

# AZ9405

## 10 AMP MINIATURE POWER RELAY

### FEATURES

- 4 kV dielectric strength
- Epoxy sealed version available
- 4 mm clearance & 6 mm creepage (1 Form A)
- 3 mm clearance & 5 mm creepage (1 Form C)
- UL, CUR file E44211
- TÜV R50304647



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) SPDT (1 Form C)
<b>Ratings</b>	Resistive load:  Max. switched power: 150 W or 1400 VA (N.O.) 90 W or 850 VA (N.C.) Max. switched current: 10 A Max. switched voltage: 30 VDC* or 277 VAC  * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Rated Load UL</b>	1 Form A 10 A at 125 VAC, resistive, 85°C, 100k cycles 5 A at 277 VAC, resistive, 85°C, 100k cycles 1/10 HP at 125/250 VAC, 85°C, 100k cycles  1 Form C - normally open contacts 5 A at 277 VAC, resistive, 85°C, 100k cycles 5 A at 30 VDC, resistive, 85°C, 100k cycles 1/10 HP at 125/250 VAC, 85°C, 100k cycles  1 Form C - normally closed contacts 3 A at 277 VAC, resistive, 85°C, 100k cycles 3 A at 30 VDC, resistive, 85°C, 100k cycles
<b>TÜV</b>	1 Form A 10 A at 125 VAC, resistive, 85°C, 100k cycles 5 A at 277 VAC, resistive, 85°C, 100k cycles  1 Form C - normally open contacts 5 A at 277 VAC, resistive, 85°C, 100k cycles 5 A at 30 VDC, resistive, 85°C, 100k cycles  1 Form C - normally closed contacts 3 A at 277 VAC, resistive, 85°C, 100k cycles 3 A at 30 VDC, resistive, 85°C, 100k cycles
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 100 milliohms initially (6 V, 1 A voltage drop method)

### 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 Mechanical Electrical</b>	Minimum operations 1 x 10 <sup>7</sup> 1 x 10 <sup>5</sup> at rated load
<b>Operate Time (max.)</b>	10 ms at nominal coil voltage (standard) 15 ms at nominal coil voltage (sensitive)
<b>Release Time (max.)</b>	5 ms at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength (at sea level for 1 min.)</b>	4000 Vrms coil to contact 1000 Vrms between open contacts
<b>Insulation Resistance</b>	1000 megohms min. at 20°C, 500 VDC, 50% RH
<b>Dropout</b>	Greater than 10% of nominal coil voltage
<b>Ambient Temperature Operating</b>	At nominal coil voltage -40°C (-40°F) to 85°C (185°F)
<b>Vibration</b>	1.5 mm DA at 10–55 Hz
<b>Shock</b>	10 g operating, 100 g damage
<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

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	196 mW (standard coil) 113 mW (sensitive coil)
<b>Max. Continuous Dissipation</b>	676 mW at 20°C (68°F) ambient
<b>Temperature Rise (at nominal voltage)</b>	42°C (76°F) standard coil 24°C (44°F) sensitive coil
<b>Temperature</b>	Max. 130°C (266°F)

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This product specification to be used only together with the application notes  
which can be downloaded from <http://www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf>

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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 $\pm 10\%$	Form A (SPST)	Form C (SPDT)
3	2.1	3.9	22.5	AZ9405-1A-3DF	AZ9405-1C-3DF
5	3.5	6.5	63	AZ9405-1A-5DF	AZ9405-1C-5DF
6	4.2	7.8	90	AZ9405-1A-6DF	AZ9405-1C-6DF
9	6.3	11.7	202.5	AZ9405-1A-9DF	AZ9405-1C-9DF
12	8.4	15.6	360	AZ9405-1A-12DF	AZ9405-1C-12DF
18	12.6	23.4	810	AZ9405-1A-18DF	AZ9405-1C-18DF
24	16.8	31.2	1,440	AZ9405-1A-24DF	AZ9405-1C-24DF
48	33.6	62.4	5,760	AZ9405-1A-48DF	AZ9405-1C-48DF

SENSITIVE COIL					
COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	Form A (SPST)	Form C (SPDT)
3	2.25	3.9	45	AZ9405-1A-3DSF	AZ9405-1C-3DSF
5	3.75	6.5	125	AZ9405-1A-5DSF	AZ9405-1C-5DSF
6	4.50	7.8	180	AZ9405-1A-6DSF	AZ9405-1C-6DSF
9	6.75	11.7	400	AZ9405-1A-9DSF	AZ9405-1C-9DSF
12	9.00	15.6	720	AZ9405-1A-12DSF	AZ9405-1C-12DSF
18	13.50	23.4	1,620	AZ9405-1A-18DSF	AZ9405-1C-18DSF
24	18.00	31.2	2,800	AZ9405-1A-24DSF	AZ9405-1C-24DSF

\* Add suffix "E" before "F" at the end of order number for sealed version.

## MECHANICAL DATA

### PC BOARD LAYOUT

### WIRING DIAGRAM

VIEWED TOWARD TERMINALS

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

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