

# AZ830 4POLE

## 4 POLE POLARIZED MINIATURE DIP RELAY

### FEATURES

- Single side stable and two coil bistable versions
- High sensitivity, 90 mW pickup
- Low profile DIP package
- DC coils to 48 VDC
- Life expectancy to 100 million operations
- Meets FCC Part 68.302 1500 V lightning surge
- Meets FCC Part 68.304 1000 V dielectric
- Epoxy sealed for automatic wave soldering and cleaning
- UL file E43203; CSA file 73363

### CONTACTS

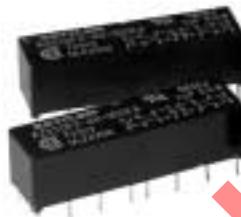
<b>Arrangement</b>	4PDT (4 Form C) Bifurcated crossbar contacts
<b>Ratings</b>	Resistive load: Max. switched power: 60 W or 60 VA Max. switched current: 2 A Max. switched voltage: 220 VDC or 250 VAC
<b>Rated Load</b> <b>UL</b>	1 A at 30 VDC 0.5 A at 120 VAC
<b>Material</b>	Silver palladium, gold clad
<b>Resistance</b>	< 50 milliohms initially

### COIL (Polarized)

<b>Power</b> <b>At Pickup Voltage (typical)</b>	Standard coil: 200 mW, single side stable 180 mW, bistable (latching) two coil Sensitive coil: 100 mW, single side stable 90 mW, bistable (latching) two coil
<b>Max. Continuous Dissipation</b>	1.27 W at 20°C (68°F) ambient 0.99 W at 40°C (104°F) ambient
<b>Temperature Rise</b>	Standard: 34°C (61°F) at nominal coil voltage Sensitive: 17°C (31°F) at nominal coil voltage
<b>Temperature</b>	Max. 110°C (230°F)

### NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Relay has fixed coil polarity.
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</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>8</sup> 5 x 10 <sup>5</sup> at 2 A, 30 VDC 2 x 10 <sup>5</sup> at 0.5 A, 120 VAC
<b>Operate Time (typical)</b>	3 ms at nominal coil voltage
<b>Release Time (typical)</b>	2 ms at nominal coil voltage (with no coil suppression)
<b>Capacitance</b>	Contact to contact: 1.0 pF Contact set to contact: 1.7 pF Contact to coil: 2.0 pF
<b>Bounce (typical)</b>	At 10 mA contact current 0.3 ms at operate 0.3 ms at release
<b>Dielectric Strength (at sea level)</b>	1500 Vrms contact to coil 1500 Vrms between contact sets 1000 Vrms across contacts 250 Vrms coil to coil (dual coil) 1500 Vrms surge contact to coil 1500 Vrms surge contact set to contact set Meets FCC Part 68.302 lightning surge Meets FCC Part 68.304 V dielectric
<b>Insulation Resistance</b>	1000 megohms min. at 20°C, 500 VDC, 50% RH
<b>Dropout</b>	Greater than 10% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b> <b>Storage</b>	At nominal coil voltage Standard: -40°C (-40°F) to 70°C (158°F) Sensitive: -40°C (-40°F) to 80°C (176°F) Both: -40°C (-40°F) to 110°C (230°F)
<b>Vibration</b>	0.062" DA at 10–55 Hz
<b>Shock</b>	30 g
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy, P.C.
<b>Max. Solder Temp.</b>	260°C (500°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>	6.5 grams

**AMERICAN ZETTLER, INC.**

# AZ830 4POLE

## RELAY ORDERING DATA

### STANDARD RELAYS: Single Side Stable

COIL SPECIFICATIONS				ORDER NUMBER
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	
5	9	62.5	3.5	AZ830-4C-5DEA
6	10	90	4.2	AZ830-4C-6DEA
9	16	203	6.3	AZ830-4C-9DEA
12	21	360	8.4	AZ830-4C-12DEA
24	43	1440	16.8	AZ830-4C-24DEA
48	86	5760	33.6	AZ830-4C-48DEA

### SENSITIVE RELAYS: Single Side Stable

5	12	125	3.5	AZ830-4C-5DSEA
6	15	180	4.2	AZ830-4C-6DSEA
9	23	405	6.3	AZ830-4C-9DSEA
12	30	720	8.4	AZ830-4C-12DSEA
24	60	2880	16.8	AZ830-4C-24DSEA
48	120	11520	33.6	AZ830-4C-48DSEA

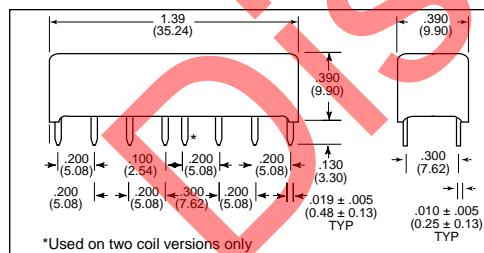
### STANDARD RELAYS: Bistable (Latching) Two Coil

Nominal Coil VDC	Max. Continuous VDC	COIL SPECIFICATIONS		Must Operate VDC	ORDER NUMBER
		Coil I	Coil II		
5	9	69	69	3.5	AZ830P2-4C-5DEA
6	10	100	100	4.2	AZ830P2-4C-6DEA
12	21	400	400	8.4	AZ830P2-4C-12DEA
24	43	1,600	1,600	16.8	AZ830P2-4C-24DEA
48	86	6,400	6,400	33.6	AZ830P2-4C-48DEA

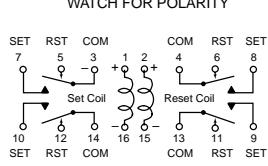
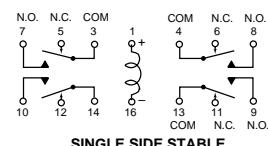
### SENSITIVE RELAYS: BISTABLE (Latching) Two Coil

5	10	139	139	3.5	AZ830P2-4C-5DSEA
6	13	200	200	4.2	AZ830P2-4C-6DSEA
12	26	800	800	8.4	AZ830P2-4C-12DSEA
24	52	3,200	3,200	16.8	AZ830P2-4C-24DSEA
48	104	12,800	12,800	33.6	AZ830P2-4C-48DSEA

## MECHANICAL DATA

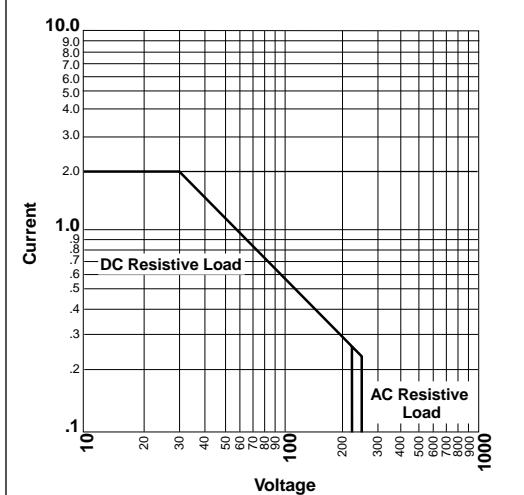


## WIRING DIAGRAM



Diagrams show the "reset" position before energized with polarity as shown  
Viewed toward terminals

## MAXIMUM SWITCHING CAPACITY



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

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

**AMERICAN ZETTLER, INC.**

2/26/03W

PHONE: (949) 831-5000

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

E-MAIL: SALES@AZETTLER.COM

This specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.