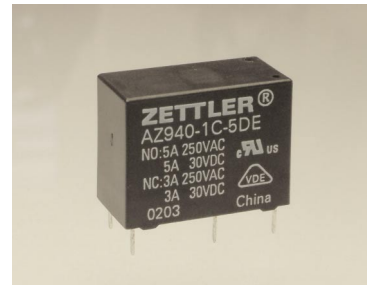


# AZ940

## 10 AMP MINIATURE POWER RELAY

### FEATURES

- 10 Amp switching capability
- 4 kV dielectric strength
- Epoxy sealed version available
- UL, CUR file E44211
- VDE file 134326



### CONTACTS

|  |   |
|--|---|
| <b>Arrangement</b>                       | SPST (1 Form A)<br>SPDT (1 Form C)  |
| <b>Ratings</b>                           | Resistive load:<br>Max. switched power: 150 W or 1250 VA (N.O.)<br>90 W or 750 VA (N.C.)<br>Max. switched current: 10 A (N.O.), 3 A (N.C.)<br>Max. switched voltage: 150 VDC* or 400 VAC<br><br>* Note: If switching voltage is greater than 30 VDC,<br>special precautions must be taken.<br>Please contact the factory. |
| <b>Rated Load<br/>UL, CUR<br/>(N.O.)</b> | 10 A at 125 VAC general use, 100K cycles [1] [2]<br>10 A at 277 VAC cos phi 0.4, 10K cycles [1] [2]<br>5 A at 250 VAC general use, 100K cycles [1] [2]<br>5 A at 30 VDC [1] [2]<br>1/10 HP at 125 VAC, 100K cycles [1] [2]<br>1/6 HP at 250 VAC, 100K cycles [1] [2]  |
| <b>UL, CUR<br/>(N.C.)</b>                | 3 A at 250 VAC general use, 100 K cycles [1] [2]<br>3 A at 30 VDC resistive, 100K cycles [1] [2]  |
| <b>VDE</b>                               | Form A N.O.: 5 A 250 VAC [1] [2]<br>Form C N.O.: 5 A 250 VAC [1] [2]<br>Form C N.C.: 3 A 250 VAC [1] [2]  |
| <b>Material</b>                          | Silver cadmium oxide [1] or silver nickel [2].<br>Gold plating available.   |
| <b>Resistance</b>                        | <100 milliohms initially  |

### 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 10 A 250 VAC Res.  |
| <b>Operate Time (max.)</b>                               | 8 ms at nominal coil voltage   |
| <b>Release Time (max.)</b>                               | 5 ms at nominal coil voltage<br>(with no coil suppression)   |
| <b>Dielectric Strength<br/>(at sea level for 1 min.)</b> | 1000 Vrms contact to contact<br>4000 Vrms contact to coil  |
| <b>Insulation Resistance</b>                             | 1 x 10 <sup>9</sup> ohms minimum at 500 VDC  |
| <b>Dropout</b>   | Greater than 5% of nominal coil voltage  |
| <b>Ambient Temperature<br/>Operating<br/>Storage</b>     | At nominal coil voltage<br>-40°C (-40°F) to 70°C (158°F) standard<br>-40°C (-40°F) to 85°C (185°F) sensitive<br>-40°C (-40°F) to 105°C (221°F) |
| <b>Vibration</b>   | 0.062" (1.5 mm) DA at 10–55 Hz   |
| <b>Shock<br/>Operating<br/>Mechanical</b>                | 10 g for 11 ms 1/2 sine pulse<br>(no contact opening >100 usec)<br>100 g for 11 ms 1/2 sine pulse  |
| <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>  | 7 grams  |
| <b>Packing unit in pcs</b>                               | 100 per styropor tray / 1000 per carton box  |

### COIL

|  |   |
|--|---|
| <b>Power<br/>At Pickup Voltage<br/>(typical)</b> | 253 mW (Standard Coil)<br>113 mW (Sensitive Coil)       |
| <b>Max. Continuous<br/>Dissipation</b>           | 1.1 W at 20°C (68°F)                                    |
| <b>Temperature Rise</b>                          | 40°C (72°F) standard coil<br>20°C (36°F) sensitive coil |
| <b>Temperature</b>                               | Max. 105°C (221°F)                                      |

### 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.

**ZETTLER electronics GmbH**

Junkersstrasse 3, D-82178 Puchheim, Germany

Tel. +49 89 800 97 0  
Fax +49 89 800 97 200

office@ZETTLERelectronics.com  
www.ZETTLERelectronics.com

2005-09-21

# AZ940

## RELAY ORDERING DATA

| COIL SPECIFICATIONS – Standard Coil (SPDT and SPST) |                  |                     |                                | ORDER NUMBER* |
|---|------------------|---------------------|--------------------------------|---------------|
| Nominal Coil VDC                                    | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm $\pm 10\%$ |               |
| 3   | 2.3              | 4.7                 | 20                             | AZ940-1C-3D   |
| 5   | 3.8              | 7.7                 | 55                             | AZ940-1C-5D   |
| 6   | 4.5              | 9.4                 | 80                             | AZ940-1C-6D   |
| 9   | 6.8              | 14.0                | 180                            | AZ940-1C-9D   |
| 12  | 9.0              | 18.7                | 320                            | AZ940-1C-12D  |
| 18  | 13.5             | 28.1                | 720                            | AZ940-1C-18D  |
| 24  | 18.0             | 37.5                | 1,280                          | AZ940-1C-24D  |

\* Substitute "1A" for "1C" to indicate 1 Form A contacts. Add suffix "B" to "1A" or "1C" for silver nickel contacts. Add suffix "E" at the end of order number for sealed version. Add suffix "G" for gold plated contacts.

| COIL SPECIFICATIONS – Sensitive Coil (SPST) |                  |                     |                                | ORDER NUMBER** |
|---|------------------|---------------------|--------------------------------|----------------|
| Nominal Coil VDC                            | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm $\pm 10\%$ |                |
| 3   | 2.3              | 7.0                 | 45                             | AZ940-1A-3DS   |
| 5   | 3.8              | 11.7                | 125                            | AZ940-1A-5DS   |
| 6   | 4.5              | 14.0                | 180                            | AZ940-1A-6DS   |
| 9   | 6.8              | 20.9                | 400                            | AZ940-1A-9DS   |
| 12  | 9.0              | 28.1                | 720                            | AZ940-1A-12DS  |
| 18  | 13.5             | 41.9                | 1,600                          | AZ940-1A-18DS  |
| 24  | 18.0             | 55.5                | 2,800                          | AZ940-1A-24DS  |

\*\* Add suffix "B" to "1A" for silver nickel contacts.

Add suffix "E" at the end of order number for sealed version. Add suffix "G" for gold plated contacts.

## MECHANICAL DATA

### PC BOARD LAYOUT

### WIRING DIAGRAM

VIEWED TOWARD TERMINALS

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

## ZETTLER electronics GmbH

Junkersstrasse 3, D-82178 Puchheim, Germany

Tel. +49 89 800 97 0

Fax +49 89 800 97 200

office@ZETTLERelectronics.com

www.ZETTLERelectronics.com

2005-09-21