

# AZ7709

## SPDT SUBMINIATURE POWER RELAY

### FEATURES

- 4kV dielectric strength
- Proof tracking index (PTI/CTI) 250
- 5 Amp switching capability (version "T" 10 Amp)
- Epoxy sealed version available
- Class F insulation available
- UL, CUR file E365652
- TUV B170288793007



### CONTACTS

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Arrangement</b>        | SPST (1 Form A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Ratings</b>            | Resistive load:<br>Max. switched power: 150W or 1250VA (Version "T": 300W or 2500VA) Max.<br>switched current: 5A (Version "T": 10A)<br>Max. switched voltage: 30VDC* or 250VAC<br><br>* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.                                                                                                                                                                                                                                                                       |
| <b>Rated Load UL, CUR</b> | Standard Coil<br>5A at 250VAC, resistive, 100k cycles 85°C<br>5A at 30VDC, resistive, 100k cycles 85°C<br>1/6HP at 125/250 VAC, 100k cycles 85°C<br>Sensitive Coil<br>3A at 250VAC, Res. 100k cycles 85°C<br>3A at 30VDC, Res. 100k cycles 85°C<br><br>High capacity version "T"<br>Standard Coil<br>10A at 250VAC, Res. 100k cycles 85°C<br>10A at 30VDC, Res. 100k cycles 85°C<br>1/6HP at 125/250 VAC, 100k cycles 85°C<br>TV5 at 120VAC, 25k cycles 25°C Silver tin contacts only<br>Sensitive Coil<br>8A at 250VAC, 85°C, 100k cycles<br>8A at 30VDC, Res. 100k cycles 85°C |
| <b>TUV</b>                | Standard Coil<br>5A at 250VAC/ 30VDC, Res., 100k cycles 85°C<br>10A at 250VAC/ 30VDC, Res., 100k cycles 85°C ("T Ver.)<br>Sensitive Coil<br>3A at 250VAC/ 30VDC, Res. 100k cycles 85°C<br>8A at 250VAC/ 30VDC, Res., 100k cycles 85°C ("T Ver.)<br>(All TUV ratings 105°C Class F only)                                                                                                                                                                                                                                                                                          |
| <b>Material</b>           | Silver cadmium oxide, Silver alloy (UL only), Silver tin oxide, gold plating available (UL/TUV only)                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Resistance</b>         | < 100 milliohms initially                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### 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>Mechanical<br>Electrical   | Minimum operations<br>1 x 10 <sup>7</sup><br>1 x 10 <sup>5</sup>                                                       |
| <b>Operate Time (max.)</b>                           | 8ms at nominal coil voltage                                                                                            |
| <b>Release Time (max.)</b>                           | 4ms at nominal coil voltage (with no coil suppression)                                                                 |
| <b>Dielectric Strength (at sea level for 1 min.)</b> | 4000Vrms coil to contact<br>1000Vrms between open contacts                                                             |
| <b>Insulation Resistance</b>                         | 1000 megohms min. at 20°C, 500VDC, 50% RH                                                                              |
| <b>Dropout</b>                                       | Greater than 5% of nominal coil voltage                                                                                |
| <b>Ambient Temperature Operating</b>                 | At nominal coil voltage<br>-40°C (-40°F) to 85°C (185°F) Standard Coil<br>-40°C (-40°F) to 85°C (185°F) Sensitive Coil |
| <b>Storage</b>                                       | -30°C (-22°F) to 105°C (221°F)                                                                                         |
| <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 (approx.)</b>                              | 6 grams                                                                                                                |

### COIL

|                                    |                                                                                                 |
|------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Power</b>                       |                                                                                                 |
| <b>At Pickup Voltage (typical)</b> | .220W (standard coil)<br>.113W (sensitive coil)                                                 |
| <b>Max. Continuous Dissipation</b> | .760 W at 20°C (68°F) ambient                                                                   |
| <b>Temperature Rise</b>            | 41°C (74°F) at nominal coil voltage, standard<br>22°C (40°F) at nominal coil voltage, sensitive |
| <b>Temperature</b>                 | Max. 105°C (221°F) Standard<br>Max. 155°C (311°F) available                                     |

**AMERICAN ZETTLER, INC.**

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# AZ7709

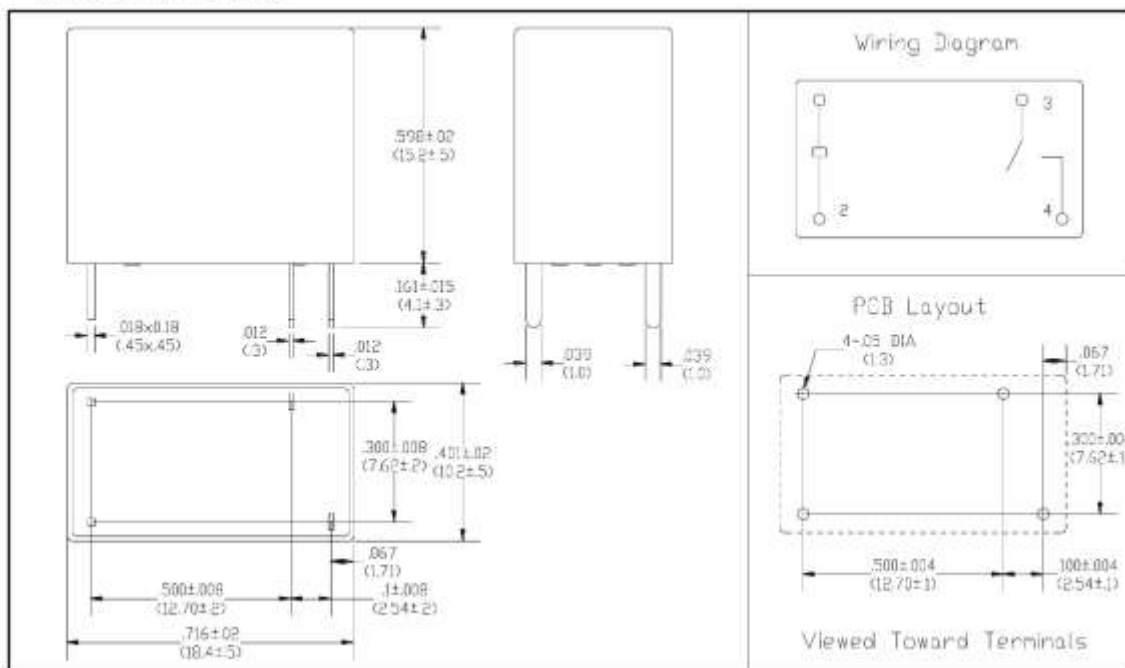
## RELAY ORDERING DATA

| STANDARD COIL       |                  |                     |                     |               |
|---------------------|------------------|---------------------|---------------------|---------------|
| COIL SPECIFICATIONS |                  |                     |                     | ORDER NUMBER* |
| Nominal Coil VDC    | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm | Form A (SPST) |
| 3                   | 2.1              | 3.9                 | 20 ± 10%            | AZ7709-1A-3D  |
| 5                   | 3.5              | 6.5                 | 55 ± 10%            | AZ7709-1A-5D  |
| 6                   | 4.2              | 7.8                 | 80 ± 10%            | AZ7709-1A-6D  |
| 9                   | 6.3              | 11.7                | 180 ± 10%           | AZ7709-1A-9D  |
| 12                  | 8.4              | 15.6                | 320 ± 10%           | AZ7709-1A-12D |
| 18                  | 12.6             | 23.4                | 720 ± 10%           | AZ7709-1A-18D |
| 24                  | 16.8             | 31.2                | 1,280 ± 10%         | AZ7709-1A-24D |
| 48                  | 33.6             | 62.4                | 5,120 ± 15%         | AZ7709-1A-48D |

| SENSITIVE COIL      |                  |                     |                           |                |
|---------------------|------------------|---------------------|---------------------------|----------------|
| COIL SPECIFICATIONS |                  |                     |                           | ORDER NUMBER*  |
| Nominal Coil VDC    | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm ± 10% | Form A (SPST)  |
| 3                   | 2.25             | 3.9                 | 45 ± 10%                  | AZ7709-1A-3DS  |
| 5                   | 3.75             | 6.5                 | 125 ± 10%                 | AZ7709-1A-5DS  |
| 6                   | 4.50             | 7.8                 | 180 ± 10%                 | AZ7709-1A-6DS  |
| 9                   | 6.75             | 11.7                | 400 ± 10%                 | AZ7709-1A-9DS  |
| 12                  | 9.00             | 15.6                | 720 ± 10%                 | AZ7709-1A-12DS |
| 18                  | 13.50            | 23.4                | 1,620 ± 10%               | AZ7709-1A-18DS |
| 24                  | 18.00            | 31.2                | 2,800 ± 10%               | AZ7709-1A-24DS |

\* Standard contact material Silver cadmium oxide contacts.  
 Substitute "AZ7709T" in place of "AZ770" for high capacity version.  
 Substitute "1AB" in place of "1A" for Silver alloy contacts. (UL only)  
 Substitute "1AE" in place of "1A" for Silver tin oxide contacts.  
 Add suffix "E" at the end of order number for sealed version.  
 Add suffix "G" at the end of order number for gold plated contacts. (UL/TUV only)  
 Add suffix "F" at the end of the model number for Class F 155°C Version.

### MECHANICAL DATA



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

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