

# AZ8461

## 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
- Monostable and bistable (latching) versions available
- 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-0, 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
<b>Material</b>	Silver palladium (movable) Silver palladium, gold plated (stationary)
<b>Resistance</b>	< 50 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 Temperature Rise</b>	0.8 W at 20°C (68°F) At nominal coil voltage 20°C (36°F) (3-12 VDC) 30°C (54°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>	3 ms at nominal coil voltage
<b>Release Time (typical)</b>	2 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>	< 1.5 pF at 10 KHz (open contacts, adjacent contacts) < 2 pF at 10 KHz (contact to coil)
<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 85°C (185°F) (48 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. Time</b>	260°C (500°F) for 5 seconds
<b>Max. Solvent Temp.</b>	80°C (176°F)
<b>Max. Immersion Time</b>	30 seconds
<b>Weight</b>	1.5 grams
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy, P.C.



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4/30/04W

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## RELAY ORDERING DATA

STANDARD VERSION				ORDER NUMBER
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	
1.5	3.6	16.1	1.13	AZ8461-1.5
3	7.2	64.3	2.25	AZ8461-3
4.5	10.8	145	3.38	AZ8461-4.5
5	12.0	178	3.75	AZ8461-5
6	14.4	257	4.50	AZ8461-6
9	21.6	579	6.75	AZ8461-9
12	28.8	1028	9.00	AZ8461-12
18	36.0	1620	13.50	AZ8461-18
24	48.0	2880	18.00	AZ8461-24
SINGLE COIL LATCHING VERSION				
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Set Voltage	ORDER NUMBER
1.5	4.2	22.5	1.13	AZ8461P1-1.5
3	8.5	90	2.25	AZ8461P1-3
4.5	12.7	203	3.38	AZ8461P1-4.5
5	14.1	250	3.75	AZ8461P1-5
6	17.0	360	4.50	AZ8461P1-6
9	25.5	810	6.75	AZ8461P1-9
12	33.9	1440	9.00	AZ8461P1-12
18	41.6	2160	13.50	AZ8461P1-18
24	55.4	3840	18.00	AZ8461P1-24
DUAL COIL LATCHING VERSION				
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Set/Reset Voltage	ORDER NUMBER
1.5	3.0	11.25	1.13	AZ8461P2-1.5
3	6.0	45	2.25	AZ8461P2-3
4.5	9.0	101	3.38	AZ8461P2-4.5
5	10.0	125	3.75	AZ8461P2-5
6	12.0	180	4.50	AZ8461P2-6
9	18.0	405	6.75	AZ8461P2-9
12	24.0	720	9.00	AZ8461P2-12
18	29.4	1080	13.50	AZ8461P2-18
24	39.2	1920	18.00	AZ8461P2-24

	INITIAL DIELECTRIC STRENGTH (minimum)		SURGE	
	VRMS, 1 min.	Peak (V)	Rise Time ( $\mu$ S)	Decay Time* ( $9\mu$ 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	1,500 (1000 <sup>(1)</sup> )	2,500 (1500 <sup>(1)</sup> )	2	10

<sup>(1)</sup> Dual coil

\* Decay time measured from beginning of surge.



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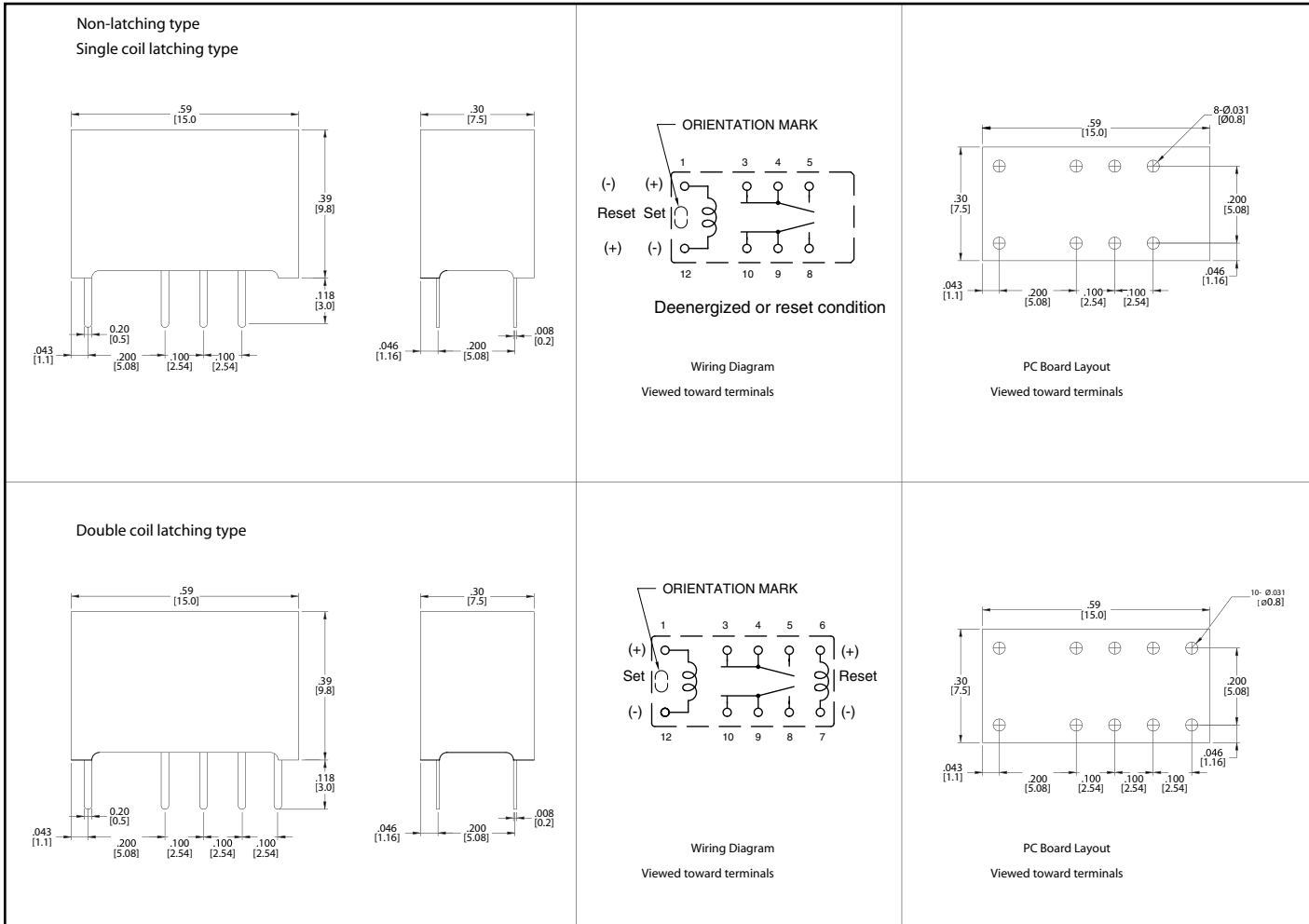
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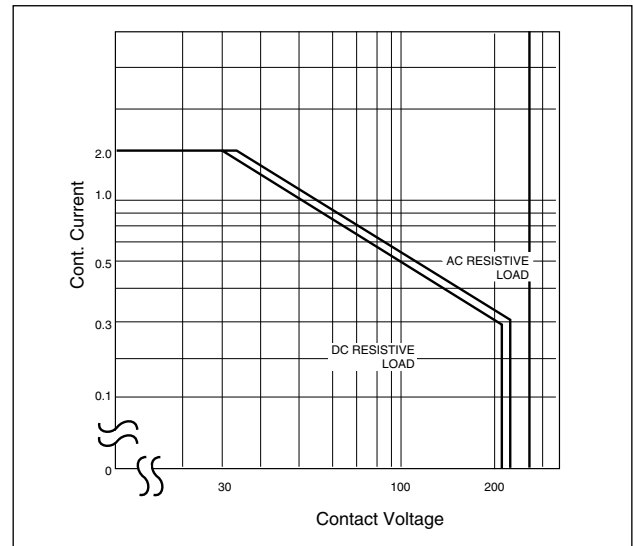
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## Mechanical Data



## Maximum Switching Capacity



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