

# AZ9405

## 10 AMP MINIATURE POWER RELAY

### FEATURES

- 10 Amp switching capability
- SPST-N.O. and SPDT configurations
- 4kV dielectric strength
- Epoxy sealed version available
- Class F insulation system standard
- UL, CUR file E44211
- TUV R50304647



### CONTACTS

<b>Arrangement</b>	SPST N.O. (1 Form A) SPDT (1 Form C)
<b>Ratings</b>	Resistive load: Max. switched power: 150W or 1400VA N.O. 90W or 850VA N.C. Max. switched current: 10A N.O., 3A N.C. Max. switched voltage: 30VDC or 277VAC
<b>UL, CSA</b>	<b>Standard and Sensitive Coil</b>
<b>1 form A (only)</b>	10A at 125 VAC, Res.100k cycles, 85°C
<b>1 form A, and 1 form C (N.O.)</b>	1/10 HP at 125 VAC, 100k cycles, 85°C 1/10 HP at 250 VAC, 100k cycles, 85°C
<b>1 Form C (N.C.)</b>	5A In-rush, 1A steady state at 120 VAC Pilot Duty, 50k cycles, 85°C
<b>1 form A, and 1 form C (N.O.)</b>	<b>Sensitive Coil only</b> 10A Carry, 0A Make, 5A Break at 277 VAC, Res., 10k cycles, 105°C 10A Carry, 0A Make, 5A Break 30 VDC, Res., 10k cycles, 105°C
<b>1 form A, and 1 form C (N.O.)</b>	<b>Super Sensitive Coil Only</b> 5A at 277 VAC, Res. 100k cycles, 85°C 5A at 30 VDC, Res., 100k cycles, 85°C
<b>1 Form C (N.C.)</b>	3A at 277 VAC Res., 100k cycles, 85°C 3A at 30 VDC Res., 100k cycles, 85°C
<b>TUV</b>	5A NO / 3A NC @ 277VAC; cos phi=1, 100k cycles, 85°C 5A NO / 3A NC @ 30VDC; L/R=0ms, 100k cycles, 85°C 5A NO @ 277VAC; cos phi=1, 100k cycles, 85°C 10A NO @ 125VAC; cos phi=1, 100k cycles, 85°C
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 0.1 Ohm (24V, 1A voltage drop method)

### COIL

<b>Power At Pickup Voltage (typical)</b>	225mW (Standard Coil) 113mW (Sensitive Coil) 84mW (Super Sensitive Coil)
<b>Max. Continuous Dissipation</b>	676mW at 20°C (68°F)
<b>Temperature Rise</b>	42°C (76°F) (Standard Coil) 24°C (44°F) (Sensitive Coil)
<b>Temperature</b>	Max. 155°C (311°F)

### GENERAL DATA

<b>Life Expectancy</b>	Minimum operations
<b>Mechanical</b>	5 x 10 <sup>6</sup>
<b>Electrical</b>	1 x 10 <sup>5</sup> at 10A, 120VAC Res.
<b>Operate Time (max.)</b>	10ms at nominal coil voltage, standard 15ms at nominal coil voltage, sensitive
<b>Release Time (max.)</b>	5ms at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength (at sea level for 1 min.)</b>	1000Vrms contact to contact 4000Vrms contact to coil
<b>Insulation Resistance</b>	1 x 10 <sup>9</sup> ohms minimum at 500VDC
<b>Dropout</b>	Greater than 10% of nominal coil voltage
<b>Ambient Temperature Operating</b>	At nominal coil voltage -40°C (-40°F) to 105°C (221°F)
<b>Storage</b>	-40°C (-40°F) to 105°C (221°F)
<b>Vibration</b>	0.062" DA at 10–55 Hz
<b>Shock</b>	
<b>Operating</b>	10g for 11ms 1/2 sine pulse (no contact opening >100 usec)
<b>Mechanical</b>	100g for 11ms 1/2 sine pulse
<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>	7 grams

### 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.

**AMERICAN ZETTLER, INC.**

9/13/18

# AZ9405

## RELAY ORDERING DATA

COIL SPECIFICATIONS – Standard Coil (SPDT and SPST)				ORDER NUMBER*
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	SPST-NO
3	2.25	3.9	22.5	AZ9405-1A-3DF
5	3.75	6.5	63	AZ9405-1A-5DF
6	4.5	7.8	90	AZ9405-1A-6DF
9	6.75	11.7	202.5	AZ9405-1A-9DF
12	9	15.6	360	AZ9405-1A-12DF
18	15.5	23.4	810	AZ9405-1A-18DF
24	18	31.2	1440	AZ9405-1A-24DF
48	36	62.4	5760	AZ9405-1A-48DF

\*Add "E" after "D" for sealed version. For SPDT replace "-1A" with "-1C".

COIL SPECIFICATIONS – Sensitive Coil (SPST)				ORDER NUMBER*
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	SPST-NO
3	2.25	3.9	45	AZ9405-1A-3DSF
5	3.75	6.5	125	AZ9405-1A-5DSF
6	4.5	7.8	180	AZ9405-1A-6DSF
9	6.75	11.7	400	AZ9405-1A-9DSF
12	9	15.6	720	AZ9405-1A-12DSF
18	13.5	23.4	1620	AZ9405-1A-18DSF
24	18	31.2	2800	AZ9405-1A-24DSF

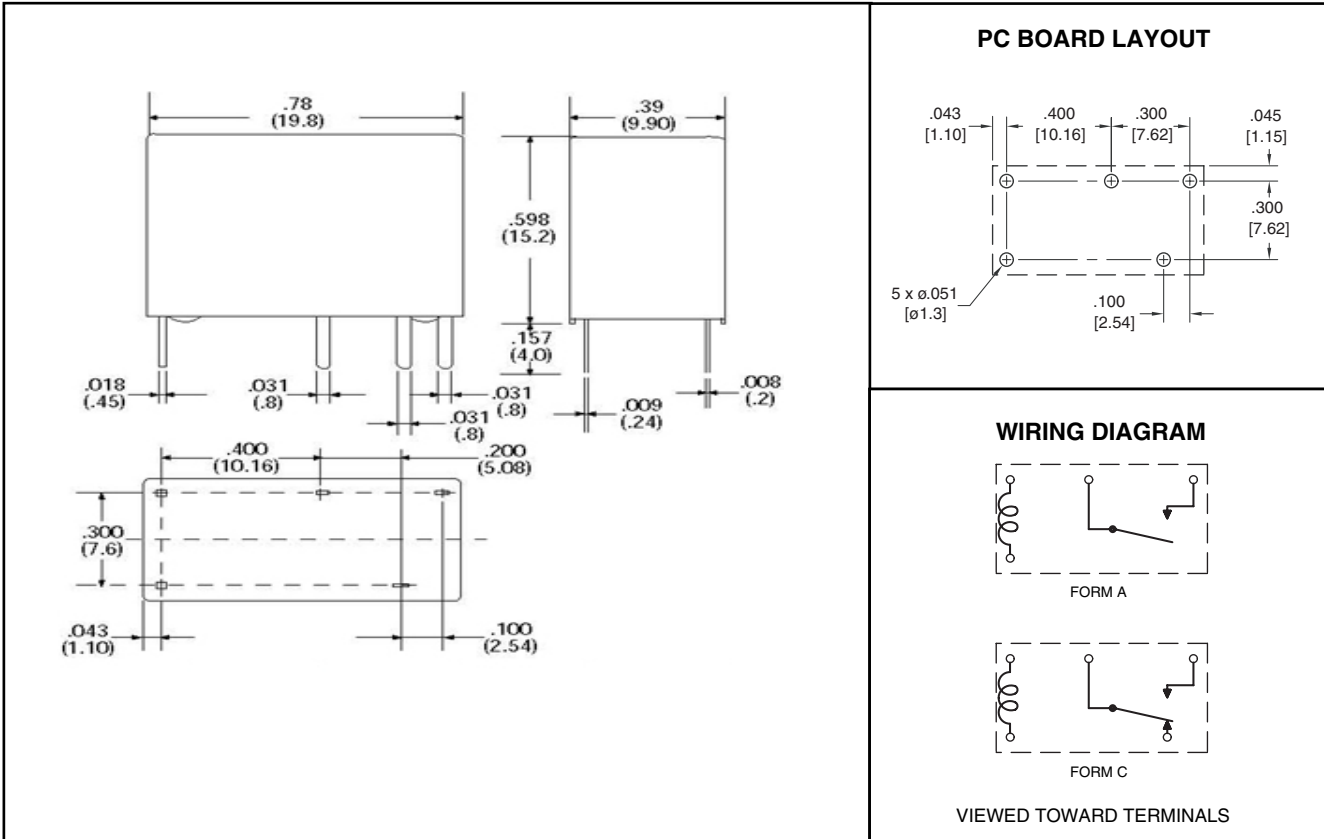
\*Add "E" after "DS" for sealed version. For SPDT replace "-1A" with "-1C".

COIL SPECIFICATIONS – Super Sensitive Coil (SPST)				ORDER NUMBER*
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	SPST-NO
3	2.25	3.9	60	AZ9405-1A-3DSSF
5	3.75	6.5	166	AZ9405-1A-5DSSF
6	4.5	7.8	240	AZ9405-1A-6DSSF
9	6.75	11.7	540	AZ9405-1A-9DSSF
12	9	15.6	960	AZ9405-1A-12DSSF
18	13.5	23.4	2160	AZ9405-1A-18DSSF
24	18	31.2	3840	AZ9405-1A-24DSSF

\*Add "E" after "DSS" for sealed version. For SPDT replace "-1A" with "-1C".

# AZ9405

## MECHANICAL DATA



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

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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.