

# AZ846

## MICROMINIATURE POLARIZED RELAY

### FEATURES

- Microminiature size: up to 50% less board area than previous generation telecom relays
- High dielectric and surge voltage:  
2.5 KV surge (per Bellcore TA-NWT-001089)  
1.5 KV surge (per FCC Part 68)  
1,000 Vrms, open contacts
- Low power consumption: 79 mW pickup
- Stable contact resistance for low level signal switching
- Epoxy sealed for automatic wave soldering and cleaning
- UL file E43203; CSA file 700339
- All plastics meet UL94 V-O, 30 min. oxygen index



### CONTACTS

<b>Arrangement</b>	DPDT (2 Form C) Bifurcated crossbar contacts
<b>Ratings</b>	Resistive load: Max. switched power: 60 W or 62.5 VA Max. switched current: 2.0 A Max. switched voltage: 220 VDC or 250 VAC
<b>Rated Load UL/CSA</b>	0.5 A at 125 VAC 2.0 A at 30 VDC 0.3 A at 110 VDC
<b>Material</b>	Silver alloy; gold clad
<b>Resistance</b>	< 100 milliohms initially at 6 V, 1 A

### COIL (Polarized)

<b>Power At Pickup Voltage (typical)</b>	79 mW (3–12 VDC) 113 mW (24 VDC)
<b>Max. Continuous Dissipation</b>	1.0 W at 20°C (68°F) 0.78 W at 40°C (104°F)
<b>Temperature Rise</b>	At nominal coil voltage 18°C (32°F) (3–12 VDC) 25°C (45°F) (24 VDC)
<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. Specifications subject to change without notice.

### GENERAL DATA

<b>Life Expectancy Mechanical Electrical</b>	Minimum operations 1 x 10 <sup>8</sup> at 3Hz 1 x 10 <sup>5</sup> at 0.5 A, 125 VAC, Res. 2 x 10 <sup>5</sup> at 1.0 A, 30 VDC, Res.
<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>Bounce (typical)</b>	At 10 mA contact current 1 ms at operate or release
<b>Capacitance</b>	< 1 pF at 10 KHz—open contacts < 1 pF at 10 KHz—adjacent contact sets
<b>Dielectric Strength (at sea level)</b>	See table
<b>Dropout</b>	Greater than 10% of nominal coil voltage
<b>Insulation Resistance</b>	10 <sup>9</sup> ohms min. at 25°C, 500 VDC, 50% RH
<b>Ambient Temperature Operating Storage</b>	At nominal coil voltage -40°C (-40°F) to 95°C (203°F) (3–12 VDC) -40°C (-40°F) to 90°C (194°F) (24 VDC) -40°C (-40°F) to 115°C (239°F)
<b>Vibration</b>	Operational, 20 g, 10–55 Hz Non-destructive, 30 g, 10–55 Hz
<b>Shock</b>	Operational, 50 g min., 11 ms Non-destructive, 100 g min., 11 ms
<b>Max. Solder Temp. Temp./Time</b>	350°C (662°F) for 3 seconds 260°C (500°F) for 10 seconds
<b>Max. Solvent Temp.</b>	80°C (176°F)
<b>Max. Immersion Time</b>	30 seconds
<b>Weight</b>	1.8 grams
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy, P.C.

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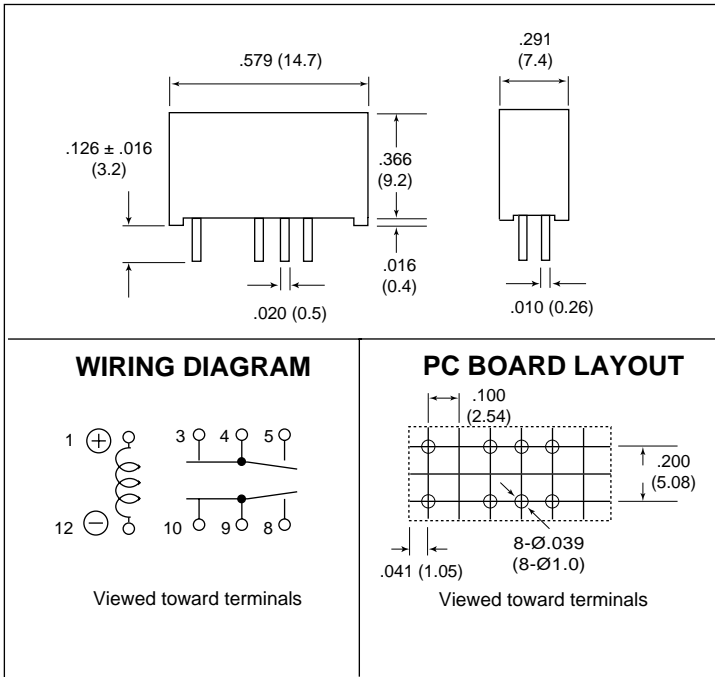
## RELAY ORDERING DATA

STANDARD RELAYS				ORDER NUMBER
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	
3	6.9	64	2.25	AZ846-3
4.5	10.4	145	3.38	AZ846-4
5	11.5	178	3.75	AZ846-5
6	13.8	257	4.5	AZ846-6
9	20.8	579	6.75	AZ846-9
12	27.7	1,028	9.0	AZ846-12
24	46.3	2,880	18.0	AZ846-24

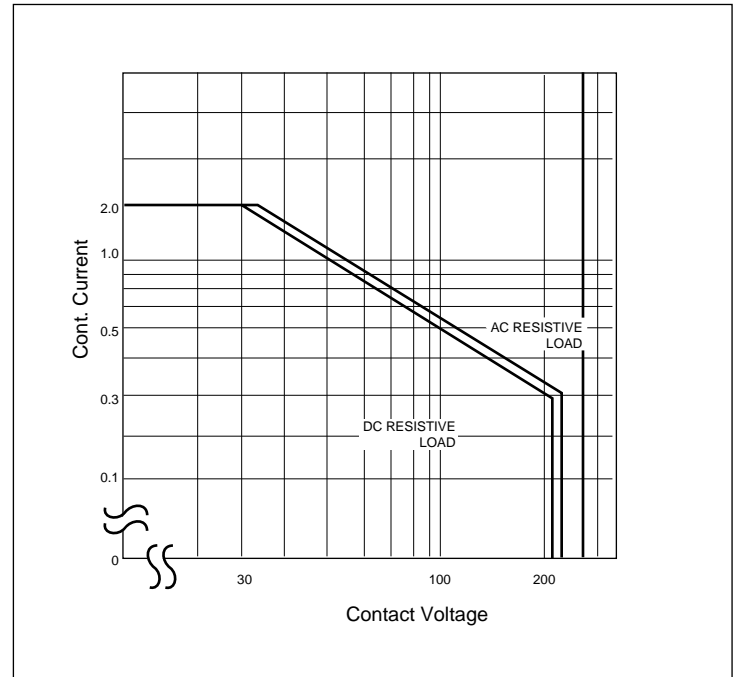
	INITIAL DIELECTRIC STRENGTH (minimum)		SURGE	
	VRMS, 1 min.	Peak (V)	Rise Time ( $\mu\text{S}$ )	Decay Time* ( $9\mu\text{S}$ ) (1/2 peak)
Between open contacts	1,000	1,500	10	160
Between contact sets	1,000	1,500	2	160
Between coil and contacts	1,800	2,500	2	10

\* Decay time measured from beginning of surge.

## Mechanical Data



## Maximum Switching Capacity



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

**AMERICAN ZETTLER, INC.**

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