

AZ21501

50 AMP MINIATURE POWER RELAY

FEATURES

- 1 Form A, B and C contacts available
- AC and DC coils available
- Class F high temperature available
- Lower cost 30A contact available
- Epoxy sealed versions available
- UL, CUR file E44211



CONTACTS

Arrangement	SPST (1 Form A, or B) SPDT (1 Form C)
Ratings	Resistive load: Max. switched power: 1200W or 7200VA Max. switched current: 50A (Form A) Max. switched voltage: 300VAC, 110VDC
UL, CUR	NO: 50A at 240VAC, Resistive [2] 40A at 240VAC, Resistive 30A at 277VAC, General Purpose 25A at 277VAC, Resistive, 100k cycles 20A at 240VAC, Resistive, 250k cycles 2HP at 250VAC 5A at 280VAC, Ballast
TÜV	NC: 35A at 240VAC, Resistive [2] 30A at 240VAC / 30VDC, Resistive 20A at 277VAC, General Purpose 1.5 HP at 250VAC 5A at 280VAC, Ballast
Material	Silver cadmium oxide [1], silver tin oxide [2]
Resistance	< 50 milliohms initially (24V, 1A voltage drop method)

COIL

Power At Pickup Voltage (typical)	DC: 506mW (30/40A), 844mW (50A) AC: 1.4VA
Max. Continuous Dissipation	DC: 1.7W at 20°C AC: 2.7VA at 20°C
Max. Temperature	Max. 130°C (266°F) Class B Max. 155°C (311°F) Class F

GENERAL DATA

Life Expectancy Mechanical Electrical	Minimum operations 1 x 10 ⁷ 5 x 10 ⁴ at 40A 250VAC Res.
Operate Time	15 msec max. at nominal coil voltage
Release Time	10 msec max. at nominal coil voltage (without suppression)
Dielectric Strength (at sea level for 1 min.)	1500Vrms contact to contact 2500Vrms contact to coil 4000Vrms contact to coil-Contact Factory
Insulation Resistance	1000 megohms min. at 20°C, 500VDC 50% RH
Dropout	DC: > 10% of nominal coil voltage AC: > 30% of nominal coil voltage
Ambient Temperature Operating Storage	-55°C (-67°F) to 100°C (212°F) Class B -55°C (-67°F) to 130°C (266°F) Class B -55°C (-67°F) to 125°C (257°F) Class F -55°C (-67°F) to 155°C (311°F) Class F
Vibration	0.06" DA at 10-55Hz
Shock	20g
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy, P.C.,
Max. Solder Temp.	270°C (518°F)
Max. Solder Time	5 seconds
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Weight	30 grams

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.

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RELAY ORDERING DATA

COIL SPECIFICATIONS – DC Coil						ORDER NUMBER*
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Nominal Current mA ± 10%	Coil Resistance ±10% (30/40A) (50A)		
3	2.25	3.9	300	10	6	AZ21501-1A-3D
5	3.75	6.5	179	28	16.7	AZ21501-1A-5D
6	4.50	7.8	150	40	24	AZ21501-1A-6D
9	6.75	11.7	100	90	54	AZ21501-1A-9D
12	9.00	15.6	75	160	96	AZ21501-1A-12D
15	10.25	19.5	60	250	150	AZ21501-1A-15D
18	13.5	23.4	50	360	216	AZ21501-1A-18D
24	18.0	31.2	38	640	384	AZ21501-1A-24D
48	36.0	62.4	19	2,560	1536	AZ21501-1A-48D
110	82.50	143	8	13,445	8067	AZ21501-1A-110D

COIL SPECIFICATIONS – AC Coil 50/60 Hz					ORDER NUMBER*
Nominal Coil VAC	Must Operate VAC	Max. Continuous VAC	Nominal Coil Power VA	Coil Resistance ±10% (30/40A only)	
12	9	15.6	2.0	27	AZ21501-1A-12A
24	18	31.2	2.0	120	AZ21501-1A-24A
110	82.5	143	2.0	2,360	AZ21501-1A-110A
120	90	156	2.0	3,040	AZ21501-1A-120A
220	165	286	2.0	13,490	AZ21501-1A-220A
240	180	312	2.0	15,740	AZ21501-1A-240A
277	207.75	360.1	2.0	20,300	AZ21501-1A-277A

*Substitute "-1B" or "-1C" in place of "-1A" for 1 Form B or 1 Form C respectively. For silver tin oxide contacts substitute "-1AE", or "1BE" or "-1CE" in place of "-1A" or "1B", or "1C". For 30A version - add "H" after "-1A", "-1AE", "-1B", "-1BE", "-1C", "-1CE" or for 50A version - add "T" after "-1AE", "-1BE", or "-1CE." To indicate class F version - add suffix "F". Substitute "DE" or "AE" in place of "D" or "A" for epoxy sealed version. Use AZ21511 for Pin 6 style.

MECHANICAL DATA

Outline Dimensions

50A version Only

Terminal	Dimensions
[4,5]	2-0.031(0.8)x0.071(1.8)
[1,6]	2-0.071(1.8)x0.047(1.2)
ALL	0.146(3.7)±0.02(0.5)

BOTTOM VIEW

PC Board Layout

50A version Only

Terminal	Dimensions
[1,4,5]	3-ø0.098(2.5)
[1,4,5,6]	4-ø0.098(2.5)

FORM 1A,1B,1C (Viewed toward terminals)

Wiring Diagram

Omit pin 6 for AZ21501

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