

# AZ697

## 10 AMP MINIATURE POWER RELAY

### FEATURES

- Dielectric strength 5000 Vrms
- Low cost
- Epoxy sealed version available
- 10 Amp switching — single pole contacts
- UL TV-5
- Isolation spacing greater than 8mm
- UL Class B insulation system, Class F available
- UL, CUR file E44211; TÜV file R50129288



### CONTACTS

|                       |                                                                                                                                                                                                                                                                                                                                           |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Arrangement           | SPST (1 Form A)<br>SPDT (1 Form C)                                                                                                                                                                                                                                                                                                        |
| Ratings               | Resistive load:<br>Max. switched power: 300 W or 2770 VA<br>Max. switched current: 10 A<br>Max. switched voltage: 150* VDC or 380 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, CUR | TV-5 at 120 VAC [1][2][3]<br>10 A at 277 VAC, General Use [1]<br>10 A 30 VDC, Resistive [1]<br>1/3 HP at 250 VAC [1]<br>1/4 HP at 125 VAC N.O. [1]<br>10 A at 277 VAC, General Use, 100k cycles [2][3]<br>10 A at 30 VDC, Resistive, 100k cycles [2][3]<br>1/3 HP at 250 VAC, 100k cycles [2][3]<br>1/4 HP at 125 VAC, 100k cycles [2][3] |
| TÜV                   | 10 A at 250 VAC, 30 VDC Resistive 100k cycles [1][2]<br>10 A at 250 VAC, 30 VDC Resistive 50k cycles [3]                                                                                                                                                                                                                                  |
| Material              | Silver cadmium oxide [1], silver nickel [2], silver tin oxide [3], Gold plating available                                                                                                                                                                                                                                                 |
| Resistance            | < 50 milliohms initially<br>(24 V, 1 A voltage drop method)                                                                                                                                                                                                                                                                               |

### COIL

|                                         |                                                                                  |
|-----------------------------------------|----------------------------------------------------------------------------------|
| Power<br>At Pickup Voltage<br>(typical) | 257 mW                                                                           |
| Max. Continuous<br>Dissipation          | 1.9 W at 20°C (68°F) ambient (Class B)<br>2.5 W at 20°C (68°F) ambient (Class F) |
| Temperature Rise                        | 34° C (61°F) at nominal voltage                                                  |
| Temperature                             | Max. 130°C (266°F) Class B<br>Max. 155° C (311° F) Class F                       |

### GENERAL DATA

|                                                  |                                                                                                                                                                                                |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Life Expectancy<br>Mechanical<br>Electrical      | Minimum operations<br>1 x 10 <sup>7</sup><br>1 x 10 <sup>5</sup> at 10 A 240 VAC Res.                                                                                                          |
| Operate Time (typical)                           | 8 ms at nominal coil voltage                                                                                                                                                                   |
| Release Time (typical)                           | 5 ms at nominal coil voltage<br>(with no coil suppression)                                                                                                                                     |
| Dielectric Strength<br>(at sea level for 1 min.) | 5000 Vrms coil to contact<br>1000 Vrms between open contacts                                                                                                                                   |
| Insulation<br>Resistance                         | 1000 megohms min. at 20°C, 500 VDC<br>50% RH                                                                                                                                                   |
| Dropout                                          | Greater than 10% of nominal coil voltage                                                                                                                                                       |
| Ambient Temperature<br>Operating<br>Storage      | At nominal coil voltage<br>-40°C (-40°F) to 90°C (194°F) Class B<br>-40°C (-40°F) to 110°C (230°F) Class F<br>-40°C (-40°F) to 130°C (266°F) Class B<br>-40°C (-40°F) to 155°C (311°F) Class F |
| Vibration                                        | 0.062" DA at 10–55 Hz                                                                                                                                                                          |
| Shock                                            | 10 g                                                                                                                                                                                           |
| 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                                           | 18 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.**

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# AZ697

## RELAY ORDERING DATA

| COIL SPECIFICATIONS |                  |                     |                  | ORDER NUMBER* |               |
|---------------------|------------------|---------------------|------------------|---------------|---------------|
| Nominal Coil VDC    | Must Operate VDC | Max. Continuous VDC | Coil Resistance  | Form A (SPST) | Form C (SPDT) |
| 3                   | 2.1              | 5.7                 | 17 $\pm 10\%$    | AZ697-1A-3D   | AZ697-1C-3D   |
| 5                   | 3.5              | 9.4                 | 47 $\pm 10\%$    | AZ697-1A-5D   | AZ697-1C-5D   |
| 6                   | 4.2              | 11.4                | 68 $\pm 10\%$    | AZ697-1A-6D   | AZ697-1C-6D   |
| 9                   | 6.3              | 17.4                | 160 $\pm 10\%$   | AZ697-1A-9D   | AZ697-1C-9D   |
| 12                  | 8.4              | 22.8                | 275 $\pm 10\%$   | AZ697-1A-12D  | AZ697-1C-12D  |
| 18                  | 12.6             | 27.9                | 650 $\pm 10\%$   | AZ697-1A-18D  | AZ697-1C-18D  |
| 24                  | 16.8             | 45.7                | 1100 $\pm 15\%$  | AZ697-1A-24D  | AZ697-1C-24D  |
| 48                  | 33.6             | 89.0                | 4170 $\pm 15\%$  | AZ697-1A-48D  | AZ697-1C-48D  |
| 60                  | 42.0             | 115.3               | 7000 $\pm 15\%$  | AZ697-1A-60D  | AZ697-1C-60D  |
| 110                 | 79.3             | 170.5               | 22900 $\pm 15\%$ | AZ697-1A-110D | AZ697-1C-110D |

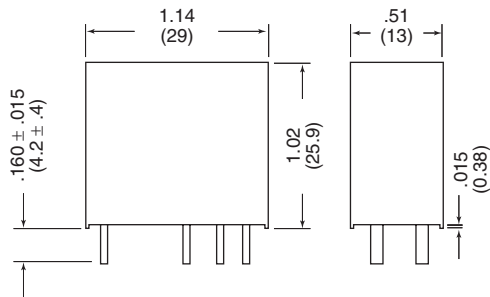
\*For silver nickel contacts change "-1A" or "-1C" to "-1AB" or "-1CB". For silver tin oxide contacts change "-1A" or "-1C" to "-1AE" or "-1CE". For epoxy seal change "D" to "DE". For gold plating change "D" or "DE" to "DA" or "DEA". For Class F insulation add suffix "F" to part number.

## HARDWARE ORDERING DATA

| DESCRIPTION | ORDER NUMBER | DESCRIPTION | ORDER NUMBER |
|-------------|--------------|-------------|--------------|
| Socket      | ST482-U1     | Retainer    | ST482-2      |

## MECHANICAL DATA

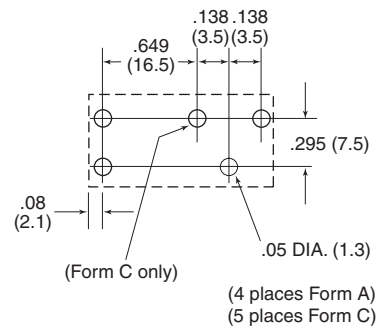
### Form A and C



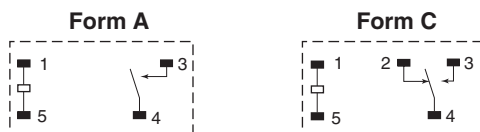
| Terminal No. | Dimensions Tol.: $\pm 0.005$ (0.13) |
|--------------|-------------------------------------|
| 1,2,3,5      | 0.018 (0.457) x 0.038 (0.965)       |
| 4            | 0.011 (0.279) x 0.038 (0.965)       |

### PC BOARD LAYOUT

Viewed toward terminals



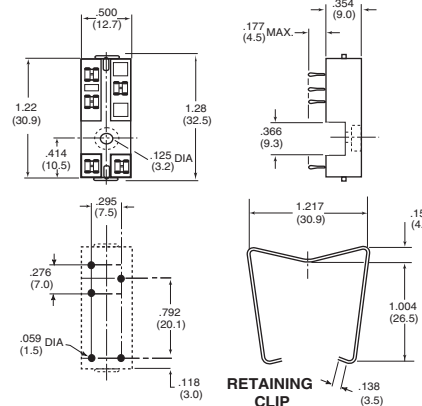
### WIRING DIAGRAM



Viewed toward terminals

### ST482-U1

### HARDWARE



ST482-2

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



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