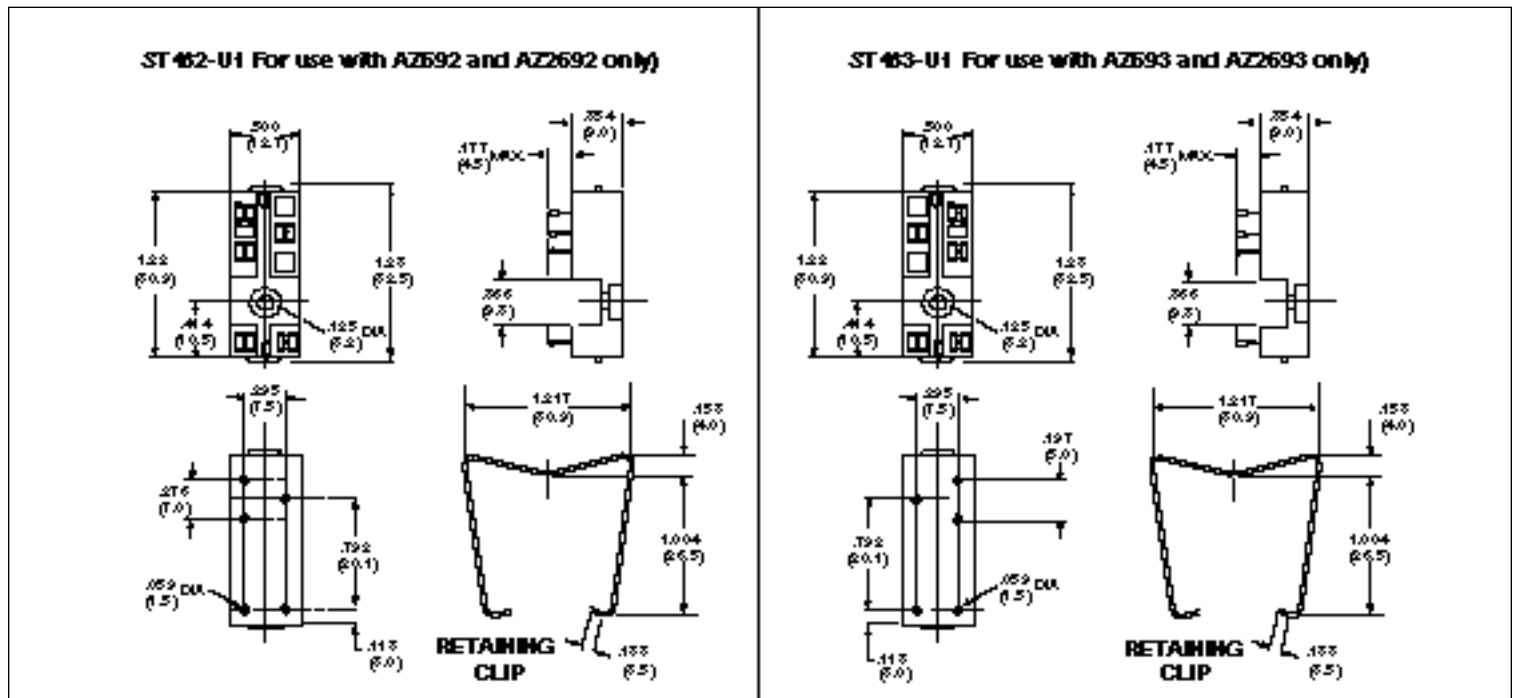
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## Coil Temperature Rise



## HARDWARE SPECIFICATIONS



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