

# AZ2501

## 50 AMP LATCHING POWER RELAY

### FEATURES

- Low cost
- 50 Amp switching
- Heavy loads to 13850 VA
- Inrush current 500A/2ms max.
- 1.5mm contact gap available
- 4 kV dielectric
- Manual switch available
- Epoxy sealed version available
- UL, CUR file E44211



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A), 1C (SPDT)
<b>Ratings</b>	Resistive load: Max. switched power: 13850 VA Max. switched current: 50 A Max. switched voltage: 440 VAC
<b>UL/CUR</b>	1 Form A (SPST) 50 A at 277 VAC, resistive, 100k cycles 70°C 20A at 347Vac resistive 30K, 70°C 20A at 277 VAC, Tungsten, 30k 5000 W at 240VAC, Tungsten, 30k cycles 20A at 120 VAC, 277 VAC Ballast 20 FLA, 120 LRA at 120 VAC, 30k cycles 17 FLA, 102 LRA at 240 VAC, 30k cycles 14 FLA, 84 LRA at 277 VAC, 30k cycles 16 A at 120/277 VAC Electronic Ballast 70°C 20 A at 120/277 VAC Std Ballast, 30k cycles 15 A at 347 VAC Std Ballast, 30k cycles 6A/120 VAC, 3A/240 VAC, 2.6A/277 VAC Pilot Duty 1 Form C (SPDT) 40 A at 277 VAC, General Use, 30k cycles
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 50 milliohms initially (24 V, 1 A voltage drop method)

### COIL

<b>Power At Pickup Voltage (typical)</b>	.96 W single coil 1.9 W dual coil
<b>Temperature</b>	Max. 105°C (221°F)

### NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Specifications subject to change without notice.

### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>6</sup> 1 x 10 <sup>5</sup> at 50 A 250 VAC Res. (SPST)
<b>Set and Reset Pulse Duration</b>	50 ms minimum
<b>Set Time (typical)</b>	15 ms at nominal coil voltage
<b>Reset Time (typical)</b>	15 ms at nominal coil voltage
<b>Dielectric Strength (at sea level for 1 min.)</b>	4000 Vrms coil to contact 1500 Vrms between open contacts
<b>Insulation Resistance</b>	1000 megohms min. at 20°C, 500 VDC, 50% RH
<b>Creepage Distance</b>	8 mm
<b>Ambient Temperature</b> <b>Operating</b> <b>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>	0.062" DA at 10–55 Hz
<b>Shock</b> <b>Operating</b> <b>Non-Operating</b>	10 g, 11 ms, 1/2 sine (no false operation) 100 g, 11 ms, 1/2 sine (no damage)
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy
<b>Max. Solder Temp.</b>	270°C (518°F)
<b>Max. Solder Time</b>	5 seconds
<b>Weight</b>	32 grams

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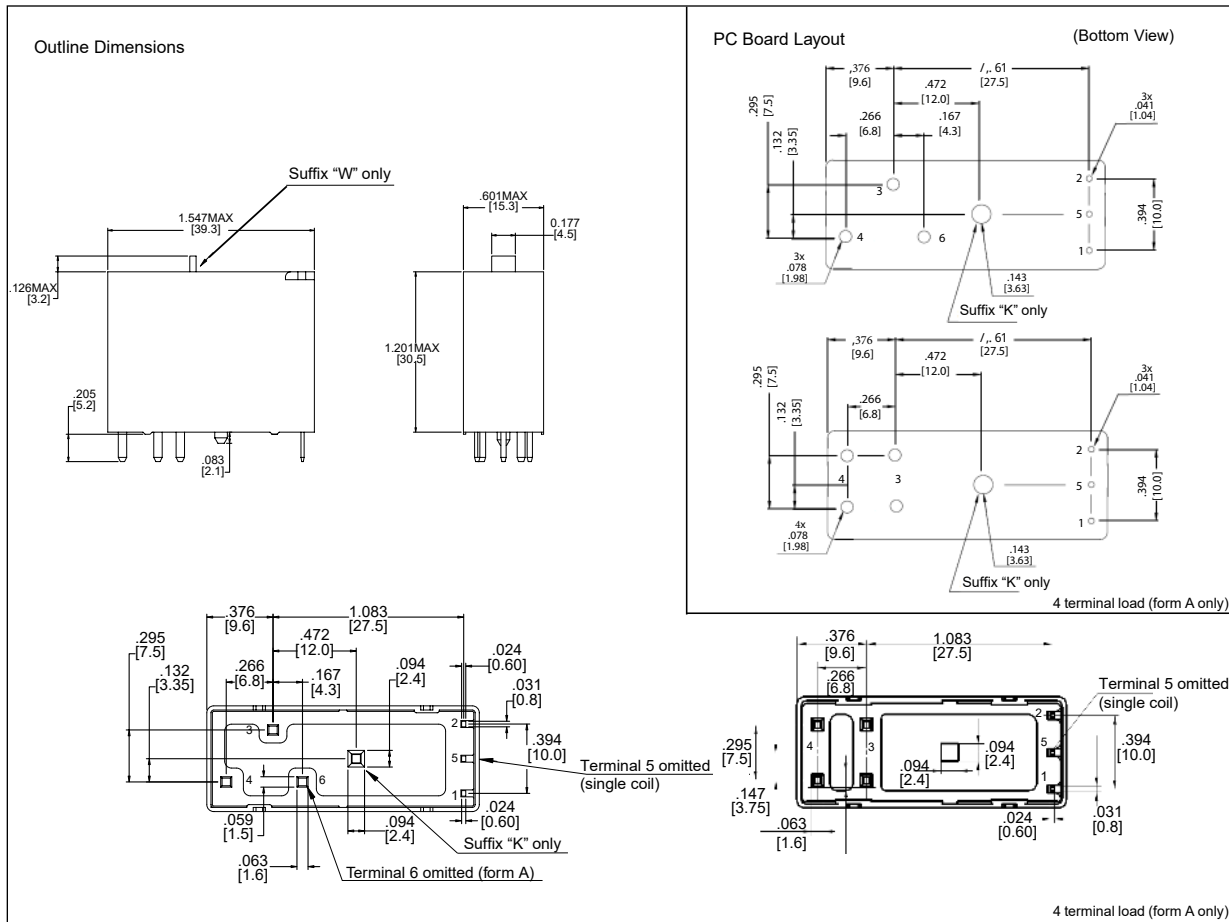
## RELAY ORDERING DATA

COIL SPECIFICATIONS -Standard Single Coil				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC [1]	Coil Resistance $\pm 10\%$	1 Form A	1 Form C
6	4.8	7.8	24	AZ2501P1-1A-6D	AZ2501P1-1C-6D
12	9.6	15.6	96	AZ2501P1-1A-12D	AZ2501P1-1C-12D
24	19.2	31.2	384	AZ2501P1-1A-24D	AZ2501P1-1C-24D
48	38.4	62.4	1536	AZ2501P1-1A-48D	AZ2501P1-1C-48D

COIL SPECIFICATIONS -Standard Dual Coil				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC [1]	Coil Resistance $\pm 10\%$	1 Form A	1 Form C
6	4.8	7.8	12	AZ2501P2-1A-6D	AZ2501P2-1C-6D
12	9.6	15.6	48	AZ2501P2-1A-12D	AZ2501P2-1C-12D
24	19.2	31.2	192	AZ2501P2-1A-24D	AZ2501P2-1C-24D
48	38.4	62.4	768	AZ2501P2-1A-48D	AZ2501P2-1C-48D

\* For epoxy sealed version (not allowed with manual switch) add suffix "E". For manual switch add suffix "W". For PCB retaining stud add suffix "K". For reverse polarity coil add suffix "R". For 4 terminal load add suffix "T" (form A only). **NOTE:** [1] Max. continuous voltage should not be applied for more than 30 seconds.

## MECHANICAL DATA



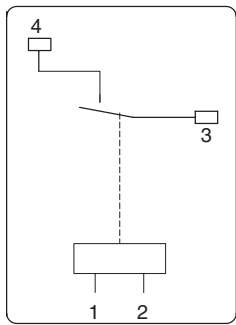
Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm .010$ "

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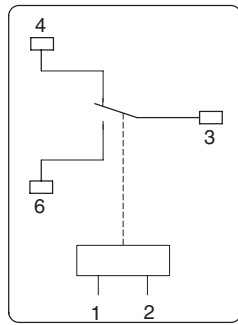
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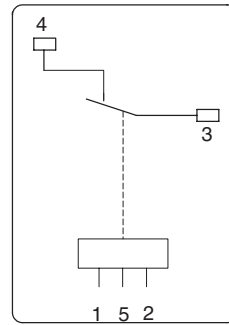
## Wiring Diagram



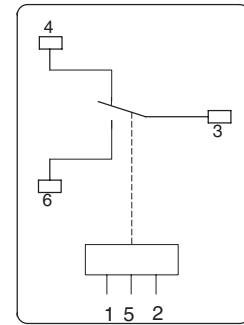
SPST&Single Coil



SPDT&Single Coil



SPST&Double Coil



SPDT&Double Coil

### NOTE:

#### Regarding Standard Polarity type:

##### 1. "Single Coil Latching Version"

- (1) After energizing 1 (+) and 2 (-), 50ms pulse, terminal 3 and 4 is connected.
- (2) After energizing 2 (+) and 1 (-), 50ms pulse, terminal 3 and 4 is disconnected.

##### 2. "Double Coil Latching Version"

- (1) After energizing 5 (+) and 1 (-), 50ms pulse, terminal 3 and 4 is connected.
- (2) After energizing 5 (+) and 2 (-), 50ms pulse, terminal 3 and 4 is disconnected.

#### Regarding Reverse Polarity type:

##### 1. "Single Coil Latching Version"

- (1) After energizing 1 (+) and 2 (-), 50ms pulse, terminal 3 and 4 is disconnected.
- (2) After energizing 2 (+) and 1 (-), 50ms pulse, terminal 3 and 4 is connected.

##### 2. "Double Coil Latching Version"

- (1) After energizing 5 (-) and 2 (+), 50ms pulse, terminal 3 and 4 is disconnected.
- (2) After energizing 5 (-) and 1 (+), 50ms pulse, terminal 3 and 4 is connected.

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