

# AZ900

## 50 AMP HEAVY DUTY POWER RELAY

### FEATURES

- SPST, DPST, SPDT, and DPDT versions available
- AC and DC coils available
- UL Class F (155°C) molded construction
- 900, 900D and 900E are UL and cUL Listed
- 900S, 900Q, and 900R are UL cUR Recognized
- UL, CUL file E44211



### CONTACTS

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Arrangement</b> | SPST ( 1 Form A & B ), SPST-NO-DM ( Form 1X ), SPST-NC-DB (Form 1Y), DPST ( 2 Form A & B ), SPDT ( 1 Form C ), DPDT ( 2 Form C )                                                                                                                                                                                                                                                                                                                                              |
| <b>Ratings</b>     | Resistive load:<br><br>Max. switched power: 840 W or 12000 VA<br>Max. switched current: 30 A<br>Max. switched voltage: 600 VAC, 28 VDC                                                                                                                                                                                                                                                                                                                                        |
| <b>UL, CUR</b>     | 30 A at 240 VAC [1][2][3]<br>1.5 HP at 120 VAC [1][2][3]<br>2.0 HP at 240 VAC [1][2][3]<br>3600 VA at 120 VAC / 240 VAC ballast [1][2][3]<br>30 A at 240 VAC Res., 100k cycles [1][2][3]<br>20 A at 600 VAC [1][2][3]<br>30 A at 28 VDC [1][2][3]<br>Aux. Snap Switch 1/4 HP at 125 VAC / 240 VAC [2]<br>20 A at 125 VDC [3]<br>50 A at 277 VAC Res., [4][5]<br>40 A at 277 VAC General use (inductive) [4][5]<br><br>900Q series [1], 900S [2], 900D [3], 900E [4], 900R [5] |
| <b>Material</b>    | Silver cadmium oxide                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Resistance</b>  | < 50 milliohms initially<br>(24 V, 1 A voltage drop method)                                                                                                                                                                                                                                                                                                                                                                                                                   |

### GENERAL DATA

|                                                                  |                                                                                                                                                                                        |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Life Expectancy</b><br><b>Mechanical</b><br><b>Electrical</b> | Minimum operations<br>1 x 10 <sup>7</sup><br>1 x 10 <sup>5</sup> at 30 A 240 VAC Res.                                                                                                  |
| <b>Operate Time (typical)</b>                                    | 30 msec at nominal coil voltage                                                                                                                                                        |
| <b>Release Time (typical)</b>                                    | 30 msec at nominal coil voltage<br>(without suppression)                                                                                                                               |
| <b>Dielectric Strength</b><br>(at sea level for 1 min.)          | 2200 Vrms contact to contact<br>2200 Vrms contact to coil                                                                                                                              |
| <b>Insulation Resistance</b>                                     | 100 megohms min. at 20°C, 500 VDC<br>50% RH                                                                                                                                            |
| <b>Dropout</b>                                                   | DC: > 10% of nominal coil voltage<br>AC: > 20% of nominal coil voltage                                                                                                                 |
| <b>Ambient Temperature</b><br><b>Operating</b>                   | -45°C (-49°F) to 80°C (176°F) AC coil, 30A<br>-45°C (-49°F) to 70°C (239°F) AC coil, 50A<br>-45°C (-49°F) to 115°C (176°F) DC coil, 30A<br>-45°C (-49°F) to 105°C (239°F) DC coil, 50A |
| <b>Weight</b>                                                    | 227 grams                                                                                                                                                                              |

### COIL

|                                    |                                                                        |
|------------------------------------|------------------------------------------------------------------------|
| <b>Power</b>                       |                                                                        |
| <b>At Pickup Voltage (typical)</b> | DC: 1.12 W<br>AC: 6.9 VA                                               |
| <b>Max. Continuous Dissipation</b> | DC: 3.3 W at 25°C<br>AC: 12.5 VA at 25°C                               |
| <b>Temperature Rise</b>            | 70°C at nominal coil voltage (AC)<br>35°C at nominal coil voltage (DC) |
| <b>Max. Temperature</b>            | 155°C (311°F)                                                          |

### NOTES

1. All values at 25°C (77°F).
2. Relay may pull in with less than "Must Operate" value.
3. Specifications subject to change without notice.

# AMERICAN ZETTLER, INC.

# AZ900

## RELAY ORDERING DATA

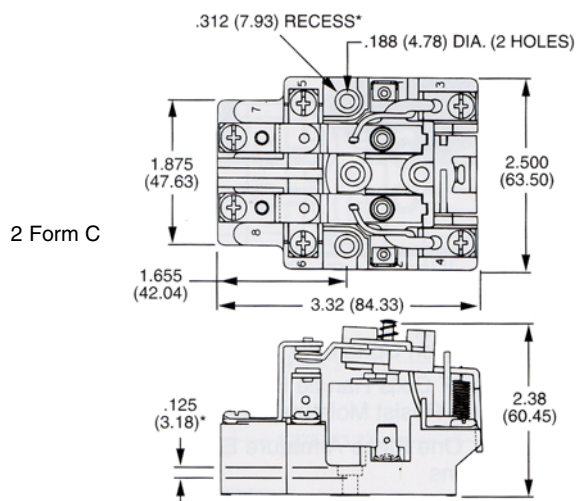
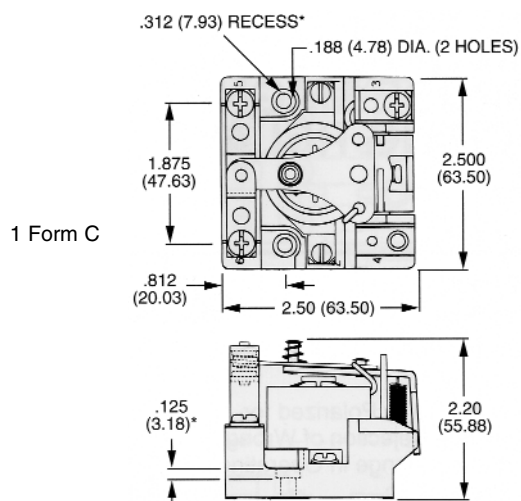
| COIL SPECIFICATIONS – DC Coil          |                  |                     |                               |                            | ORDER NUMBER* |
|----------------------------------------|------------------|---------------------|-------------------------------|----------------------------|---------------|
| Nominal Coil VDC                       | Must Operate VDC | Max. Continuous VDC | Nominal Current mA $\pm 10\%$ | Coil Resistance $\pm 10\%$ |               |
| 6                                      | 4.50             | 7.8                 | 333                           | 18                         | AZ900-1C-6D   |
| 12                                     | 9.1              | 15.4                | 166                           | 72                         | AZ900-1C-12D  |
| 24                                     | 18.0             | 32.0                | 83                            | 290                        | AZ900-1C-24D  |
| 48                                     | 36.0             | 62.6                | 42                            | 1150                       | AZ900-1C-48D  |
| 110                                    | 82.5             | 143.0               | 18.2                          | 6050                       | AZ900-1C-110D |
| COIL SPECIFICATIONS – AC Coil 50/60 Hz |                  |                     |                               |                            | ORDER NUMBER* |
| Nominal Coil VAC                       | Must Operate VAC | Max. Continuous VAC | Nominal Coil Power VA         | Coil Resistance $\pm 10\%$ |               |
| 6                                      | 5.1              | 6.9                 | 9.5                           | 0.85                       | AZ900-1C-6A   |
| 12                                     | 10.2             | 13.8                | 9.5                           | 2.85                       | AZ900-1C-12A  |
| 24                                     | 20.4             | 27.6                | 9.5                           | 11.5                       | AZ900-1C-24A  |
| 120                                    | 102.0            | 138.0               | 9.5                           | 295.0                      | AZ900-1C-120A |
| 240                                    | 204.0            | 276.0               | 9.5                           | 1170.0                     | AZ900-1C-240A |
| 480                                    | 408.0            | 552.0               | 9.5                           | 4860.0                     | AZ900-1C-480A |

\*For double pole version replace "-1C" with "-2C", "-2A", or "-2B". For SPST replace "-1C" with "-1A" or "-1B". For SPST-NO-DM replace "-1C" with "-1X"(Short Base). For SPST-NC-DB replace "-1C" with "-1Y"(Long Base). For addition of SPDT Auxiliary Snap Switch Rated at 10A and 1/4 H.P. add "S" after 900. For Q.C. 0.250" terminals add "Q" after 900. For blow out magnets used in high dc loads add "D" after 900. For 50A rating with box lug termination add "E" after 900. For 50A rating with screw termination add "R" after 900.

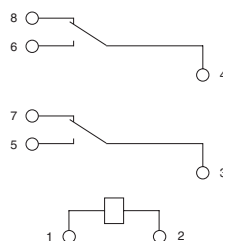
# AMERICAN ZETTLER, INC.

4/29/09w

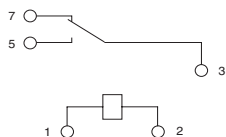
## MECHANICAL DATA



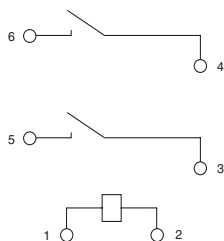
## WIRING DIAGRAM



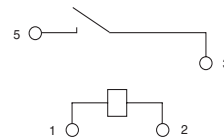
**2 Form C**



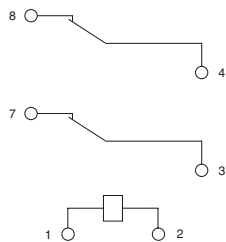
**1 Form C**



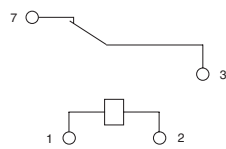
**2 Form A**



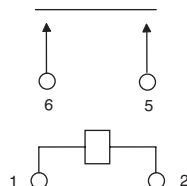
**1 Form A**



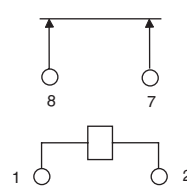
**2 Form B**



**1 Form B**



**Form 1X**



**Form 1Y**

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