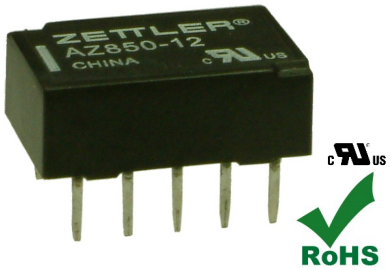
AZ850

MICROMINIATURE POLARIZED RELAY

FEATURES

- Compact size: Height: 0.197“ (5 mm); Length: 0.551“ (14 mm); Width: 0.354“ (9 mm)
- DPDT (2 Form C) contact arrangements
- Monostable non-latching and bistable latching types available
- Single and dual coil latching versions
- High sensitivity coil - 79 mW pickup
- Meets FCC Part 68.302 1500 V lightning surge
- DIP terminal layout, fits 10 pin IC socket
- Epoxy sealed for automatic wave soldering and cleaning
- Gold clad contacts
- RoHS compliant
- UL, CUR file E43203



CONTACTS

Arrangement	DPDT (2 Form C) Bifurcated crossbar contacts
Ratings (max.)	(resistive load)
switched power	30 W or 62.5 VA
switched current	1 A
carry current	2 A
switched voltage	220 VDC* or 250 VAC
	* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
Rated Loads	
UL, CUR	1 A at 30 VDC, resistive 0.5 A at 125 VAC, resistive
Contact materials	AgPd - silver palladium, gold clad
Minimum switching	
voltage	10 mV
current	10 µA
Initial resistance	< 50 mΩ

COIL

Nominal coil DC voltages	see coil voltage specifications tables
Dropout	
non-latching types	> 10% of nominal coil voltage
Power at pickup voltage	(typ.)
monostable non-latching	79 - 113 mW
bistable single coil latching	56 - 84 mW
bistable dual coil latching	113 - 169 mW
Temperature Rise	
at nominal coil voltage	18 K (32°F)
Max. temperature	105°C (211°F)

GENERAL DATA

Life Expectancy	(minimum operations)
mechanical	1×10^6
electrical	2×10^5 at 1 A 30 VDC resistive 1×10^5 at 0.5 A 125 VAC resistive

GENERAL DATA (cont‘d)

Operate Time	at nominal coil voltage
non-latching types	2 ms (typ.)
Release Time	at nominal coil voltage, w/o coil suppression
non-latching types	1 ms (typ.)
Set Time	at nominal coil voltage
latching types	2 ms (typ.)
Reset Time	at nominal coil voltage
latching types	1 ms (typ.)
Capacitance	(typ.)
coil to contacts	0.9 pF
between contact sets	0.2 pF
between open contacts	0.4 pF
Dielectric Strength	(at sea level for 1 min.)
coil to contacts	1 kV_{RMS}
between contact sets	1 kV_{RMS}
between open contacts	1 kV_{RMS}
	Meets FCC Part 68.302 1500 V lightning surge
Surge voltage	
coil to contacts	1.5 kV
between contact sets	2.5 kV
between open contacts	1.5 kV
Insulation Resistance	1000 MΩ (min.) at 20°C, 500 VDC, 50% RH
Temperature Range	(at nominal coil voltage)
operating	-40°C (-40°F) to 85°C (158°F)
Vibration resistance	
operating	3 mm (0.118") DA at 10–55 Hz
damage	5 mm (0.197") DA at 10–55 Hz
Shock	
operating	50 g
Terminals	Tinned copper alloy, P. C.
Soldering	
max. temperature	250°C (500°F)
max. time	5 seconds
Cleaning	
max. solvent temp.	80°C (176°F)
max. immersion time	30 seconds
Weight	1.5 grams
Packing unit	(pcs)
plastic tube	25
carton box	1000

AZ850

COIL VOLTAGE SPECIFICATIONS

Monostable non-latching

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.25	7.5	64
4.5	3.4	11.25	145
5	3.75	12.5	178
6	4.5	15.0	257
9	6.75	22.5	579
12	9.0	30.0	1028
24	18.0	48.0	2880

Single coil latching

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.25	8.7	90
4.5	3.4	13.0	203
5	3.75	14.5	250
6	4.5	17.4	360
9	6.75	26.1	810
12	9.0	34.8	1440
24	18.0	57.6	3840

Dual coil latching

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.25	6.0	45
4.5	3.4	9.0	101
5	3.75	10.0	125
6	4.5	12.0	180
9	6.75	18.0	405
12	9.0	24.0	720
24	18.0	36.0	1920

ORDERING DATA

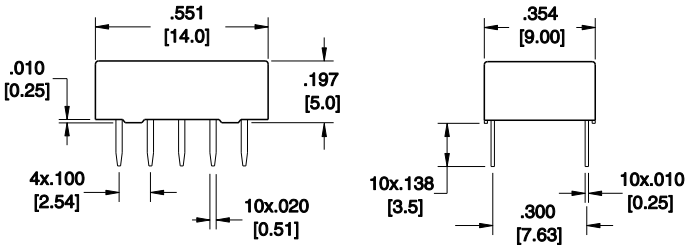
AZ850□□-□□

Nominal coil voltage
see coil voltage specifications tables

Latching type
nil: monostable non-latching
P1: bistable single coil latching
P2: bistable dual coil latching

MECHANICAL DATA

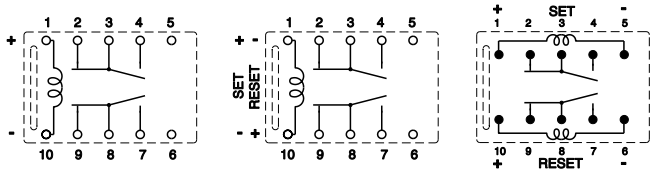
Dimensions in inches with metric equivalents in parentheses



WIRING DIAGRAMS

Viewed towards terminals, shown in deenergized / reset condition.

Note: Stripe marking on top of relay indicates position of pin 1



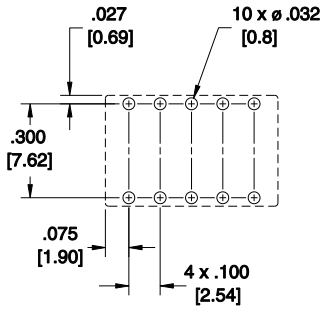
monostable
non-latching type

bistable
single coil latching type

bistable
dual coil latching type

PC BOARD LAYOUT

Viewed towards terminals.
Dimensions in inches with metric equivalents in parentheses.



NOTES

1. Specifications subject to change without notice.
2. All values at 20°C (68°F) unless otherwise stated.
3. Relay may pull in with less than “Must Operate” value.
4. Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.
5. Relay has fixed coil polarity
6. For complete isolation between the relay’s magnetic fields, it is recommended that a .197" (5.0 mm) space be provided between adjacent relays.
7. Relay adjustment may be affected if undue pressure is exerted on relay case
8. Ultrasonic cleaning is not recommended

DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf

The 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.

DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from the regional ZETTLER relay websites. The 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.

ZETTLER GROUP

Building on a foundation of more than a century of expertise in German precision engineering, ZETTLER Group is a world-class enterprise, engaged in the design, manufacturing, sales and distribution of electronic components. Our industry leadership is based on a unique combination of engineering competence and global scale.

For more information on other ZETTLER Group companies, please visit zettler-group.com. For support on this product or other ZETTLER relays, please visit one of the group sites below.

SITES FOR ZETTLER RELAYS

NORTH AMERICA

American Zettler, Inc.
www.azettler.com
sales@azettler.com

EUROPE

Zettler Electronics, GmbH
www.zettlerelectronics.com
office@zettlerelectronics.com

Zettler Electronics, Poland
www.zettlerelectronics.pl
office@zettlerelectronics.pl

CHINA

Zettler Group, China
www.zettlercn.com
relay@zettlercn.com

ASIA PACIFIC

Zettler Electronics (HK) Ltd.
www.zettlerhk.com
sales@zettlerhk.com