

# AZ830

## POLARIZED DIP RELAY SINGLE SIDE STABLE

### FEATURES

- Low profile for compact board spacing
- DC coils to 48 VDC
- High sensitivity, 96 mW pickup
- Life expectancy to 100 million operations
- High switching capacity, 60 W, 125 VA
- Fits standard 16 pin IC socket
- Epoxy sealed for automatic wave soldering and cleaning
- Meets FCC Part 68.302 1500 V lightning surge
- Meets FCC Part 68.304 1000 V dielectric
- UL file E43203 (UL1950)

### CONTACTS

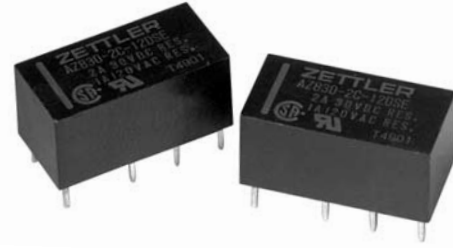
<b>Arrangement</b>	DPDT (2 Form C) Bifurcated crossbar contacts
<b>Ratings</b>	Resistive load: Max. switched power: 60 W or 125 VA Max. switched current: 2 A Max. switched voltage: 250 VDC or 300 VAC Max. carry current: 3A
<b>Rated Load UL</b>	2 A at 30 VDC 1 A at 120 VAC
<b>Material</b>	Silver alloy, gold clad.
<b>Resistance</b>	< 50 milliohms initially

### COIL

<b>Power At Pickup Voltage (typical)</b>	Standard coil: 200 mW Sensitive coil: 100 mW Ultra-Sensitive coil: 96 mW
<b>Max. Continuous Dissipation</b>	1.0 W at 20°C (68°F) 0.9 W at 40°C (104°F)
<b>Temperature Rise</b>	Standard: 38°C (68°F) at nominal coil voltage Sensitive: 21°C (38°F) at nominal coil voltage Ultra-Sensitive: 16°C (29°F) at nominal coil voltage
<b>Temperature</b>	Max. 115°C (239°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. For complete isolation between the relay's magnetic fields, it is recommended that a .197" (5.0 mm) space be provided between adjacent relays.
5. Relay adjustment may be affected if undue pressure is exerted on relay case.
6. Specifications subject to change without notice.



### GENERAL DATA

<b>Life Expectancy Mechanical Electrical</b>	Minimum operations 1 x 10 <sup>8</sup> 1 x 10 <sup>5</sup> at 2 A, 30 VDC or 1 A, 125 VAC 2 x 10 <sup>6</sup> at 1 A, 30 VDC or .5 A, 125 VAC (see table for additional figures)
<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: 1.0 pF Contact to coil: 2.0 pF
<b>Bounce (typical)</b>	At 10 mA contact current 1.5 ms at operate N.O. side 2.5 ms at operate N.C. side
<b>Dielectric Strength (at sea level)</b>	1500 Vrms contact to coil 1000 Vrms between contact sets 1000 Vrms across contacts 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 Operating</b>	At nominal coil voltage Standard: -40°C (-40°F) to 70°C (158°F) Sensitive: -40°C (-40°F) to 85°C (185°F) Ultra-Sensitive: -40°C (-40°F) to 90°C (194°F)
<b>Storage</b>	All: -40°C (-40°F) to 115°C (239°F)
<b>Vibration</b>	0.062" DA at 10–55 Hz
<b>Shock</b>	40 g
<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>	5 grams



**AMERICAN ZETTLER, INC.**

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

# AZ830

## RELAY ORDERING DATA

COIL SPECIFICATIONS				
STANDARD COIL				ORDER NUMBER*
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	
3	4.5	22.5	2.1	AZ830-2C-3DE
5	7.5	62.5	3.5	AZ830-2C-5DE
6	9.0	90	4.2	AZ830-2C-6DE
9	13.5	203	6.3	AZ830-2C-9DE
12	18.0	360	8.4	AZ830-2C-12DE
24	36.0	1440	16.8	AZ830-2C-24DE
48	72.0	5760	33.6	AZ830-2C-48DE
SENSITIVE COIL				
3	6.4	45	2.1	AZ830-2C-3DSE
5	10.6	125	3.5	AZ830-2C-5DSE
9	19.1	405	6.3	AZ830-2C-9DSE
12	25.5	720	8.4	AZ830-2C-12DSE
24	50.9	2880	16.8	AZ830-2C-24DSE
48	101.8	11520	33.6	AZ830-2C-48DSE
ULTRA-SENSITIVE COIL				
3	7.3	60	2.4	AZ830-2C-3DSSE
5	12.3	167	4.0	AZ830-2C-5DSSE
9	22.0	540	7.2	AZ830-2C-9DSSE
12	29.4	960	9.6	AZ830-2C-12DSSE
24	58.8	3840	19.2	AZ830-2C-24DSSE

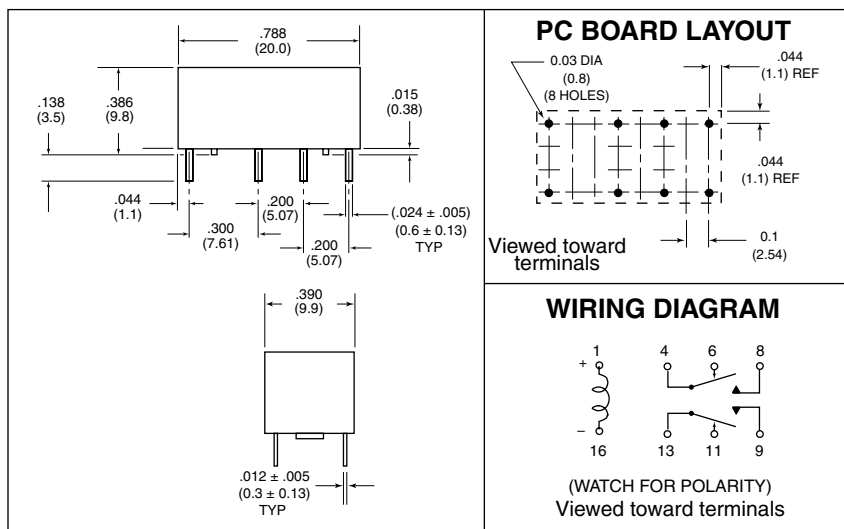
\* Add suffix "R" to indicate reversed polarity.

## TYPICAL CONTACT LIFE EXPECTANCY

VOLTAGE	POWER	NUMBER OF OPERATIONS	
		RESISTIVE LOAD	INDUCTIVE LOAD
50 mV	50 $\mu$ W	$5 \times 10^7$	$5 \times 10^7$
30 VDC	60 W	$5 \times 10^5$	$15 \times 10^4$
30 VDC	40 W	$1 \times 10^6$	$3 \times 10^5$
30 VDC	20 W	$3 \times 10^6$	$1 \times 10^6$
60 VDC	60 W	$5 \times 10^5$	—
60 VDC	40 W	$1 \times 10^6$	—
60 VDC	20 W	$3 \times 10^6$	—
30 VAC	120 VA	$5 \times 10^5$	$15 \times 10^4$
30 VAC	80 VA	$1 \times 10^6$	$3 \times 10^5$
30 VAC	40 VA	$3 \times 10^6$	$1 \times 10^6$
60 VAC	120 VA	$5 \times 10^5$	$15 \times 10^4$
60 VAC	80 VA	$1 \times 10^6$	$3 \times 10^5$
60 VAC	40 VA	$3 \times 10^6$	$1 \times 10^6$
125 VAC	125 VA	$5 \times 10^5$	$15 \times 10^4$
125 VAC	80 VA	$1 \times 10^6$	$3 \times 10^5$
125 VAC	40 VA	$3 \times 10^6$	$1 \times 10^6$

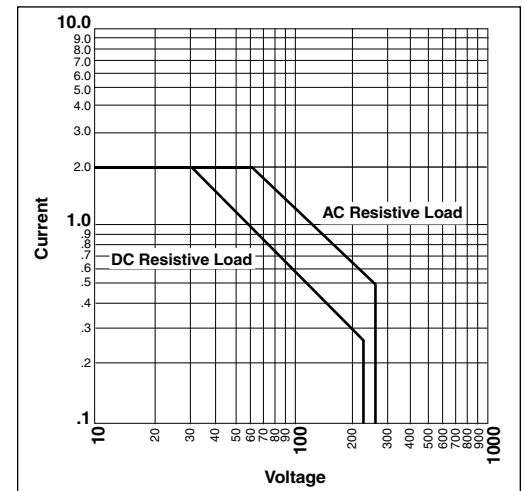
NOTES: 1. Relays operated at nominal coil voltage.  
 2. Inductive load tests are at 0.7 power factor.  
 3. Table represents typical life figures and are not guaranteed minimums.

## MECHANICAL DATA



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

## Maximum Switching Capacity



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