

AZ991

MINIATURE PC BOARD RELAY

FEATURES

- Contacts rated at 3, 5 or 10 Amps
- Meets FCC Part 68.302 1500 lightning surge
- Meets FCC Part 68.304 1000 V dielectric
- 0.240" (6.1 mm) min. between coil and contact
- Low cost
- DC coils to 48 VDC
- Flux-tight available
- UL, CUR file E44211



CONTACTS

Arrangement	SPDT (1 Form C) (Form A available on request)
Ratings	Resistive load:
Light Duty	Max. switched power: 90 W or 831 VA Max. switched current: 3 A Max. switched voltage: 30 VDC or 277 VAC UL Rating: 3 A at 30 VDC or 277 VAC
Medium Duty	Max. switched power: 150 W or 1250 VA Max. switched current: 5 A Max. switched voltage: 30 VDC or 277 VAC UL Rating: 5 A at 30 VDC or 277 VAC 1/10 HP 277 VAC
Heavy Duty	Max. switched power: 300 W or 1250 VA Max. switched current: 10 A Max. switched voltage: 30 VDC or 125 VAC UL Rating: 5 A at 30 VDC or 10 A 125 VAC
Material	Silver cadmium oxide
Resistance	< 100 milliohms initially

COIL

Power	
At Pickup Voltage (typical)	256 mW
Max. Continuous Dissipation	1.1 W at 20°C (68°F) ambient 0.86 W at 40°C (104°F) ambient
Temperature Rise	30°C (54°F) at nominal coil voltage
Temperature	Max. 105°C (267°F)

GENERAL DATA

Life Expectancy	Minimum operations
Mechanical	1 x 10 ⁷
Electrical	1 x 10 ⁶ at 10 A 120 VAC Res.
Operate Time (typical)	6 ms at nominal coil voltage
Release Time (typical)	2 ms at nominal coil voltage
Dielectric Strength (at sea level for 1 min.)	2500 Vrms contact to coil 750 Vrms across contacts Meets FCC Part 68.302 lightning surge Meets FCC Part 68.304 1000 V dielectric
Insulation Resistance	100 megohms min. at 500 VDC, 20°C 50% RH
Dropout	Greater than 10% of nominal coil voltage
Ambient Temperature	
Operating	-40°C (-13°F) to 70°C (158°F)
Storage	-55°C (-67°F) to 105°C (221°F)
Vibration	0.062" DA at 10–55 Hz
Shock	10 g
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy, P.C.
Max. Solder Temp.	270°C (500°F)
Max. Solder Time	5 seconds
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Weight	10 grams

NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Unsealed version available upon request.
4. Tape should be pulled off after wave solder and cleaning.
5. Specifications subject to change without notice.

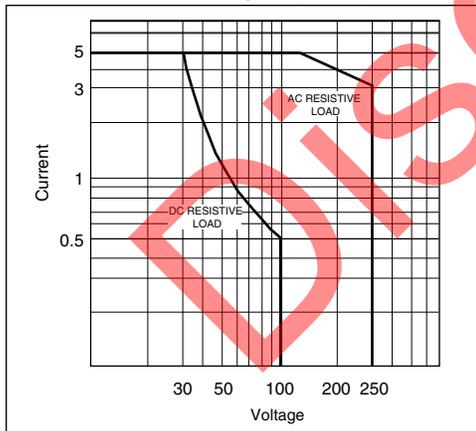
AZ991

RELAY ORDERING DATA

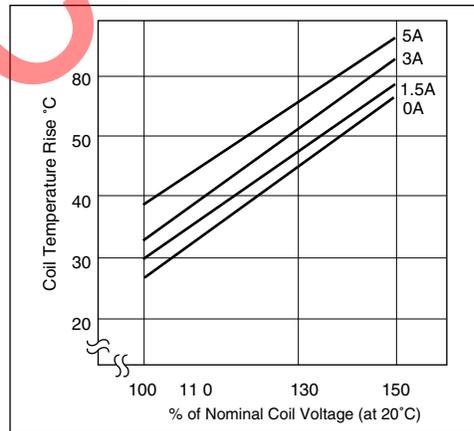
STANDARD RELAYS: Light Duty (3 Amp Contact)				
COIL SPECIFICATIONS				ORDER NUMBER*
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	
5	8.4	63	4.0	AZ991-1C-5D
6	10.0	90	4.8	AZ991-1C-6D
9	15.1	202	7.2	AZ991-1C-9D
12	20.2	360	9.6	AZ991-1C-12D
24	40.3	1,440	19.2	AZ991-1C-24D
48	80.7	5,760	38.4	AZ991-1C-48D
STANDARD RELAYS: Medium Duty (5 Amp Contact)				
COIL SPECIFICATIONS				ORDER NUMBER*
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	
5	8.4	63	4.0	AZ991-1CH-5D
6	10.0	90	4.8	AZ991-1CH-6D
9	15.1	202	7.2	AZ991-1CH-9D
12	20.2	360	9.6	AZ991-1CH-12D
24	40.3	1,440	19.2	AZ991-1CH-24D
48	80.7	5,760	38.4	AZ991-1CH-48D
STANDARD RELAYS: Heavy Duty (10 Amp Contact)				
COIL SPECIFICATIONS				ORDER NUMBER*
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	
5	8.4	63	4.0	AZ991-1CT-5D
6	10.0	90	4.8	AZ991-1CT-6D
9	15.1	202	7.2	AZ991-1CT-9D
12	20.2	360	9.6	AZ991-1CT-12D
24	40.3	1,440	19.2	AZ991-1CT-24D
48	80.7	5,760	38.4	AZ991-1CT-48D

* Add suffix "L" for flux-tight version

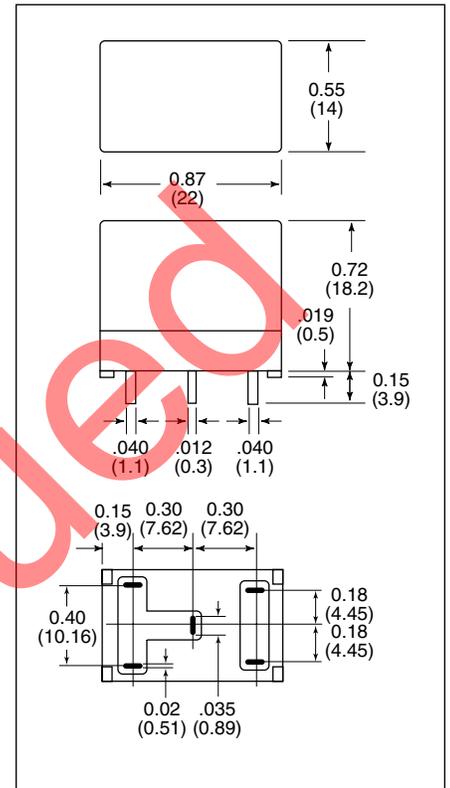
Maximum Switching Capacity



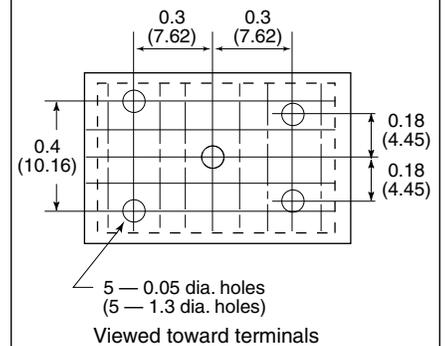
Coil Temperature Rise vs. Coil Power



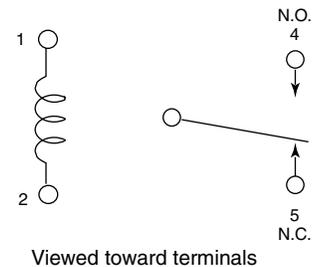
MECHANICAL DATA



PC BOARD LAYOUT



WIRING DIAGRAM



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

AMERICAN ZETTLER, INC.

12/15/03W

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This specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.