

# AZ761

## 12 A SPDT MINIATURE POWER RELAY

### FEATURES

- Dielectric strength 5000 Vrms
- Low cost
- Epoxy sealed versions available
- 12 Amp switching
- AC and DC coils
- Class B (130°C) standard
- Class F (155°C) versions available
- Isolation spacing greater than 10 mm
- UL, CUR file E44211, VDE 40006031



### CONTACTS

|                               |  |
|-------------------------------|--|
| <b>Arrangement</b>            | SPDT (1 Form C)<br>SPST (1 Form A, 1 Form B)   |
| <b>Ratings</b>                | Resistive load:<br>Max. switched power: 360 W or 3324 VA<br>Max. switched current: 12 A<br>Max. switched voltage: 150* VDC or 400 VAC<br><br>*Note: If switching voltage is greater than 30VDC, special precautions must be taken. Please contact the factory.   |
| <b>Rated Load<br/>UL, CUR</b> | 12 A at 277 VAC resistive, 50k cycles (standard coils) [1]<br>12 A at 277 VAC resistive, 100k cycles (standard coils) [2] [3]<br>10 A at 250 VAC resistive, 100k cycles (sensitive coils) [1]<br>1/2 HP at 250 VAC (1 Form A) [1]<br>1/2 HP at 120VAC [1] 5mm spacing 1 pole<br>1/3 HP at 125 VAC (1 Form A) [1]<br>B300 Pilot Duty [2]<br>R300 Pilot Duty [2] |
| <b>VDE</b>                    | 12 A at 250 VAC resistive, 30k cycles [1] and 20k cycles [2]<br><br>Contact factory for additional VDE ratings<br>[1] Silver cadmium oxide, [2] Silver tin oxide<br>[3] Silver nickel  |
| <b>Material</b>               | Silver cadmium oxide or silver tin oxide or silver nickel<br>Gold plating available  |
| <b>Resistance</b>             | < 50 milliohms initially (using 6 V 1 A method)  |

### COIL

|  |  |
|--|--|
| <b>Power<br/>At Pickup Voltage<br/>(typical)</b> | 196 mW, (DC, standard)<br>141 mW, (DC, sensitive)<br>0.43 VA (AC)                          |
| <b>Max. Continuous<br/>Dissipation</b>           | 1.7 W at 20°C (68°F) ambient   |
| <b>Temperature Rise</b>                          | 26°C (47°F) at nominal coil voltage<br>17°C (31°F) at nominal coil voltage, sensitive coil |
| <b>Max. Temperature</b>                          | 130°C (266°F) Class B<br>155°C (311°F) Class F   |

### GENERAL DATA

|   |  |
|---|--|
| <b>Life Expectancy<br/>Mechanical<br/>Electrical</b>      | Minimum operations<br>1 x 10 <sup>7</sup><br>1 x 10 <sup>5</sup> at 12 A 240 VAC Res.  |
| <b>Operate Time (typical)</b>                             | 7 ms at nominal coil voltage   |
| <b>Release Time (typical)</b>                             | 3 ms at nominal coil voltage<br>(with no coil suppression)   |
| <b>Dielectric Strength<br/>(at sea level for 1 min.)</b>  | 5000 Vrms coil to contact<br>1000 Vrms between open contacts   |
| <b>Insulation<br/>Resistance</b>                          | 1000 megohms min. at 20°C<br>500 VDC 50% RH  |
| <b>Dropout</b>  | Greater than 10% of nominal coil voltage (DC)<br>Greater than 15% of nominal coil voltage (AC)   |
| <b>Ambient Temperature<br/>Operating<br/><br/>Storage</b> | At nominal coil voltage<br>-40°C (-40°F) to 100°C (212°F)<br>-40°C (-40°F) to 105°C (221°F) sensitive coil<br>-40°C (-40°F) to 130°C (266°F) Class B<br>-40°C (-40°F) to 155°C (311°F) Class F |
| <b>Vibration</b>  | 0.062" DA at 10–55 Hz  |
| <b>Shock</b>  | 10 g   |
| <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>   | 14 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.



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# AZ761

## RELAY ORDERING DATA

| COIL SPECIFICATIONS – 12 A RATING - DC COIL |                  |                     |                            | ORDER NUMBER* |                |
|---|------------------|---------------------|----------------------------|---------------|----------------|
| Nominal Coil VDC                            | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Unsealed      | Sealed         |
| 5   | 3.5              | 10.2                | 62                         | AZ761-1C-5D   | AZ761-1C-5DE   |
| 6   | 4.2              | 12.3                | 90                         | AZ761-1C-6D   | AZ761-1C-6DE   |
| 12  | 8.4              | 24.7                | 360                        | AZ761-1C-12D  | AZ761-1C-12DE  |
| 18  | 12.6             | 37.0                | 810                        | AZ761-1C-18D  | AZ761-1C-18DE  |
| 24  | 16.8             | 49.4                | 1,440                      | AZ761-1C-24D  | AZ761-1C-24DE  |
| 48  | 33.6             | 98.0                | 5,760                      | AZ761-1C-48D  | AZ761-1C-48DE  |
| 60  | 42.0             | 112.9               | 7500                       | AZ761-1C-60D  | AZ761-1C-60DE  |
| 110   | 77.0             | 206.9               | 25,200                     | AZ761-1C-110D | AZ761-1C-110DE |

| COIL SPECIFICATIONS - SENSITIVE COIL – 10 A RATING - DC COIL |                  |                     |                            | ORDER NUMBER* |                |
|--|------------------|---------------------|----------------------------|---------------|----------------|
| Nominal Coil VDC   | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Unsealed      | Sealed         |
| 5  | 3.8              | 13.0                | 100                        | AZ761-1C-5DS  | AZ761-1C-5DSE  |
| 6  | 4.5              | 15.6                | 144                        | AZ761-1C-6DS  | AZ761-1C-6DSE  |
| 12   | 9.0              | 31.3                | 576                        | AZ761-1C-12DS | AZ761-1C-12DSE |
| 18   | 13.5             | 46.9                | 1296                       | AZ761-1C-18DS | AZ761-1C-18DSE |
| 24   | 18.0             | 62.6                | 2304                       | AZ761-1C-24DS | AZ761-1C-24DSE |
| 48   | 36.0             | 125.2               | 9216                       | AZ761-1C-48DS | AZ761-1C-48DSE |
| 60   | 45.0             | 147.8               | 12867                      | AZ761-1C-60DS | AZ761-1C-60DSE |

| COIL SPECIFICATIONS - AC COIL |                  |                     |                   |                   | ORDER NUMBER*  |                 |
|-------------------------------|------------------|---------------------|-------------------|-------------------|----------------|-----------------|
| Nominal Coil VAC              | Must Operate VAC | Max. Continuous VAC | Coil Current (mA) | Coil Resistance   | Unsealed       | Sealed          |
| 24                            | 18.0             | 31.2                | 31.6              | 350 $\pm 10\%$    | AZ761-1C-24AF  | AZ761-1C-24AEF  |
| 115                           | 86.3             | 149.5               | 6.6               | 8,100 $\pm 15\%$  | AZ761-1C-115AF | AZ761-1C-115AEF |
| 230                           | 172.5            | 299.0               | 3.2               | 32,500 $\pm 15\%$ | AZ761-1C-230AF | AZ761-1C-230AEF |

Substitute "1A" or "1B" in place of "1C" for Form A or B respectively. Add suffix "E" to "1A" or "1B" or "1C" for silver tin oxide contacts. Add suffix "B" to "1A" or "1B" or "1C" for silver nickel contacts. Add suffix "A" for gold plated contacts. \*Add suffix "K" for 5 mm pin spacing version. Add suffix "F" for Class F version (DC coils only).



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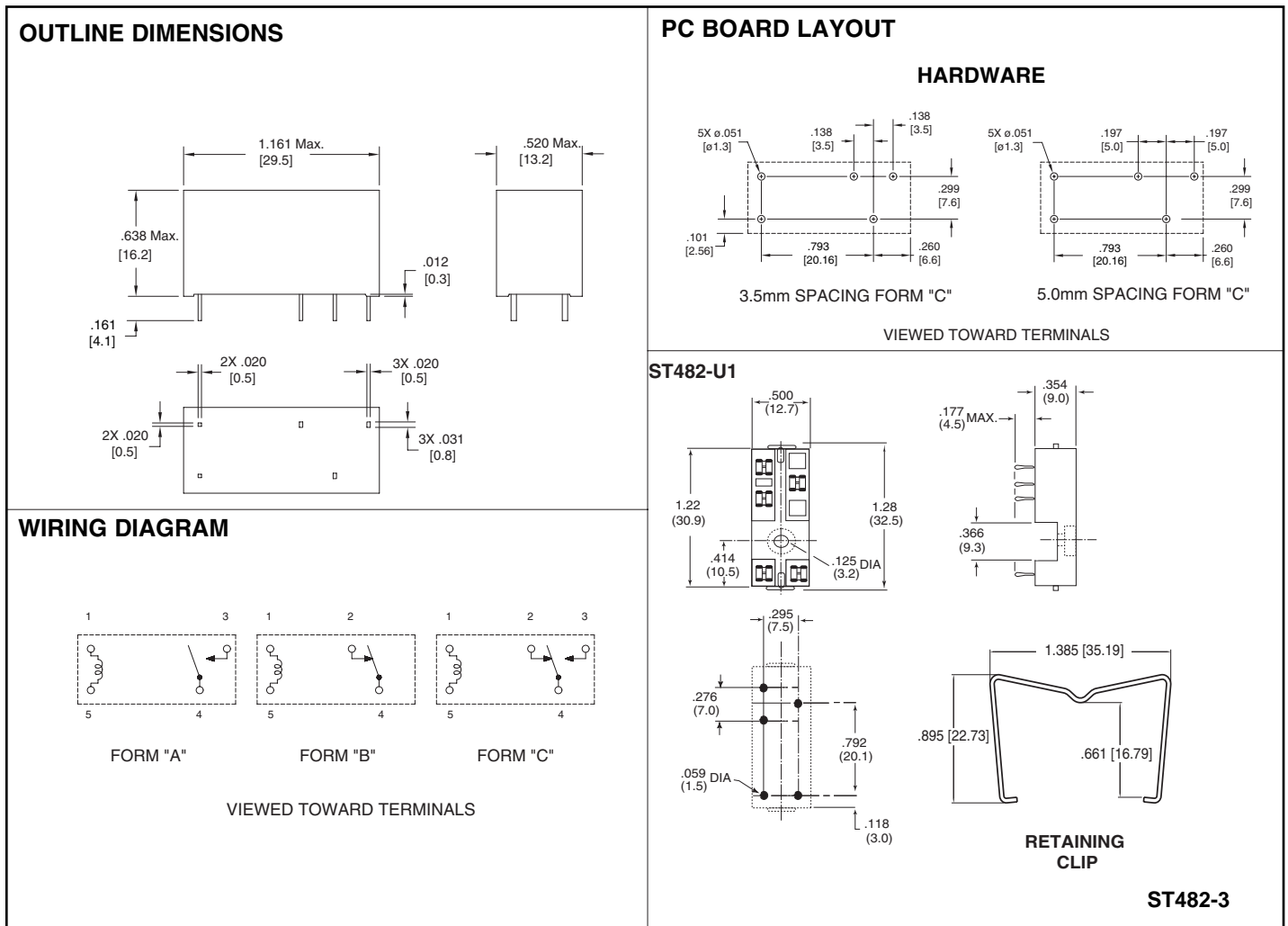
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## HARDWARE ORDERING DATA

| DESCRIPTION | ORDER NUMBER | DESCRIPTION | ORDER NUMBER |
|-------------|--------------|-------------|--------------|
| Socket      | ST482-U1     | Retainer    | ST482-3      |

## MECHANICAL DATA



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



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