AZ2501

50 AMP LATCHING POWER RELAY

FEATURES

- 50 Amp switching
- Heavy loads to 13850 VA
- 4 kV dielectric strength
- 8 mm clearance and creepage distance
- Manual switch available
- Epoxy sealed version available
- UL, CUR file E44211

CONTACTS

Arrangement	SPST (1 Form A), SPDT (1 Form C)
Ratings	Resistive load: Max. switched power: 13850 VA Max. switched current: 50 A Max. switched voltage: 440 VAC
UL/CUR	1 Form A (SPST) 50 A at 277 VAC, resistive, 100k cycles 5000 W at 240 VAC, Tungsten, 30k cycles 1 Form C (SPDT) 40 A at 277 VAC, General Use, 30k cycles
Material	Silver tin oxide
Resistance	< 50 milliohms initially

COIL

Power	
At Pickup Voltage (typical)	.96 W single coil 1.9 W dual coil
Temperature	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.
4. Initial state of contacts may be changed during transportation or shock!

GENERAL DATA

Life Expectancy **Mechanical** **Electrical**	Minimum operations 1 x 10^6 1 x 10^5 at 50 A 250 VAC Res. (SPST)
Set and Reset Pulse Duration	50 ms minimum
Set Time (typical)	15 ms at nominal coil voltage
Reset Time (typical)	15 ms at nominal coil voltage
Dielectric Strength (at sea level for 1 min.)	4000 Vrms coil to contact 1500 Vrms between open contacts
Insulation Resistance	1000 megohms min. at 20°C, 500 VDC, 50% RH
Creepage Distance	8 mm (1 Form A), 6 mm (1 Form C)
Ambient Temperature **Operating** **Storage**	At nominal coil voltage -40°C (-40°F) to 70°C (158°F) -40°C (-40°F) to 105°C (221°F)
Vibration	1.5mm DA at 10–55 Hz
Shock **Operating** **Non-Operating**	 10 g, 11 ms, $^1/_2$ sine (no false operation) 100 g, 11 ms, $^1/_2$ sine (no damage)
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy
Max. Solder Temp.	270°C (518°F)
Max. Solder Time	5 seconds
Weight	32 grams

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2008-02-22

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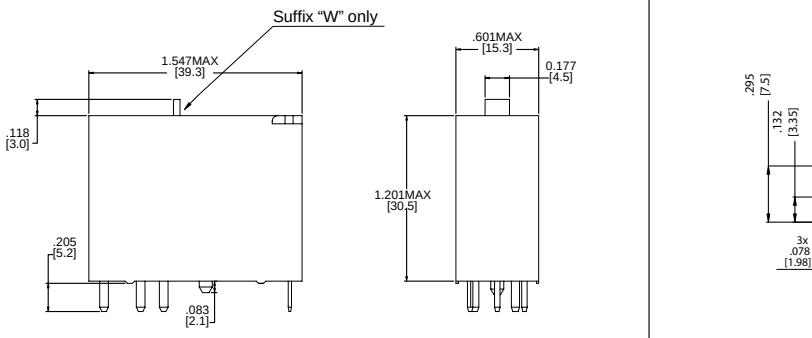
RELAY ORDERING DATA

COIL SPECIFICATIONS -Standard Single Coil				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC [1]	Coil Resistance ± 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

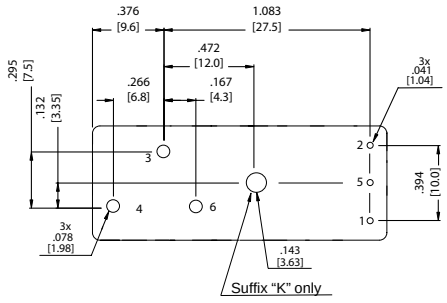
COIL SPECIFICATIONS -Standard Dual Coil				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC [1]	Coil Resistance ± 10%	1 Form A	1 Form C
6	4.8	7.8	12	AZ2501P2–1A–6D	AZ2501P2–-1C–6D
12	9.6	15.6	48	AZ2501P2–1A–12D	AZ2501P2–-1C–12D
24	19.2	31.2	192	AZ2501P2–1A–24D	AZ2501P2–-1C–24D
48	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”.
NOTE: [1] Max. continuous voltage should not be applied for more then 30 seconds.

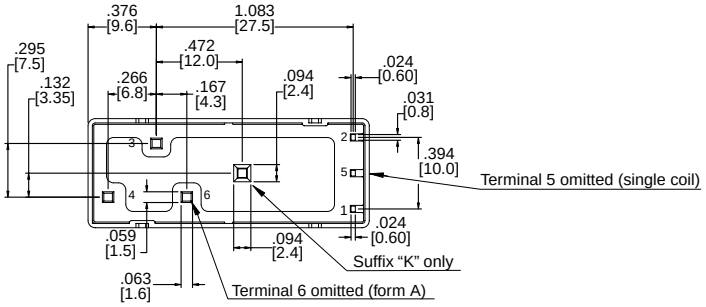
MECHANICAL DATA



PC BOARD LAYOUT



Viewed toward terminals



Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010"

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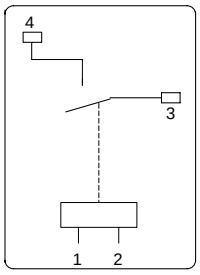
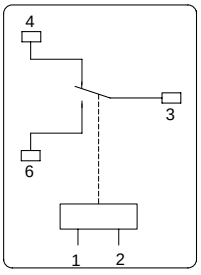
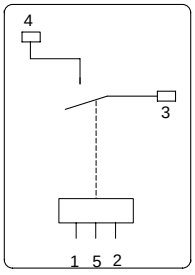
WIRING DIAGRAMS



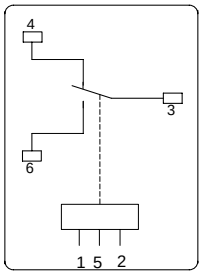
SPST&Single Coil



SPDT&Single Coil



SPST&Double Coil



SPDT&Double Coil

NOTE:

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.

Reverse Polarity type:

1. “Single Coil Latching Version”
(1) After energizing 1 (-) and 2 (+), 50ms pulse, terminal 3 and 4 is connected.
(2) After energizing 1 (+) and 2 (-), 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.

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