AZ888

SUBMINIATURE POLARIZED POWER RELAY

FEATURES

- 8 A / 5 A switching capability
- 1 Form A, 2 Form A and combined 1 Form A / 1 Form B contact arrangements
- Monostable non-latching and bistable latching types available
- Single and dual coil latching versions
- Low coil power
- High Dielectric strength 3 kV_{RMS}
- Low height 10.5 mm
- Epoxy sealed versions optional, Gold plating optional
- UL Class F insulation (155°C) standard
- RoHS compliant
- UL, CUR file E44211

CONTACTS

Arrangement	SPST-N.O. (1 Form A) DPST-N.O. (2 Form A) SPST-N.O. (1 Form A) / SPST-N.C. (1 Form B)
Ratings (max.)	(resistive load)
1 Form A	
switched power	150 W or 2000 VA
switched current	8 A
switched voltage	240 VDC* or 380 VAC
2 Form A **1 Form A/1 Form B**	
switched power	150 W or 1250 VA
switched current	5 A
switched voltage	240 VDC* or 380 VAC
	* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
Contact materials	$AgSnO_2$ - silver tin oxide gold plating available
Initial resistance	< 50 mΩ (1 A / 6 VDC, with gold plating: 0.1 A / 6 VDC)

COIL

Nominal coil DC voltages	see coil voltage specifications tables
Dropout	
non-latching types	> 10% of nominal coil voltage
Coil power	(typ.)
non-latching, dual coil latching	
at nominal voltage	300 mW
at pickup voltage	192 mW
single coil latching	
at nominal voltage	150 mW
at pickup voltage	96 mW
Max. temperature	155°C (311°F), Class F

GENERAL DATA

Life Expectancy	(minimum operations)
mechanical	1×10^7
electrical	1×10^5 at 8 A 250 VAC resistive (1s on/9s off) 3×10^4 at 5 A 250 VAC resistive (2s on/2s off)
Operate Time	at nominal coil voltage
non-latching types	10 ms (max.)
Release Time	at nominal coil voltage, w/o coil suppression
non-latching types	5 ms (max.)
Set Time	at nominal coil voltage
latching types	10 ms (max.)
Reset Time	at nominal coil voltage
latching types	10 ms (max.)
Dielectric Strength	(at sea level for 1 min.) 3 kV_{RMS} coil to contacts 2 kV_{RMS} between contact sets 1 kV_{RMS} between open contacts
Surge voltage	
coil to contact	5 kV (at 1.2 x 50 µs)
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 (185°F)
Vibration resistance	
operating	2.0 mm (0.079") DA at 10–55 Hz
damage	3.5 mm (0.138") DA at 10–55 Hz
Shock	
operating	20 g
damage	100 g
Terminals	Tinned copper alloy, P. C.
Soldering	
max. temperature	260°C (500°F)
max. time	5 seconds
Cleaning	
max. solvent temp.	80°C (176°F)
max. immersion time	30 seconds
Dimensions	
length	20.2 mm (0.795")
width	11.3 mm (0.445")
height	10.5 mm (0,413")
Weight	4.5 grams (approx.)

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UL/CUR APPROVED CONTACT RATINGS

1 Form A
8 A at 250 VAC, general use, 30k cycles, 85°C
8 A at 250 VAC, resistive, 50k cycles, 85°C *
8 A at 250 VAC, resistive, 100k cycles, 70°C
5 A at 30 VDC, resistive, 100k cycles, 70°C
5 A at 30 VDC, general use, 50k cycles, 85°C *
5 A at 30 VDC, general use, 30k cycles, 85°C
1/6 HP at 125/250 VAC, 6k cycles, 85°C
B300 pilot duty, 30k cycles, 85°C
R150 pilot duty, 30k cycles, 85°C
B300 pilot duty, 50k cycles, 70°C
R300 pilot duty, 50k cycles, 70°C
600 W tungsten, 220 VAC, 6k cycles, 70°C

2 Form A
5 A at 250 VAC, general use, 50k cycles, 40°C
5 A at 250 VAC, general use, 30k cycles, 85°C
5 A at 250 VAC, resistive, 100k cycles, 70°C
5 A at 30 VDC, resistive, 100k cycles, 70°C
5 A at 30 VDC, resistive, 30k cycles, 85°C
1/10 HP at 125/250 VAC, 6k cycles, 40°C
B300 pilot duty, 50k cycles, 40°C
R150 pilot duty, 50k cycles, 40°C

1 Form A/1 Form B
5 A at 250 VAC, general use, 50k cycles, 40°C
5 A at 250 VAC, general use, 30k cycles, 85°C
5 A at 250 VAC, resistive, 100k cycles, 70°C
5 A at 30 VDC, resistive, 100k cycles, 70°C
5 A at 30 VDC, resistive, 30k cycles, 85°C
1/6 HP at 125/250 VAC, 6k cycles, 40°C
B300 pilot duty, 50k cycles, 70°C
R150 pilot duty, 50k cycles, 70°C

* For dual coil latching type only

ORDERING DATA

AZ888□□-□□-□□D□□□

Reverse polarity option
nil: standard polarity coil
R: reversed polarity coil

Plating option
nil: non plated
A: Gold plating

Sealing option
nil: non sealed
E: sealed version

Nominal coil voltage
see coil voltage specifications tables

Contact arrangement
1A: 1 Form A (SPST-N.O.)
2A: 2 Form A (DPST-N.O.)
1AB: 1 Form A (SPST-N.O.) and 1 Form B (SPST-N.C.)

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

Example ordering data

AZ888-1A-5D	Monostable type, 1 Form A, 5 VDC nominal coil voltage, non sealed, non gold plated, standard coil polarity
AZ888P1-1AB-12DEA	Single coil latching, combined 1 Form A and 1 Form B contact arrangement, 12 VDC nominal coil voltage, sealed, gold plated, standard coil polarity
AZ888P2-2A-9DR	Dual coil latching, 2 Form A, 9 VDC nominal coil voltage, non sealed, non gold plated, reversed coil polarity

COIL VOLTAGE SPECIFICATIONS

Monostable non-latching

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.4	3.9	30
5	4.0	6.5	83
6	4.8	7.8	120
9	7.2	11.7	270
12	9.6	15.6	480
18	14.4	23.4	1080
24	19.2	31.2	1920

Single coil latching

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.4	3.9	60
5	4.0	6.5	167
6	4.8	7.8	240
9	7.2	11.7	540
12	9.6	15.6	960
18	14.4	23.4	2160
24	19.2	31.2	3840

Dual coil latching

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.4	3.9	30
5	4.0	6.5	83
6	4.8	7.8	120
9	7.2	11.7	270
12	9.6	15.6	480
18	14.4	23.4	1080
24	19.2	31.2	1920

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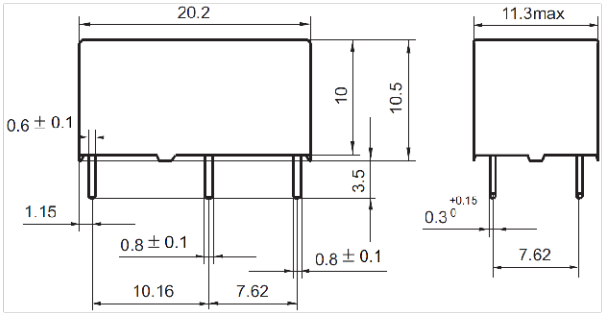
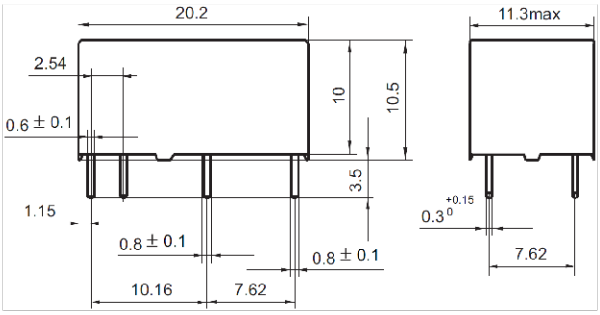
MECHANICAL DATA

Dimensions in mm.

Monostable non-latching and single coil bistable latching types



Bistable dual coil latching type

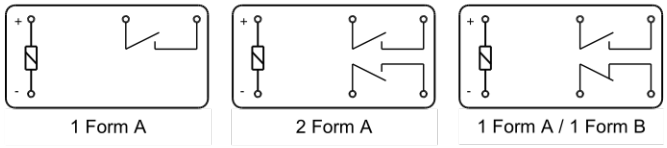


WIRING DIAGRAMS

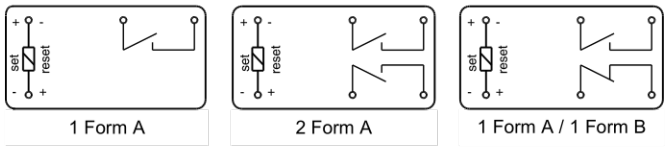
Viewed towards terminals, shown in deenergized / reset condition.

Note: The diagrams show the standard coil polarity. The polarity is reversed for types with reverse polarity option 'R'

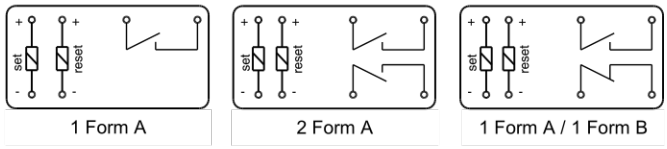
Monostable non-latching type



Bistable single coil latching type



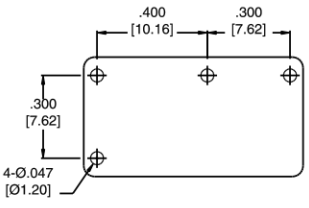
Bistable dual coil latching type

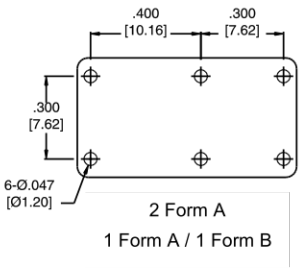


PC BOARD LAYOUT

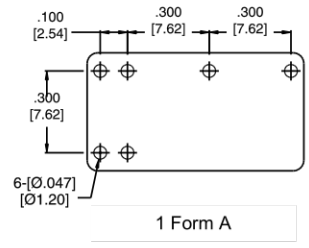
Viewed towards terminals.
Dimensions in inches with metric equivalents in parentheses.

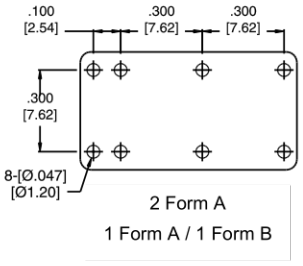
Monostable non-latching and single coil bistable latching types





Bistable dual coil latching type





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

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.