

# AZ940

## 10 AMP MINIATURE POWER RELAY

### FEATURES

- 10 Amp switching capability
- SPST-N.O. and SPDT configurations
- 4 kV dielectric strength
- Epoxy sealed version available
- Class B insulated standard, Class F available
- UL, CUR file E44211, VDE file 134326



### CONTACTS

<b>Arrangement</b>	SPST N.O. (1 Form A) SPDT (1 Form C)
<b>Ratings</b>	Resistive load: Max. switched power: 150 W or 1250 VA N.O. 90 W or 750 VA N.C. Max. switched current: 10 A N.O., 3 A N.C.. Max. switched voltage: 150 VDC* or 400 VAC  *Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>UL, CUR (N.O.)</b>	10 A at 125 VAC General Use, 100k cycles 10 A at 277 VAC COS =.4, 10k cycles 5 A at 250 VAC General Use, 100k cycles 5 A at 30 VDC 1/10 HP at 125 VAC, 100k cycles 1/6 HP at 250 VAC, 100k cycles
<b>UL, CUR (N.C.)</b>	3 A at 250 VAC General Use, 100k cycles 3 A at 30 VDC Resistive, 100k cycles
<b>VDE</b>	Form A N.O.: 5 A 250 VAC Form C N.O.: 5 A 250 VAC Form C N.C.: 3 A 250 VAC
<b>Material</b>	Silver cadmium oxide or silver nickel or silver tin oxide
<b>Resistance</b>	< 0.1 Ohm (24 V, 1 A voltage drop method)

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	253 mW (Standard Coil) 113 mW (Sensitive Coil)
<b>Max. Continuous Dissipation</b>	1.25 W at 20°C (68°F)
<b>Temperature Rise</b>	40°C (72°F) (Standard Coil) 20°C (36°F) (Sensitive Coil)
<b>Temperature</b>	Max. 130°C (266°F) Class B Max. 155°C (311°F) Class F

### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>7</sup> 1 x 10 <sup>5</sup> at 10 A 120 VAC Res.
<b>Operate Time (max.)</b>	8 ms at nominal coil voltage
<b>Release Time (max.)</b>	5 ms at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength (at sea level for 1 min.)</b>	1000 Vrms contact to contact 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</b> <b>Operating</b>  <b>Storage</b>	At nominal coil voltage -40°C (-40°F) to 90°C (194°F) Class B -40°C (-40°F) to 110°C (230°F) Class F -40°C (-40°F) to 130°C (266°F) Class B -40°C (-40°F) to 155°C (311°F) Class F
<b>Vibration</b>	0.062" DA at 10–55 Hz
<b>Shock</b>  <b>Operating</b>  <b>Mechanical</b>	10 g for 11 ms 1/2 sine pulse (no contact opening >100 usec) 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

### 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.



**AMERICAN ZETTLER, INC.**

[www.azettler.com](http://www.azettler.com)

75 COLUMBIA • ALISO VIEJO, CA 92656 • PHONE: (949) 831-5000 • FAX: (949) 831-8642 • E-MAIL: SALES@AZETTLER.COM

# AZ940

## RELAY ORDERING DATA

COIL SPECIFICATIONS – Standard Coil (SPDT and SPST)				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	SPST-NO	SPDT
3	2.3	5.0	20	AZ940-1A-3D	AZ940-1C-3D
5	3.8	8.3	55	AZ940-1A-5D	AZ940-1C-5D
6	4.5	10.0	80	AZ940-1A-6D	AZ940-1C-6D
9	6.8	15.0	180	AZ940-1A-9D	AZ940-1C-9D
12	9.0	20.0	320	AZ940-1A-12D	AZ940-1C-12D
18	13.5	30.0	720	AZ940-1A-18D	AZ940-1C-18D
24	18.0	40.0	1280	AZ940-1A-24D	AZ940-1C-24D

\*For silver nickel contacts substitute "-1AB" for "-1A" or "-1CB" for "-1C". For silver tin oxide contacts substitute "-1AE" for "-1A" or "-1CE" for "-1C." Add suffix "E" for sealed version. Add suffix "G" for gold plating. Add suffix "F" for Class F. Class B not VDE approved.

COIL SPECIFICATIONS – Sensitive Coil (SPST)				ORDER NUMBER**	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Unsealed	Sealed
3	2.3	7.5	45	AZ940-1A-3DS	AZ940-1A-3DSE
5	3.8	12.5	125	AZ940-1A-5DS	AZ940-1A-5DSE
6	4.5	15.0	180	AZ940-1A-6DS	AZ940-1A-6DSE
9	6.8	22.4	400	AZ940-1A-9DS	AZ940-1A-9DSE
12	9.0	30.0	720	AZ940-1A-12DS	AZ940-1A-12DSE
18	13.5	44.7	1600	AZ940-1A-18DS	AZ940-1A-18DSE
24	18.0	59.2	2800	AZ940-1A-24DS	AZ940-1A-24DSE

\*\*For silver nickel contacts substitute "-1AB" for "-1A" or "-1CB" for "-1C". For silver tin oxide contacts substitute "-1AE" for "-1A" or "-1CE" for "-1C." Add suffix "G" for gold plating. Add suffix "F" for Class F. Class B not VDE approved.

## MECHANICAL DATA

Top view dimensions: 807 max. [20.50], .417 max. [10.59], .614 max. [15.60], .016 [0.40], 5 x .150 [3.8]

Side view dimensions: .614 max. [15.60], .016 [0.40]

Terminal view dimensions: 5 x .031 [0.8], 5 x .012±.005 [0.31±0.12]

### PC BOARD LAYOUT

Dimensions: .054 [1.36], .400 [10.16], .300 [7.62], .058 [1.49], .300 [7.62], .100 [2.54], 5 x  $\phi$ .051 [ $\phi$ 1.3]

\*omitted from Form A

### WIRING DIAGRAM

FORM A

FORM C

VIEWED TOWARD TERMINALS

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



# AMERICAN ZETTLER, INC.

[www.azettler.com](http://www.azettler.com)

75 COLUMBIA • ALISO VIEJO, CA 92656 • PHONE: (949) 831-5000 • FAX: (949) 831-8642 • E-MAIL: SALES@AZETTLER.COM