

# 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: Max. switched power: 150W or 1250VA (Version "T": 300W or 2500VA) Max. switched current: 5A (Version "T": 10A) Max. switched voltage: 30VDC* or 250VAC  * 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 5A at 250VAC, resistive, 100k cycles 85°C 5A at 30VDC, resistive, 100k cycles 85°C 1/6HP at 125/250 VAC, 100k cycles 85°C Sensitive Coil 3A at 250VAC, Res. 100k cycles 85°C 3A at 30VDC, Res. 100k cycles 85°C  High capacity version "T" Standard Coil 10A at 250VAC, Res. 100k cycles 85°C 10A at 30VDC, Res. 100k cycles 85°C 1/6HP at 125/250 VAC, 100k cycles 85°C TV5 at 120VAC, 25k cycles 25°C Silver tin contacts only Sensitive Coil 8A at 250VAC, 85°C, 100k cycles 8A at 30VDC, Res. 100k cycles 85°C
<b>TUV</b>	Standard Coil 5A at 250VAC/ 30VDC, Res., 100k cycles 85°C 10A at 250VAC/ 30VDC, Res., 100k cycles 85°C ("T Ver.) Sensitive Coil 3A at 250VAC/ 30VDC, Res. 100k cycles 85°C 8A at 250VAC/ 30VDC, Res., 100k cycles 85°C ("T Ver.) (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> Mechanical Electrical	Minimum operations 1 x 10 <sup>7</sup> 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 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 -40°C (-40°F) to 85°C (185°F) -40°C (-40°F) to 105°C (221°F) Class F only
<b>Storage</b>	-40°C (-40°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) .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 22°C (40°F) at nominal coil voltage, sensitive
<b>Temperature</b>	Max. 105°C (221°F) Standard Max. 155°C (311°F) available

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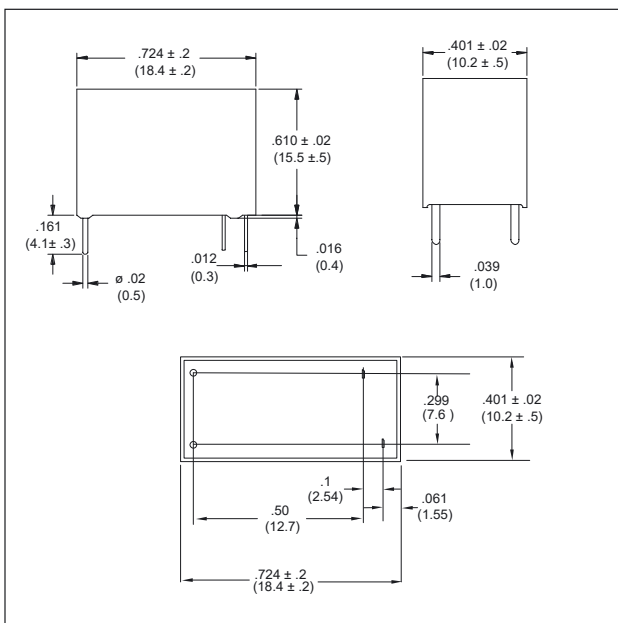
## RELAY ORDERING DATA

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

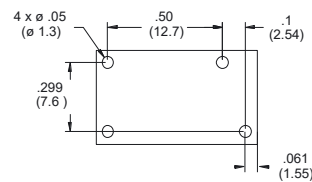
\* Standard contact material Silver cadmium oxide contacts.  
 Substitute "AZ7709T" in place of "AZ7709" for high capacity version.  
 Substitute "1AB" in place of "1A" for Silver alloy contacts. (UL only)  
 Substitute "1AE" in place of "1A" for Silver tin oxide contacts.  
 Add suffix "E" at the end 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



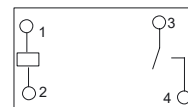
Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010"

## PC BOARD LAYOUT



Viewed toward terminals

## WIRING DIAGRAMS



Viewed toward terminals

# AMERICAN ZETTLER, INC.

8/29/18

PHONE: (949) 831-5000

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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.