AZ832 / AZ832P

MONOSTABE / BISTABLE POLARIZED DIP RELAY

FEATURES

- Low profile for compact board spacing
- DC coils to 48 VDC
- High sensitivity with 96 mW pickup power
- Life expectancy to 20 million operations
- High switching capacity, 60 W, 250 VA
- Fits standard 16 pin IC socket
- Minimum switching load 10 mV, 10 µA
- Epoxy sealed
- UL, CUR file E43203

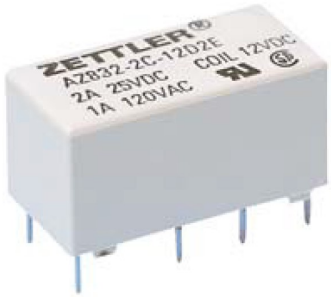


Illustration similar

CONTACTS

Arrangement	DPDT (2 Form C) bifurcated crossbar contacts
Ratings (max.) switched power switched current switched voltage	(resistive load) 60 W or 250 VA 3 A 30 VDC* or 125 VAC * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
Rated Loads **UL/CUR**	**AgPd/Ag+Au** and **AgPd/AgPd+Au** versions 0.5 A at 60 VDC, resistive load [1][2] 2 A at 30 VDC, resistive load [1][2] 2 A at 125 VAC, resistive load [1][2] **AgPd/Ag+Au** versions 3 A at 40 VDC, resistive load, 10k cyc., 40°C [1] **Ag+Au/Ag+Au** versions 2 A at 30 VDC, resistive load [3] 2 A at 125 VAC, resistive load [3] 3 A at 30 VDC, resistive load, 50k cyc., 70°C [3] Note: Monostable high power coil types are not UL/CUR recognized.
Contact materials	Palladium silver against gold plated silver (AgPd/Ag+Au)[1] Palladium silver against gold plated palladium silver (AgPd/AgPd+Au)[2] Gold plated silver against gold plated silver (Ag+Au/Ag+Au)[3]
Minimum load	10 mV, 10µA (ref.)
Contact resistance initial	≤100 mΩ (at 10 mA)

COIL

Nominal coil voltage	See coil voltage specifications tables
Dropout voltage monostable types	> 10% of nominal coil voltage
Coil power monostable types single coil latching dual coil latching	(typ. at 23°C) 200 mW (standard coil), 150 mW (sensitive coil), 240 - 260 mW (high power coil) 100 - 144 mW (standard coil) 75 mW (sensitive coil) 200 - 282 mW (standard coil) 150 mW (sensitive coil)
Max. temperature	Class F insulation system

GENERAL DATA

Life Expectancy mechanical electrical	(minimum operations) 2 x 10^7 See UL/CUR Rated Loads
Operate/Set Time	at nominal coil voltage 3 ms (typ.), 5 ms (max.)
Release/Reset Time monostable types latching types	at nominal coil voltage 3 ms (typ.), 4 ms (max.), w/o coil suppression 3 ms (typ.), 5 ms (max.)
Bounce Time	3 ms (typ.)
Dielectric Strength coil to contacts between open contacts between contacts sets	(at sea level for 1 min.) 1500 VAC (single coil versions) 1200 VAC (dual coil versions) 1000 VAC 1500 VAC
Insulation Resistance	1000 MΩ (min.) at 23°C, 500 VDC, 50% RH
Temperature Range operating	(at nominal coil voltage) -40°C (-40°F) to 85°C (185°F)
Vibration resistance	0.062" (1.5 mm) DA at 10–55 Hz
Shock	50 g
Enclosure protection category material group	P.B.T. polyester Plastic sealed, wash tight IIIa
Terminals	Tinned copper alloy, P. C.
Soldering max. temperature max. time	 270°C (518°F) 5 s
Cleaning max. solvent temp. max. immersion time	 80°C (176°F) 30 seconds
Dimensions length width height	 20.2 mm (0.795”) 10.2 mm (0.402”) 10.6 mm (0.417”)
Weight	5 grams (approx.)
Compliance	UL 508, RoHS
Packing unit (pcs)	25 per plastic tube / 1000 per carton box

AZ832 / AZ832P

ORDERING DATA

AZ832□□-2C-□□D□E□

Contact material option
nil: AgPd/Ag+Au[1]
A: AgPd/AgPd+Au[2]
D: Ag+Au/Ag+Au[3]

Coil option
nil: standard coil
S: sensitive coil
M: high power coil (monostable types only)

Nominal coil voltage
see coil voltage specifications table

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

Example ordering data

AZ832-2C-12DSE	Non-latching monostable type, 2 Form C, 12 VDC nominal coil voltage, sensitive coil, contacts from palladium silver against gold plated silver
AZ832P2-2C-5DEA	Dual coil latching type, 2 Form C, 5 VDC nominal coil voltage, contacts from palladium silver against gold plated palladium silver

COIL VOLTAGE SPECIFICATIONS - MONOSTABLE TYPES

Monostable non-latching standard type

Nominal Coil VDC	Must Operate VDC	Max. Cont. VDC	Nom. Power mW	Resistance Ohm ± 10%
3	2.3	6.0	200	45
5	3.75	10.0		125
6	4.5	12.0		180
9	6.75	18.0		405
12	9.0	24.0		720
15	11.25	30.0		1125
24	18.0	48.0		2880
48	36.0	96.0		11520

Monostable non-latching sensitive type

Nominal Coil VDC	Must Operate VDC	Max. Cont. VDC	Nom. Power mW	Resistance Ohm ± 10%
3	2.4	7.0	150	60
5	4.0	11.5		167
6	4.8	13.8		240
9	7.2	20.8		540
12	9.6	27.7		960
15	12.0	34.6		1500
24	19.2	55.4		3840

Monostable non-latching high power type

Nominal Coil VDC	Must Operate VDC	Max. Cont. VDC	Nom. Power mW	Resistance Ohm ± 10%
3	2.25	5.7	250	36
5	3.75	9.2	263	95
6	4.5	11.0	240	150
12	9.0	23.2	240	600
24	18.0	44.6	261	2210
48	36.0	93.7	236	9750

Note: All values at 23°C (73°F), upright position, terminals downward.

COIL VOLTAGE SPECIFICATIONS - LATCHING TYPES

Single coil latching standard type

Nominal Coil VDC	Must Operate VDC	Max. Cont. VDC	Nom. Power mW	Resistance Ohm ± 10%
3	2.25	8.4	100	90
5	3.75	14.0		250
6	4.5	17.0		360
9	6.75	25.0		810
12	9.0	34.0		1440
15	11.25	42.0		2220
24	18.0	56.0	144	4000

Single coil latching sensitive type

Nominal Coil VDC	Must Operate VDC	Max. Cont. VDC	Nom. Power mW	Resistance Ohm ± 10%
3	2.4	9.6	75	120
5	4.0	16.0		330
6	4.8	19.0		480
9	7.2	29.0		1080
12	9.6	39.0		1920
15	12.0	43.0		3000
24	19.2	78.0		7680

Dual coil latching standard type

Nominal Coil VDC	Must Operate VDC	Max. Cont. VDC	Nom. Power mW	Resistance Ohm ± 10%
3	2.25	6.0	200	45
5	3.75	10.0		125
6	4.5	12.0		180
9	6.75	18.0		405
12	9.0	24.0		720
15	11.25	30.0		1125
24	18.0	48.0	282	2040

Dual coil latching sensitive type

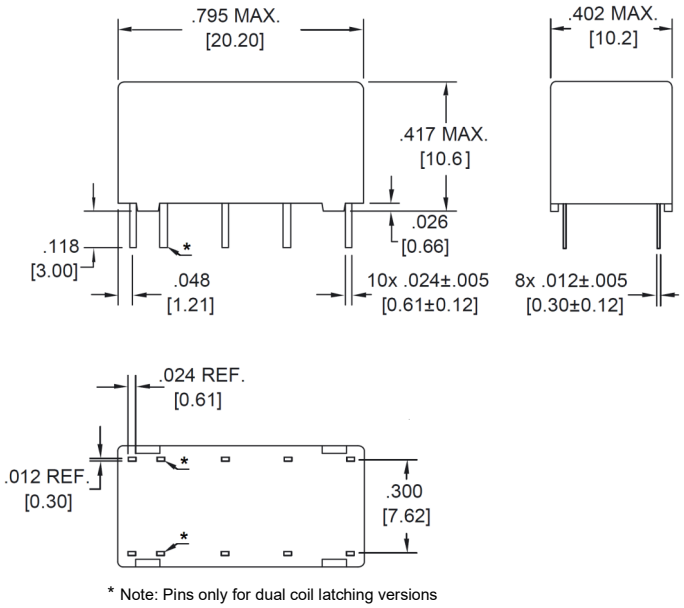
Nominal Coil VDC	Must Operate VDC	Max. Cont. VDC	Nom. Power mW	Resistance Ohm ± 10%
3	2.4	6.9	150	60
5	4.0	11.5		167
6	4.8	13.8		240
9	7.2	20.8		540
12	9.6	27.7		960
15	12.0	34.6		1500
24	19.2	55.4		3840

Note: All values at 23°C (73°F), upright position, terminals downward.

AZ832 / AZ832P

MECHANICAL DATA

Dimensions in inches with metric equivalents in parentheses. Tolerance: ±.010”
Pin dimensions given without tin coating. Pin grid is a multiple of 0.1”

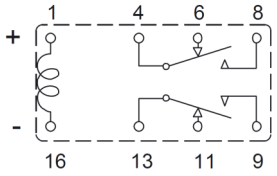


* Note: Pins only for dual coil latching versions

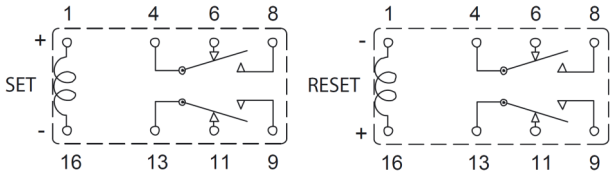
WIRING DIAGRAMS

Viewed towards terminals

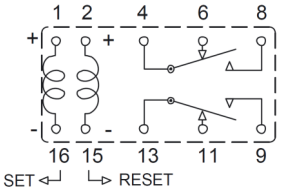
Monostable non-latching types



Bistable single coil latching types



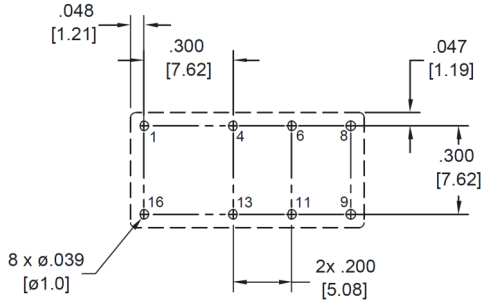
Bistable dual coil latching types



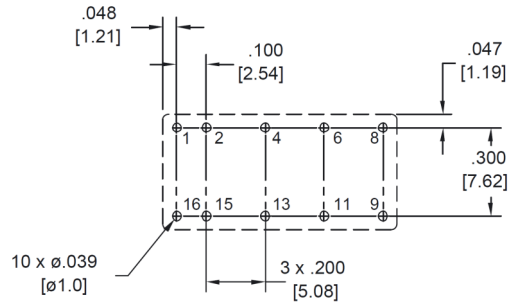
PC BOARD LAYOUT

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

Monostable non-latching and bistable single coil types



Bistable dual coil types



NOTES

1. All values at reference temperature of 23°C (73°F) unless stated otherwise.
2. Relay has a fixed coil polarity.
3. Keep away from strong magnetic fields to avoid alterations of “Must Operate voltage”.
4. For isolation between the relay’s magnetic fields, it is recommended that at least a .2" (5.0 mm) space is provided between adjacent relays.
5. Relay may pull in or set/reset with less than “Must Operate” value.
6. “Max. Continuous Voltage” is the maximum voltage the coil can endure for a short period of time.
7. For monostable non-latching types: Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.
8. For bistable latching types: Initial state of contacts may be changed during transportation or shock.
9. For bistable latching types: Recommended set / reset pulse width is 50 ms to 100 ms.
10. For dual coil latching types: Do not power set and reset coils simultaneously.
11. The minimum load values are for reference only. The part’s suitability has to be confirmed in the application.
12. Relay adjustment may be affected if excessive shock is applied to the relay.
13. Relay adjustment may be affected if undue pressure is exerted on the relay case.
14. Specifications subject to change without notice.

AZ832 / AZ832P

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.

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