

# AZ940

## 10 AMP MINIATURE POWER RELAY

### FEATURES

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



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) SPDT (1 Form C)
<b>Ratings</b>	Resistive load:  Max. switched power: 150 W or 2770 VA 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>Rated Load UL</b>	Normally open contact (N.O.) 10 A at 125 VAC, General Use, 100k cycles [1][2][3] 10 A at 277 VAC, cos phi 0.4, 10k cycles [1][2] 8 A at 250 VAC, General Use, 50k cycles [1][2] 5 A at 250 VAC, General Use, 100k cycles [1][2][3] 5 A at 30 VDC, resistive, 100k cycles [1][2][3] 4 A at 120 VAC, resistive, 100k cycles [3] 1 A at 120 VAC, tungsten, 6k cycles [3] 1/10 HP at 125 VAC, 100k cycles [1][2] 1/6 HP at 250 VAC, 100k cycles [1][2] 2.5 FLA / 15 LRA at 120 VAC, 6k cycles [3]
<b>VDE</b>	Normally closed contact (N.C.) 3 A at 250 VAC general use, 100k cycles [1][2][3] 3 A at 30 VDC resistive, 100k cycles [1][2][3]  1 Form A 5 A at 250 VAC, 85°C, 100k cycles [2][3] 5 A at 250 VAC, 70°C, 75k cycles [1]  1 Form C, normally open contact (N.O.) 5 A at 250 VAC, 70°C, 100k cycles [2] 5 A at 250 VAC, 75°C, 75k cycles [1]  1 Form C, normally closed contact (N.C.) 3 A at 250 VAC, 70°C, 100k cycles [2] 3 A at 250 VAC, 75°C, 75k cycles [1]
<b>Material</b>	Silver cadmium oxide [1], silver nickel [2], silver tin oxide [3], gold plating available
<b>Resistance</b>	< 100 milliohms initially (at 6 V, 1 A, voltage drop method)

### 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</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>7</sup> 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 (with no coil suppression)
<b>Dielectric Strength (at sea level for 1 min.)</b>	4000 Vrms coil to contact 1000 Vrms between open contacts
<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 Operating</b>	At nominal coil voltage -40°C (-40°F) to 70°C (158°F) standard -40°C (-40°F) to 85°C (185°F) sensitive
<b>Vibration</b>	0.062" (1.5 mm) 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
<b>Packing unit in pcs</b>	100 per styrofoam tray / 1000 per cartonbox

### COIL

<b>Power At Pickup Voltage (typical)</b>	253 mW (standard coil) 113 mW (sensitive coil)
<b>Max. Continuous Dissipation</b>	1.1 W at 20°C (68°F) ambient
<b>Temperature Rise</b>	26°C (47°F) at nominal coil voltage (standard coil) 20°C (36°F) at nominal coil voltage (sensitive coil)
<b>Temperature</b>	Max. 105°C (221°F)

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This product specification to be used only together with the application notes which can be downloaded from <http://www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf>

2014-06-24

## RELAY ORDERING DATA

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

\* "1A" or "1C" denote silver cadmium contacts.

Substitute "1AB" or "1CB" in place of "1A" or "1C" to indicate silver nickel contacts.

Substitute "1AE" or "1CE" in place of "1A" or "1C" to indicate silver tin contacts.

Add suffix "E" at the end of order number for sealed version.

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

SENSITIVE COIL				
COIL SPECIFICATIONS				ORDER NUMBER*
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	Form A (SPST)
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

\* "1A" denote silver cadmium contacts.

Substitute "1AB" in place of "1A" to indicate silver nickel contacts.

Add suffix "E" at the end of order number for sealed version.

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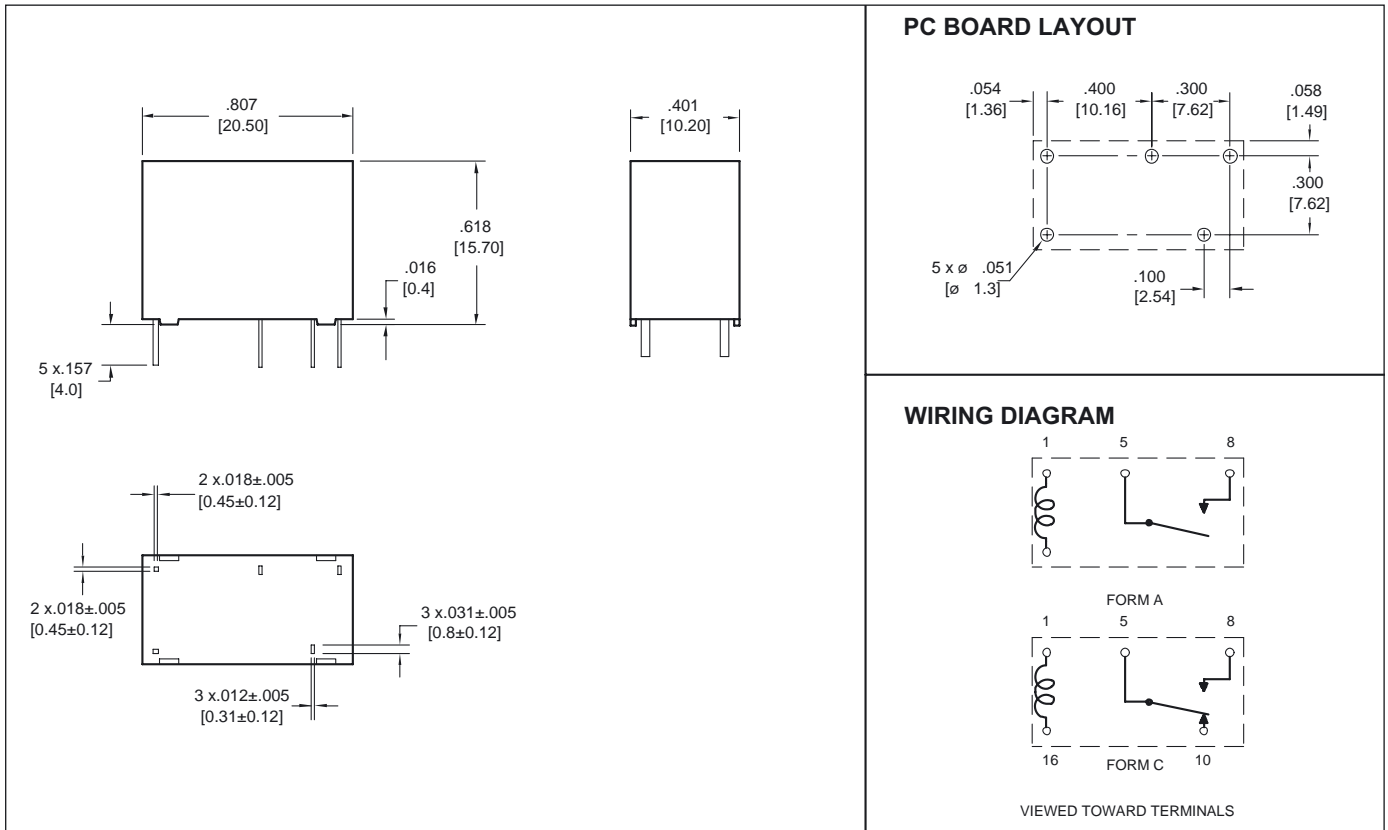
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## MECHANICAL DATA



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

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