

# AZ850

## MICROMINIATURE POLARIZED RELAY

### FEATURES

- Microminiature size: Height: .197 inches (5 mm); Length: .551 inches (14 mm); Width: .354 inches (9 mm)
- High sensitivity, 79 mW pickup
- Monostable and bistable (latching) single coil and two coil versions available
- Meets FCC Part 68.302 1500 V lightning surge
- DIP terminal layout, fits 10 pin IC socket
- Epoxy sealed for automatic wave soldering and cleaning
- UL, CUR file E43203



### CONTACTS

<b>Arrangement</b>	DPDT (2 Form C) Bifurcated crossbar contacts
<b>Ratings</b>	Resistive load: Max. switched power: 30 W or 62.5 VA Max. switched current: 1 A Max. switched voltage: 220 VDC or 250 VAC Max. carry current: 2 A
<b>Rated Load UL</b>	1 A at 30 VDC resistive 0.5 A at 125 VAC resistive
<b>Material</b>	Silver palladium; gold clad
<b>Resistance</b>	< 50 milliohms initially

### COIL (Polarized)

<b>Power At Pickup Voltage (typical)</b>	Single side stable: 79–169 mW Bistable (latching) single coil: 56–84 mW Bistable (latching) two coil: 113–169 mW
<b>Max. Continuous Dissipation</b>	875 mW at 20°C (68°F) ambient
<b>Temperature Rise</b>	18°C (32°F) at nominal coil voltage
<b>Temperature</b>	Max. 105°C (221°F)

### NOTES

1. All values at 20°C (68°F).
2. Relay has fixed coil polarity.
3. Relay may pull in with less than "Must Operate" value.
4. Relay adjustment may be affected if undue pressure is exerted on relay case.
5. For complete isolation between the relay's magnetic fields, it is recommended that a .197" (5.0 mm) space be provided between adjacent relays.
6. Specifications subject to change without notice.

### GENERAL DATA

<b>Life Expectancy Mechanical Electrical</b>	Minimum operations 1 x 10 <sup>8</sup> 2 x 10 <sup>5</sup> at 1 A, 30 VDC, resistive 1 x 10 <sup>5</sup> at 0.5 A, 125VAC, resistive
<b>Operate Time (typical)</b>	2 ms at nominal coil voltage
<b>Release Time (typical)</b>	1 ms at nominal coil voltage (with no coil suppression)
<b>Set Time (bistable versions)</b>	2 ms at nominal coil voltage (typical)
<b>Reset Time (bistable versions)</b>	2 ms at nominal coil voltage (typical)
<b>Dropout</b>	Greater than 10% of nominal coil voltage
<b>Capacitance</b>	Contact to contact: 0.4 pF Contact set to contact set: 0.2 pF Contact to coil: 0.9 pF
<b>Dielectric Strength (at sea level)</b>	1000 Vrms between contact sets 1000 Vrms across contacts 1000 Vrms contact to coil Meets FCC part 68.302 1500 V lightning surge
<b>Insulation Resistance</b>	1000 megohms min. at 25°C, 500 VDC, 50% RH
<b>Ambient Temperature Operating Storage</b>	At nominal coil voltage -40°C (-40°F) to 70°C (158°F) -40°C (-40°F) to 105°C (221°F)
<b>Vibration</b>	.130" DA at 10–55 Hz
<b>Shock</b>	50 g
<b>Enclosure</b>	LCP
<b>Terminals</b>	Tinned copper alloy, P.C.
<b>Max. Solder Temp.</b>	250°C (482°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>	1.5 grams



**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

6/20/05 W

# AZ850

## RELAY ORDERING DATA

SINGLE SIDE STABLE					ORDER NUMBER
COIL SPECIFICATIONS					
Nominal Coil VDC	Must Operate VDC	Max Continuous VDC	Coil Resistance $\pm 10\%$		
3	2.3	7.5	64.3		
4.5	3.4	11.25	145.2		
5	3.8	12.5	178		
6	4.5	15.0	257		
9	6.8	22.5	579		
12	9.0	30.0	1,028		
24	18.0	48.0	2,880		
48	36.0	80.0	7,680		

  

BISTABLE (LATCHING) SINGLE COIL					ORDER NUMBER
COIL SPECIFICATIONS					
Nominal Coil VDC	Must Operate VDC	Max Continuous VDC	Coil Resistance $\pm 10\%$		
3	2.3	8.7	90		
4.5	3.4	13.0	203		
5	3.8	14.5	250		
6	4.5	17.4	360		
9	6.8	26.1	810		
12	9.0	34.8	1440		
24	18.0	57.6	3840		

  

BISTABLE (LATCHING) TWO COIL					ORDER NUMBER
COIL SPECIFICATIONS					
Nominal Coil VDC	Must Operate VDC	Max Continuous VDC	Coil Resistance		
			Coil I	Coil II	
3	2.3	6.0	45	45	
4.5	3.4	13.0	102	102	
5	3.8	10.0	125	125	
6	4.5	12.0	180	180	
9	6.8	18.0	405	405	
12	9.0	24	720	720	
24	18.0	40	1,920	1,920	

\*Not UL Approved

## MECHANICAL DATA

Dimensions: .551 [14.0], .197 [5.0], .010 [0.25], 4x.100 [2.54], 10x.020 [0.51], .354 [9.00], 10x.138 [3.5], .300 [7.63], 10x.010 [0.25]

### PC BOARD LAYOUT

Dimensions: .027 [0.69], 10 x .032 [0.81], .300 [7.62], .075 [1.90], 4 x .100 [2.54]

VIEWED TOWARDS TERMINALS

### WIRING DIAGRAMS

**SINGLE SIDE STABLE**

DEENERGIZED OR RESET CONDITION  
Watch for polarity

**BISTABLE (LATCHING) TWO COIL**

RESET CONDITION  
Watch for polarity

Diagrams show the "reset" position before energized with polarity as shown.

VIEWED TOWARDS TERMINALS

Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm 0.010$ "



# 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