# 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

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

| | |
|---|---|
| **Life Expectancy**<br>**Mechanical**<br>**Electrical** | Minimum operations<br>1 x $10^7$<br>1 x $10^5$ at rated load |
| **Operate Time (max.)** | 10 ms at nominal cail voltage (standard)<br>15 ms at nominal coil voltage (sensitive) |
| **Release Time (max.)** | 5 ms at nominal coil voltage<br>(with no coil suppression) |
| **Dielectric Strength**<br>**(at sea level for 1 min.)** | 4000 Vrms coil to contact<br>1000 Vrms between open contacts |
| **Insulation Resistance** | 1000 megohms min. at 20°C, 500 VDC, 50% RH |
| **Dropout** | Greater than 10% of nominal coil voltage |
| **Ambient Temperature**<br>**Operating** | At nominal coil voltage<br>-40°C (-40°F) to 85°C (185°F) |
| **Vibration** | 1.5 mm DA at 10–55 Hz |
| **Shock** | 10 g operating, 100 g damage |
| **Enclosure** | P.B.T. polyester |
| **Terminals** | Tinned copper alloy, P.C. |
| **Max. Solder Temp.** | 270°C (518°F) |
| **Max. Solder Time** | 5 seconds |
| **Max. Solvent Temp.** | 80°C (176°F) |
| **Max. Immersion Time** | 30 seconds |
| **Weight** | 7 grams |

### COIL

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

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# AZ9405

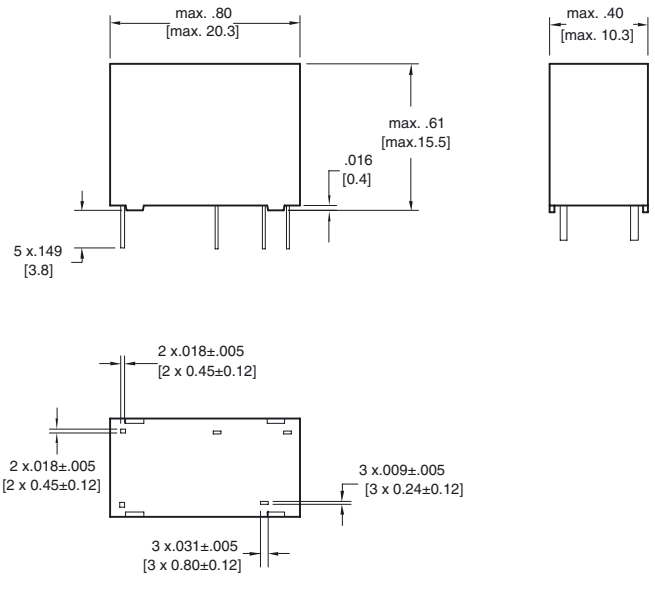
## RELAY ORDERING DATA

| STANDARD COIL | | | | | |
|---|---|---|---|---|---|
| COIL SPECIFICATIONS | | | | ORDER NUMBER* | |
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm ± 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 ± 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 |

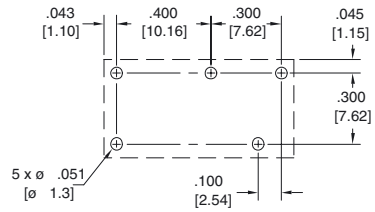
* Add suffix “E” before “F” at the end of order number for sealed version.

## MECHANICAL DATA

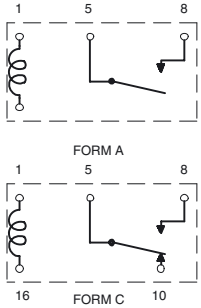



Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010"

### PC BOARD LAYOUT




### WIRING DIAGRAM




VIEWED TOWARD TERMINALS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