



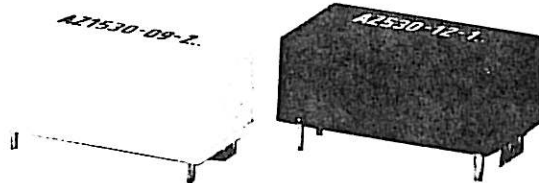
# AMERICAN ZETTLER, INC.

SERIES

# AZ 530

## THINPAK® PC BOARD RELAY

SPDT, Low Level to 2 Amp Contacts  
UL File E43203



ACTUAL SIZE

### FEATURES

- Low profile for compact board spacing
- DC coils to 100 VDC
- Life expectancy to 10 million operations
- Standard PC 0.1" grid terminal spacing
- Contact resistance less than 50 milliohms
- Insulation resistance greater than 10,000 megohms
- No phenolic insulation
- Economical unsealed version
- Ultrasonically welded version for environmental protection
- Rigidly molded relay body stabilizes contact performance

### GENERAL DESCRIPTION

The THINPAK® Relay, Series AZ 530 has been designed for applications with either demanding space limitations, such as 0.6" center-to-center PC card mounting, or operating requirements that cannot be met by reed relays. The high pressure SPDT, 1 or 2 amp contacts enable the relay to switch capacitive or lamp loads with current spikes that would normally weld the contacts of reed relays.

The high sensitivity, long life, and insulation resistance of more than  $10^{10}$  ohms makes it an ideal relay for galvanic separation between electronic circuits. Refer to Series AZ 530 Ultra-Sensitive data sheet for versions which may be driven directly from logic IC's without interface.

The unsealed version AZ 530 offers an economical alternative where the above design considerations are important, but where protection during automatic wave soldering processes and from excessively dirty environments is not critical.

The ultrasonically welded version AZ 1530 has the cover bonded to the base such that it offers excellent protection in dusty and dirty environments. While this version may be used in automatic wave soldering processes, the bond is not airtight so that the relay may be subject to vapor contamination. Under no circumstances should this relay be immersed during cleaning.

For a "process-proof" relay which can withstand the rigors of today's automatic wave soldering and dip cleaning processes, please refer to our SEALPAK™, Series AZ 2530 relay data sheet.

### ELECTRICAL SPECIFICATIONS

<b>CONTACT ARRANGEMENT:</b>	SPDT (1 Form C)	<b>COIL POWER:</b>	
<b>CONTACT RATING:</b>	Noninductive Load	At Pick Up Voltage (typical):	Light duty type: 125 mW
Light Duty:	Fine silver gold plated		Medium duty type: 250 mW
	1 Amp @ 26 VDC	Max. Continuous Dissipation:	1.6 W @ 20°C (68°F) ambient
	0.5 Amp @ 115 VAC	Temperature Rise:	1.2 W @ 40°C (105°F) ambient
Medium Duty:	Silver cadmium oxide		55°C (130°F) per watt (typical)
	2 Amp @ 26 VDC	<b>COIL TEMPERATURE:</b>	Max. 105°C (220°F)
	1 Amp @ 115 VAC	<b>AMBIENT TEMPERATURE:</b>	
<b>LIFE EXPECTANCY:</b>	Mechanical: 10 million operations	Operating: Light duty type:	-55°C (-67°F) to 70°C (158°F)
	Electrical: See diagram	at nominal coil voltage	
<b>CONTACT RESISTANCE:</b>	50 milliohms max. initially	Medium duty type:	-55°C (-67°F) to 60°C (140°F)
<b>OPERATE TIME:</b>	5 ms at nominal coil voltage (typical)	at nominal coil voltage	
<b>RELEASE TIME:</b>	6 ms at nominal coil voltage (typical)	Storage: Both types:	-55°C (-67°F) to 105°C (220°F)
<b>CONTACT BOUNCE:</b>	At 10mA contact current:	<b>VIBRATION:</b>	0.062 DA @ 10 -55Hz.
(typical)	2 ms at operate N.O. side	<b>SHOCK:</b>	20 g
	6 ms at release N.C. side	<b>ENCLOSURE:</b>	
<b>CAPACITANCE:</b>	N.C. to moveable 0.6 pF	Unsealed:	Polycarbonate cover and mylar base plate
(typical)	N.O. to moveable 0.9 pF	Ultrasonically Welded:	Fiberglass filled polyester cover and base plate
	Contact to coil 12 pF	<b>TERMINALS:</b>	PC board, gold plated in 0.10" standard grid spacing
<b>DIELECTRIC STRENGTH:</b>	Contact to contact: 500 Vrms	<b>WEIGHT:</b>	Approximately 10 grams
	Contact to coil: 500 Vrms		
<b>INSULATION RESISTANCE:</b>	10,000 megohms min. @20°C,		
	100 VDC, 50% RH		
<b>DROP OUT:</b>	Greater than 5% of nominal coil voltage		

*"It's a Better Relay"*

## RELAY ORDERING DATA

STANDARD RELAYS: Light Duty Type (1 Amp contact)					
COIL SPECIFICATIONS				ORDER NUMBER	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	Unsealed	Ultrasonically Welded
5	9.5	64	3.75	AZ 530-12-1	AZ 1530-12-1
6	11.0	90	4.5	AZ 530-11-1	AZ 1530-11-1
12	21.0	310	9.0	AZ 530-08-1	AZ 1530-08-1
24	37.0	950	18.0	AZ 530-06-1	AZ 1530-06-1
48	80.0	4,500	36.0	AZ 530-04-1	AZ 1530-04-1
100	143.0	14,000	75.0	AZ 530-03-1	AZ 1530-03-1

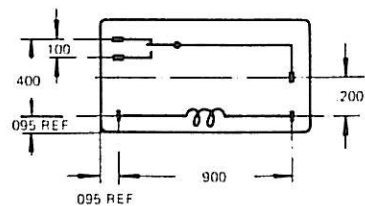
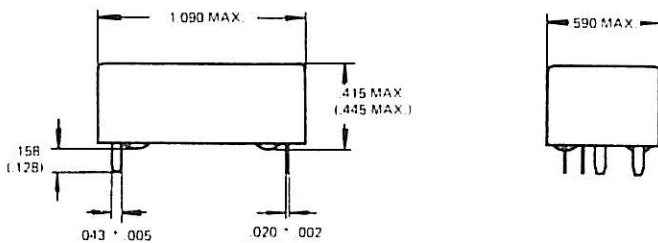
STANDARD RELAYS: Medium Duty Type (2 Amp contact)					
COIL SPECIFICATIONS				ORDER NUMBER	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	Unsealed	Ultrasonically Welded
5	7.1	35	3.75	AZ 530-14-2	AZ 1530-14-2
6	9.5	47	4.5	AZ 530-13-2	AZ 1530-13-2
12	17.0	200	9.0	AZ 530-09-2	AZ 1530-09-2
24	37.0	950	18.0	AZ 530-06-2	AZ 1530-06-2
48	66.0	3,000	36.0	AZ 530-045-2	AZ 1530-045-2
100	143.0	14,000	75.0	AZ 530-03-2	AZ 1530-03-2

Other coil resistances, sensitives, and contact material available upon request. Please consult factory for additional information.

### NOTES

- All values at 20° C (68° F).
- Relay will pull in with less than "Must Operate" value.
- To fasten relay on PC board prior to soldering, bend coil terminals only. Do not bend or stress the contact terminals as this may alter contact adjustment.
- Relays may be hand or machine soldered with the following precautions being noted:
  - No excessive flux should flow on top of the board.
  - Flux must be dried prior to turning over board.
  - Max. solder temperature: 270° C (500° F).
  - Max. solder time: 5 seconds
  - Excellent results have been obtained using Zeva Flux C-3, foaming, which may remain on board and act as protective cover.
  - Relay may *not* be dip cleaned after soldering and care should be exercised during brush cleaning.

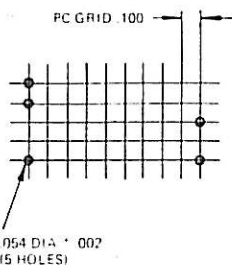
### MECHANICAL SPECIFICATIONS



Viewed toward terminals

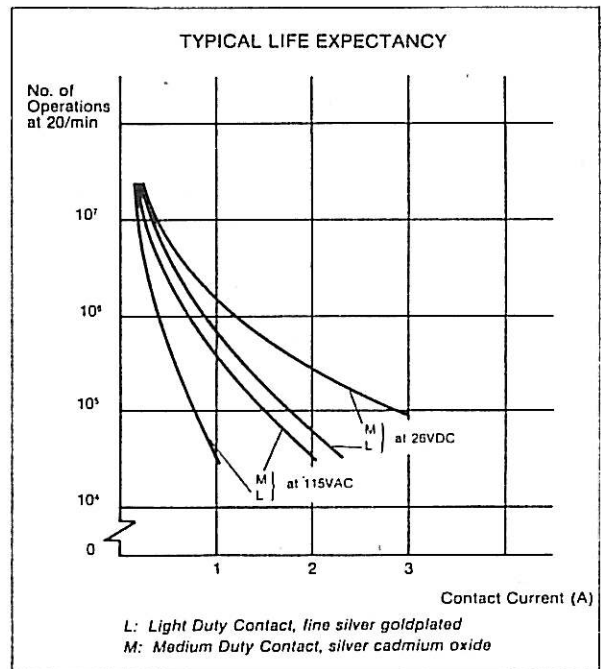
Dimensions in parenthesis for ultrasonically welded version.

#### PC BOARD LAYOUT



TOLERANCE:  $\pm .010''$

.054 DIA x .002 (5 HOLES)



Represented By:

*"It's a Better Relay"*

Specifications subject to change without notice.

AMERICAN ZETTLER, INC.

16881 HALE AVENUE • IRVINE, CALIFORNIA 92714 • PHONE 714/660-1670 • TELEX 67-8472