

# AZ742

## 10 A DPDT MINIATURE POWER RELAY

### FEATURES

- Dielectric strength 5000 Vrms
- Low height: 15.7 mm
- Epoxy sealed version available
- 10 Amp switching (N.O. contact only)
- AC and DC coils
- Isolation spacing greater than 10 mm
- Proof tracking index (PTI/CTI) 250
- UL, CUR file E43203
- VDE certificate 40012572



### CONTACTS

|                               |   |
|-------------------------------|---|
| <b>Arrangement</b>            | DPDT (2 Form C)<br>DPST (2 Form A)  |
| <b>Ratings</b>                | Resistive load:<br><br>Max. switched power: 2 X 240 W or 2500 VA<br>Max. switched current: 2 X 10 A<br>Max. switched voltage: 300 VDC* or 400 VAC<br><br>* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.  |
| <b>Rated Load<br/>UL, CUR</b> | 8 A at 250 VAC resistive [1][2]<br>10 A at 250 VAC resistive, 30k cycles (N.O.) [1]   |
| <b>VDE</b>                    | 2 Form A - DC coil<br>8 A at 250 VAC, 100k cycles, 85°C [1]<br>8 A at 250 VAC, 10k cycles, 85°C [2]<br><br>2 Form A - AC coil<br>8 A at 250 VAC, 80k cycles, 70°C [1]<br>8 A at 250 VAC, 40k cycles, 70°C [2]<br><br>2 Form C - DC coil<br>8 A at 250 VAC, 30k cycles, 70°C [1]<br>8 A at 250 VAC, 20k cycles, 85°C [1]<br>8 A at 250 VAC, 10k cycles, 85°C [2]<br><br>2 Form C - AC coil<br>8 A at 250 VAC, 80k cycles, 70°C [1]<br>8 A at 250 VAC, 10k cycles, 70°C [2] |
| <b>Material</b>               | Silver nickel [1], silver tin oxide [2], gold plating available   |
| <b>Resistance</b>             | < 100 milliohms initially   |

### 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

|  |  |
|--|--|
| <b>Life Expectancy<br/>Mechanical<br/>Electrical</b>                   | Minimum operations<br>3 x 10 <sup>7</sup><br>1 x 10 <sup>5</sup> at 8 A 250 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>2500 Vrms between contact sets<br>1000 Vrms between open contacts   |
| <b>Insulation<br/>Resistance</b>                                       | 10 <sup>5</sup> megohms min. at 500 VDC,<br>20°C, 50% RH   |
| <b>Insulation<br/>(according to<br/>DIN VDE 0110,<br/>IEC 60664-1)</b> | B250 at 2 Form C, flux proof version<br>C250 at other relay versions<br>Overvoltage category: III<br>Pollution degree: 3<br>Nominal voltage: 250 VAC |
| <b>Dropout DC coils<br/>AC coils</b>                                   | Greater than 10% of nominal coil voltage<br>Greater than 15% of nominal coil voltage   |
| <b>Ambient Temperature<br/>Operating</b>                               | At nominal coil voltage<br>-40°C (-40°F) to 85°C (185°F) - DC coils<br>-40°C (-40°F) to 70°C (158°F) - AC coils                                      |
| <b>Vibration</b>   | Break contacts: 5 g at 20...500 Hz<br>Make contacts: 20 g at 30...500 Hz   |
| <b>Shock</b>   | 20 g   |
| <b>Enclosure</b>   | P.B.T. polyester, UL-94 : V0   |
| <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   |
| <b>Packing unit in pcs</b>   | 20 per carton tube / 1000 per carton box   |

### COIL

|  |   |
|--|---|
| <b>Power</b>                           |   |
| <b>At Pickup Voltage<br/>(typical)</b> | 200 mW (DC coil)<br>.422 VA (AC coil)                         |
| <b>Max. Continuous<br/>Dissipation</b> | 1.7 W at 20°C (68°F) ambient<br>1.7 VA at 20°C (68°F) ambient |
| <b>Temperature Rise</b>                | 26°C (47°F) at nominal coil voltage                           |
| <b>Max. Temperature</b>                | 155°C (311°F) Class F   |

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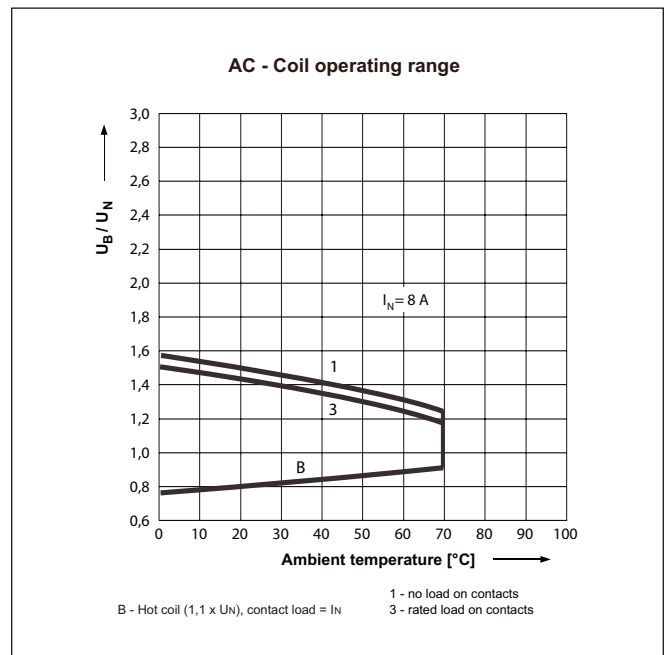
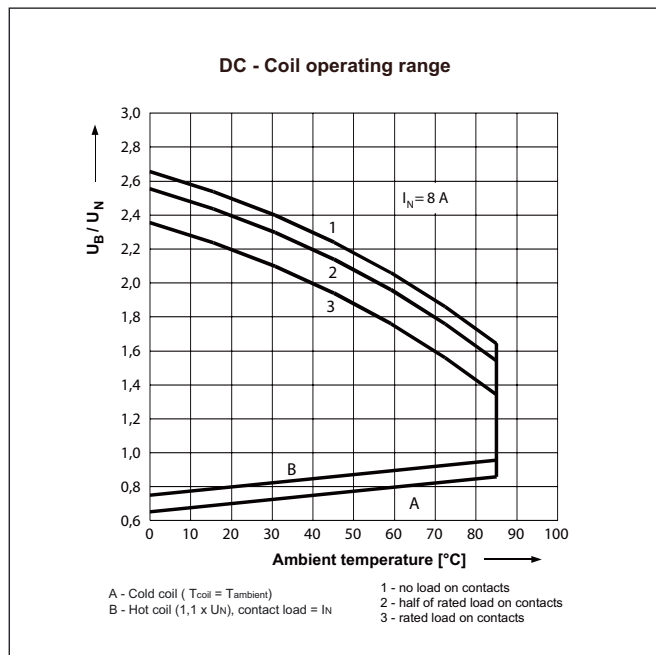
# AZ742

## RELAY ORDERING DATA

| COIL SPECIFICATIONS - DC COIL |                  |                     |                                | ORDER NUMBER* |               |
|-------------------------------|------------------|---------------------|--------------------------------|---------------|---------------|
| Nominal Coil VDC              | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm $\pm 10\%$ | 2 Form A      | 2 Form C      |
| 3                             | 2.1              | 7.6                 | 22                             | AZ742-2A-3D   | AZ742-2C-3D   |
| 5                             | 3.5              | 12.7                | 60                             | AZ742-2A-5D   | AZ742-2C-5D   |
| 6                             | 4.2              | 15.3                | 90                             | AZ742-2A-6D   | AZ742-2C-6D   |
| 9                             | 6.3              | 22.9                | 200                            | AZ742-2A-9D   | AZ742-2C-9D   |
| 12                            | 8.4              | 30.6                | 360                            | AZ742-2A-12D  | AZ742-2C-12D  |
| 18                            | 12.6             | 45.9                | 710                            | AZ742-2A-18D  | AZ742-2C-18D  |
| 24                            | 16.8             | 61.2                | 1,440                          | AZ742-2A-24D  | AZ742-2C-24D  |
| 36                            | 25.2             | 92.0                | 3,140                          | AZ742-2A-36D  | AZ742-2C-36D  |
| 48                            | 33.6             | 122.0               | 5,700                          | AZ742-2A-48D  | AZ742-2C-48D  |
| 60                            | 42.0             | 153.0               | 7,500                          | AZ742-2A-60D  | AZ742-2C-60D  |
| 110                           | 77.0             | 280.0               | 25,200                         | AZ742-2A-110D | AZ742-2C-110D |

| COIL SPECIFICATIONS - AC COIL |                  |                     |                               |                                | ORDER NUMBER* |               |
|-------------------------------|------------------|---------------------|-------------------------------|--------------------------------|---------------|---------------|
| Nominal Coil VAC              | Must Operate VAC | Max. Continuous VAC | Nominal Current mA $\pm 10\%$ | Coil Resistance Ohm $\pm 10\%$ | 2 Form A      | 2 Form C      |
| 12                            | 9.0              | 18.0                | 63.0                          | 100                            | AZ742-2A-12A  | AZ742-2C-12A  |
| 24                            | 18.0             | 36.0                | 31.3                          | 400                            | AZ742-2A-24A  | AZ742-2C-24A  |
| 48                            | 36.0             | 72.0                | 15.6                          | 1,550                          | AZ742-2A-48A  | AZ742-2C-48A  |
| 60                            | 45.0             | 90.0                | 12.5                          | 2,600                          | AZ742-2A-60A  | AZ742-2C-60A  |
| 110                           | 82.5             | 165.0               | 6.8                           | 8,900                          | AZ742-2A-110A | AZ742-2C-110A |
| 115                           | 86.3             | 172.5               | 6.5                           | 9,600                          | AZ742-2A-115A | AZ742-2C-115A |
| 120                           | 90.0             | 180.0               | 6.3                           | 10,200                         | AZ742-2A-120A | AZ742-2C-120A |
| 220                           | 165.0            | 330.0               | 3.4                           | 35,500                         | AZ742-2A-220A | AZ742-2C-220A |
| 230                           | 172.5            | 345.0               | 3.3                           | 38,500                         | AZ742-2A-230A | AZ742-2C-230A |
| 240                           | 180.0            | 360.0               | 3.1                           | 42,500                         | AZ742-2A-240A | AZ742-2C-240A |

\* "2A" or "2C" denote silver nickel contacts.  
 Add suffix "G" at "2A" or "2C" for gold plated silver nickel contacts.  
 Add suffix "E" at "2A" or "2C" for silver tin oxide contacts.  
 Add suffix "E" at the end of order number for sealed version.



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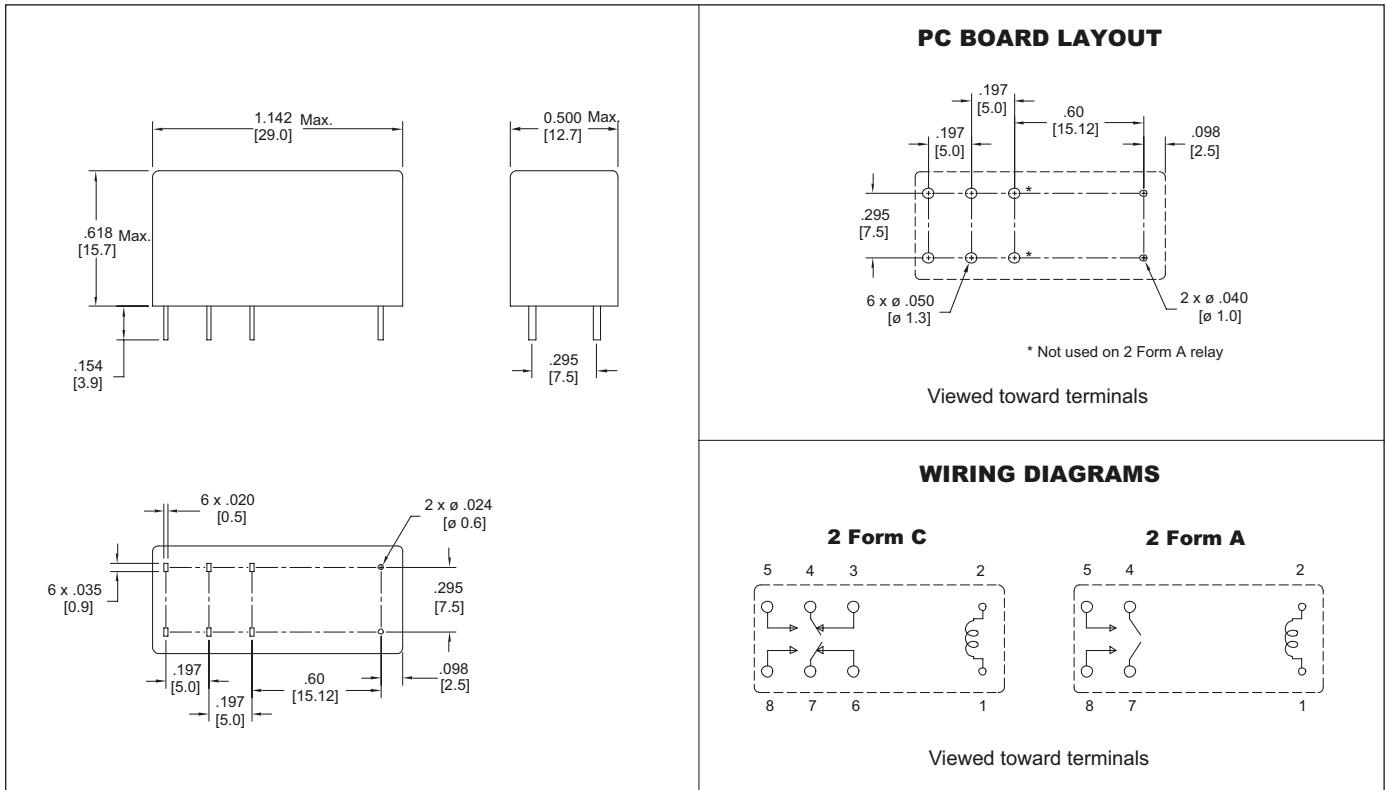
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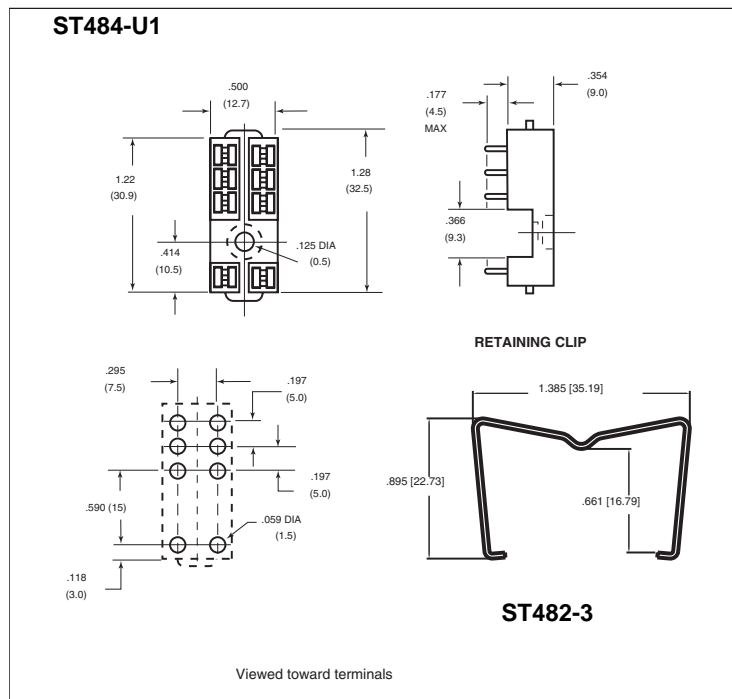
## MECHANICAL DATA



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

## HARDWARE ORDERING DATA

| DESCRIPTION | ORDER NUMBER | DESCRIPTION | ORDER NUMBER |
|-------------|--------------|-------------|--------------|
| Socket      | ST484-U1     | Retainer    | ST482-3      |



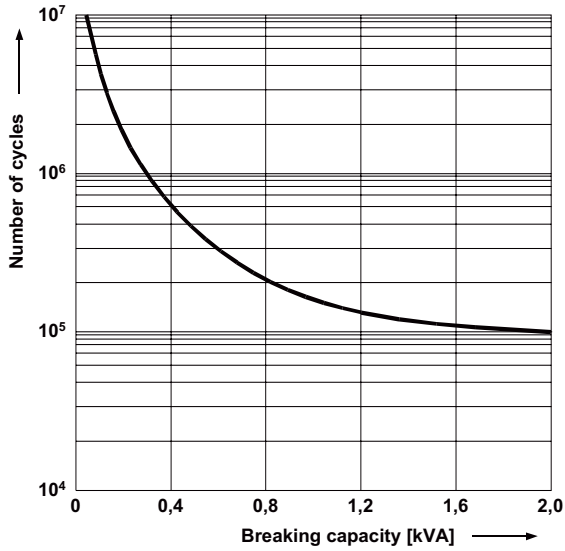
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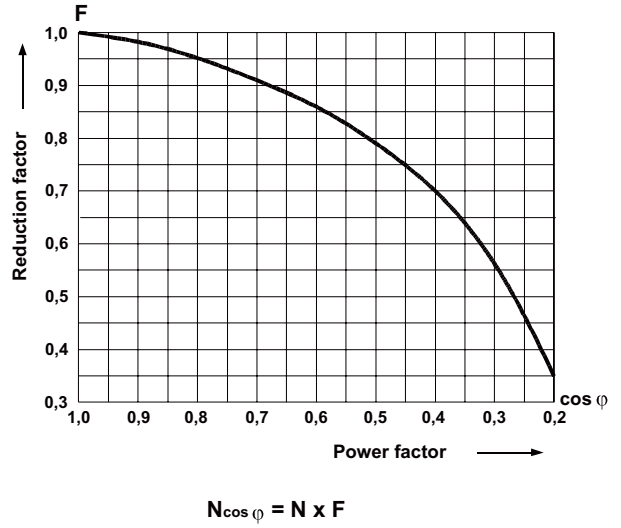
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Electrical life at 250 VAC, resistive load



Electrical life reduction factor at inductive AC load



Max. DC resistive load breaking capacity

