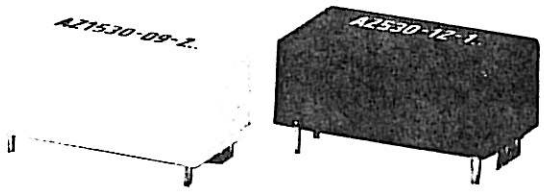
AMERICAN ZETTLER, INC.

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

CONTACT ARRANGEMENT:	SPDT (1 Form C)
CONTACT RATING:	Noninductive Load
Light Duty:	Fine silver gold plated 1 Amp @ 26 VDC 0.5 Amp @ 115 VAC
Medium Duty:	Silver cadmium oxide 2 Amp @ 26 VDC 1 Amp @ 115 VAC
LIFE EXPECTANCY:	Mechanical: 10 million operations Electrical: See diagram
CONTACT RESISTANCE:	50 milliohms max. initially
OPERATE TIME:	5 ms at nominal coil voltage (typical)
RELEASE TIME:	6 ms at nominal coil voltage (typical)
CONTACT BOUNCE: (typical)	At 10mA contact current: 2 ms at operate N.O. side 6 ms at release N.C. side
CAPACITANCE: (typical)	N.C. to moveable 0.6 pF N.O. to moveable 0.9 pF Contact to coil 12 pF
DIELECTRIC STRENGTH:	Contact to contact: 500 Vrms Contact to coil: 500 Vrms
INSULATION RESISTANCE:	10,000 megohms min. @20°C, 100 VDC, 50% RH
DROP OUT:	Greater than 5% of nominal coil voltage

COIL POWER:	
At Pick Up Voltage (typical):	Light duty type: 125 mW Medium duty type: 250 mW
Max. Continuous Dissipation:	1.6 W @ 20°C (68°F) ambient 1.2 W @ 40°C (105°F) ambient
Temperature Rise:	55°C (130°F) per watt (typical)
COIL TEMPERATURE:	Max. 105°C (220°F)
AMBIENT TEMPERATURE:	
Operating: Light duty type:	-55°C (-67°F) to 70°C (158°F) at nominal coil voltage
Medium duty type:	-55°C (-67°F) to 60°C (140°F) at nominal coil voltage
Storage: Both types:	-55°C (-67°F) to 105°C (220°F)
VIBRATION:	0.062 DA @ 10-55Hz.
SHOCK:	20 g
ENCLOSURE:	
Unsealed:	Polycarbonate cover and mylar base plate
Ultrasonically Welded:	Fiberglass filled polyester cover and base plate
TERMINALS:	PC board, gold plated in 0.10" standard grid spacing
WEIGHT:	Approximately 10 grams

RELAY ORDERING DATA

STANDARD RELAYS: Light Duty Type (1 Amp contact)

COIL SPECIFICATIONS				ORDER NUMBER	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance ± 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)

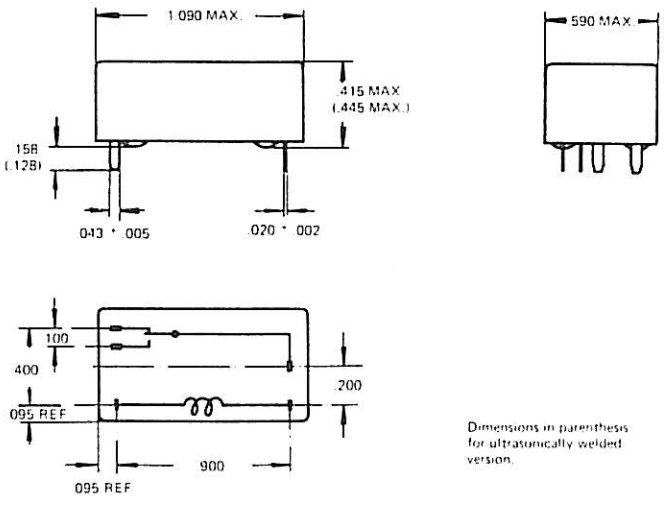
COIL SPECIFICATIONS				ORDER NUMBER	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance ± 10%	Must Operate VDC	Unsealed	Ultrasonically Welded
5	7.1	35	3.75	AZ 530-14-2	AZ 1530-14-2
6	9.5	47	4.5	AZ 530-13-2	AZ 1530-13-2
12	17.0	200	9.0	AZ 530-09-2	AZ 1530-09-2
24	37.0	950	18.0	AZ 530-06-2	AZ 1530-06-2
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.

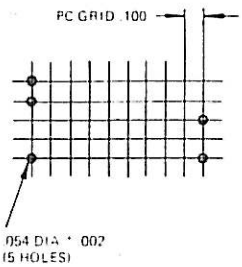
NOTES

1. All values at 20° C (68° F).
2. Relay will pull in with less than "Must Operate" value.
3. 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.
4. Relays may be hand or machine soldered with the following precautions being noted:
   a. No excessive flux should flow on top of the board.
   b. Flux must be dried prior to turning over board.
   c. Max. solder temperature: 270° C (500° F).
   d. Max. solder time: 5 seconds
   e. Excellent results have been obtained using Zeva Flux C-3, foaming, which may remain on board and act as protective cover.
   f. Relay may *not* be dip cleaned after soldering and care should be exercised during brush cleaning.

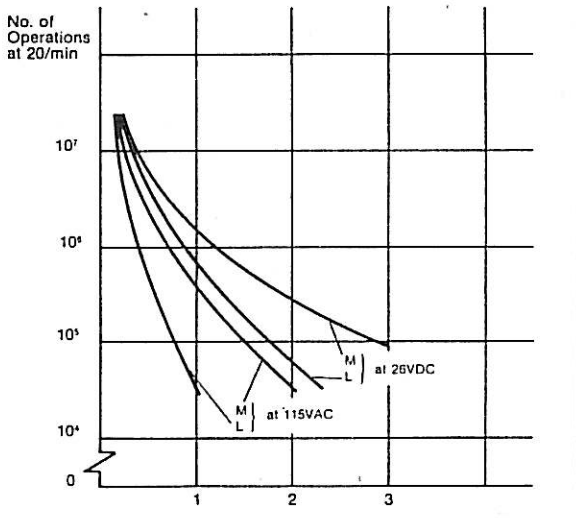
MECHANICAL SPECIFICATIONS



PC BOARD LAYOUT



TYPICAL LIFE EXPECTANCY



L: Light Duty Contact, fine silver goldplated
M: Medium Duty Contact, silver cadmium oxide

Represented By:

"It's a Better Relay"

Specifications subject to change without notice.

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