

# AZ2280

## 40 AMP MINIATURE POWER RELAY

### FEATURES

- Quick-connect leads for contacts and coil
- 1 Form A, B and C contacts available
- AC and DC coils available
- Epoxy sealed versions available
- UL Class F (155°C) standard
- UL, CUR file E44211
- VDE 40027037 ( DC coil only )



### CONTACTS

|                    |  |
|--------------------|--|
| <b>Arrangement</b> | SPST (1 Form A, or B)<br>SPDT (1 Form C)   |
| <b>Ratings</b>     | Resistive load:<br>Max. switched power: 840W or 11,080VA<br>Max. switched current: 40A (Form A),<br>15A (Form B), 20A (Form C)<br>Max. switched voltage: 277VAC, 28VDC   |
| <b>UL, CUR</b>     | 1 Form A<br>40A at 277VAC, General Use [1][2]<br>28A at 277VAC, General Use, 100k cycles [1]<br>2Hp at 250VAC [1][2]<br>1HP at 125VAC [1][2]<br>30A at 28VDC [1]<br>20/60 (FLA/LRA) at 277VAC 30k cycles [1]<br><br>1 Form B<br>15A at 277VAC, General Use [1]<br>10A at 28VDC [1]<br>0.5HP at 250VAC [1]<br>0.25HP at 125VAC [1]<br>10/33 (FLA/LRA) at 277VAC 30k cycles [1]<br><br>1 Form C<br>30/20A (N.O./N.C.) at 277VAC, General Use [1][2]<br>20/10A (N.O./N.C.) at 28VDC[1]<br>2/0.5HP (N.O./N.C.) at 250VAC[1][2]<br>1/0.25HP (N.O./N.C.) at 125VAC[1][2]<br>20/60 (FLA/LRA) at 277VAC 30k cycles N.O. [1]<br>10/33 (FLA/LRA) at 277VAC 30k cycles N.C. [1] |
| <b>VDE</b>         | Contact factory for ratings  |
| <b>Material</b>    | Silver cadmium oxide [1], silver tin oxide [2]   |
| <b>Resistance</b>  | < 50 milliohms initially<br>(24V, 1A voltage drop method)  |

### COIL

|                                    |   |
|------------------------------------|---|
| <b>Power</b>                       |   |
| <b>At Pickup Voltage (typical)</b> | DC: 500mW<br>AC: 1.4VA                              |
| <b>Max. Continuous Dissipation</b> | DC: 1.7W at 20°C (68°F)<br>AC: 2.7VA at 20°C (68°F) |
| <b>Temperature Rise</b>            | 38°C (68°F)   |
| <b>Temperature</b>                 | Max. 155°C (311°F)                                  |

### 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 28A, 277VAC Res. [N.O.]  |
| <b>Operate Time (max.)</b>                                       | 15ms at nominal coil voltage   |
| <b>Release Time (max.)</b>                                       | 10ms at nominal coil voltage<br>(with no coil suppression)   |
| <b>Dielectric Strength (at sea level for 1 min.)</b>             | 1500 Vrms contact to contact<br>2500 Vrms contact to coil  |
| <b>Insulation Resistance</b>                                     | 1000 megohms min. at 500 VDC, 20°C<br>50% RH   |
| <b>Dropout</b>   | DC: Greater than 10% of nominal coil voltage<br>AC: Greater than 20% of nominal coil voltage   |
| <b>Ambient Temperature</b><br><b>Operating</b><br><b>Storage</b> | At nominal coil voltage<br>-55°C (-67°F) to 85°C (185°F), [DC]<br>-55°C (-67°F) to 60°C (140°F), [AC]<br>-55°C (-67°F) to 155°C (311°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, Quick Connects<br>Note: Allow suitable slack on leads when wiring,<br>and do not subject the terminals to excessive<br>force. |
| <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 (approx.)</b>  | 36 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.

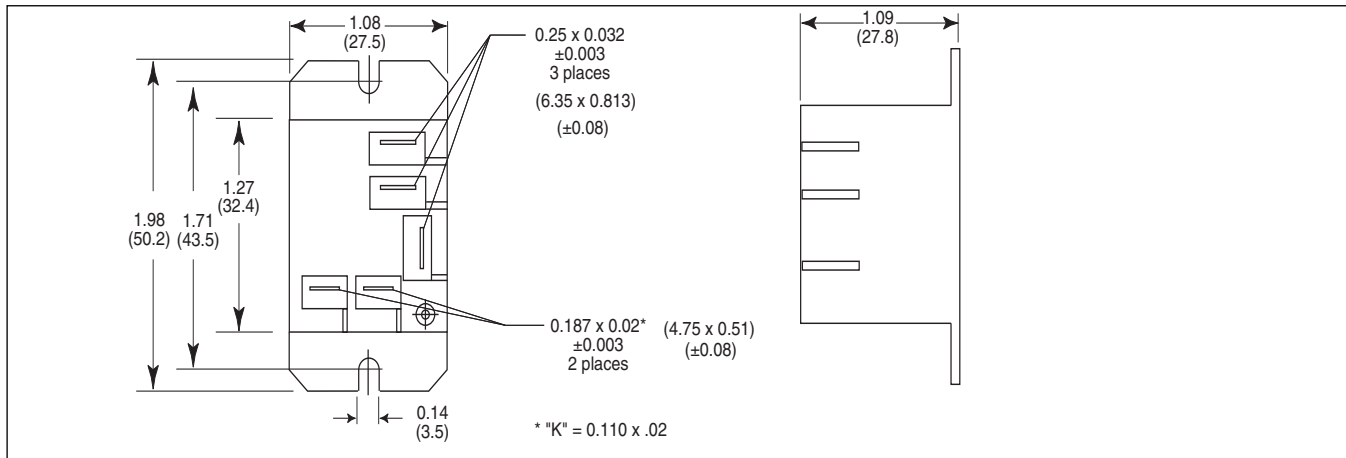
# AZ2280

## RELAY ORDERING DATA

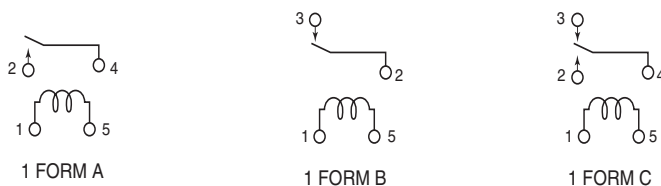
| COIL SPECIFICATIONS – DC Coil          |                  |                     |                               |                            | ORDER NUMBER*   |
|--|------------------|---------------------|-------------------------------|----------------------------|-----------------|
| Nominal Coil VDC                       | Must Operate VDC | Max. Continuous VDC | Nominal Current mA $\pm 10\%$ | Coil Resistance $\pm 10\%$ |                 |
| 5                                      | 3.75             | 6.4                 | 185                           | 27                         | AZ2280-1A-5DF   |
| 6                                      | 4.50             | 7.8                 | 150                           | 40                         | AZ2280-1A-6DF   |
| 9                                      | 6.75             | 12.2                | 93                            | 97                         | AZ2280-1A-9DF   |
| 12                                     | 9.00             | 15.4                | 77                            | 155                        | AZ2280-1A-12DF  |
| 15                                     | 11.25            | 19.8                | 59                            | 256                        | AZ2280-1A-15DF  |
| 18                                     | 13.5             | 24.1                | 47                            | 380                        | AZ2280-1A-18DF  |
| 24                                     | 18.00            | 32.0                | 36                            | 660                        | AZ2280-1A-24DF  |
| 48                                     | 36.00            | 62.6                | 19                            | 2560                       | AZ2280-1A-48DF  |
| 110                                    | 82.5             | 146.6               | 8.2                           | 13450                      | AZ2280-1A-110DF |
| COIL SPECIFICATIONS – AC Coil 50/60 Hz |                  |                     |                               |                            | ORDER NUMBER*   |
| Nominal Coil VAC                       | Must Operate VAC | Max. Continuous VAC | Nominal Coil Power VA         | Coil Resistance $\pm 10\%$ |                 |
| 12                                     | 10.2             | 13.8                | 2.3                           | 25                         | AZ2280-1A-12AF  |
| 24                                     | 20.4             | 27.6                | 2.1                           | 100                        | AZ2280-1A-24AF  |
| 120                                    | 102.0            | 138.0               | 2.3                           | 2,500                      | AZ2280-1A-120AF |
| 208                                    | 176.8            | 239.0               | 2.2                           | 11,000                     | AZ2280-1A-208AF |
| 220/240                                | 187.0            | 276.0               | 2.2/2.6                       | 13,490                     | AZ2280-1A-240AF |
| 277                                    | 235.4            | 318.5               | 2.2                           | 15,000                     | AZ2280-1A-277AF |

\*Substitute "-1B" or "-1C" in place of "-1A" for 1 Form B or 1 Form C respectively. For silver tin oxide contacts substitute "-1AE" or "-1CE" in place of "-1A" or "-1C." Add "T" to "-1A", "-1AE", "-1B", "-1C" or "-1CE" for extended life contacts. Substitute "DEF" or "AEF" in place of "DF" or "AF" for epoxy sealed version IP67 approved. For 0.110 coil terminals change "F" to "KF."

## MECHANICAL DATA



## WIRING DIAGRAM (Top View)



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