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

RoHS

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
Power at pickup voltage	(typ.)
non-latching, dual coil latching	192 mW
single coil latching	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
Weight	4.5 grams

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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

NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than “Must Operate” value.
3. Relay has fixed coil polarity
4. For complete isolation between the relay’s magnetic fields, it is recommended that a .197" (5.0 mm) space be provided between adjacent relays.
5. Relay adjustment may be affected if undue pressure is exerted on relay case
6. Specifications subject to change without notice.

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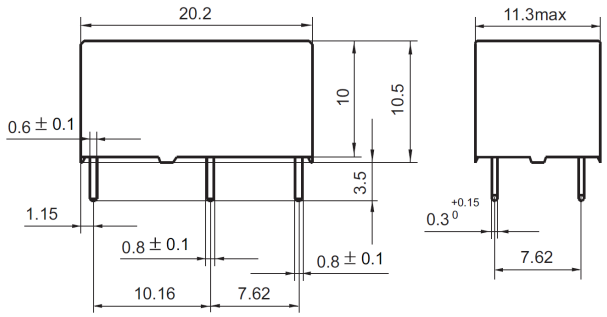
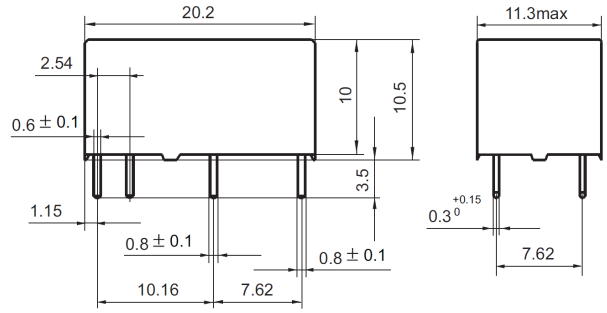
MECHANICAL DATA

Dimensions in mm.

Monostable non-latching and single coil bistable latching types



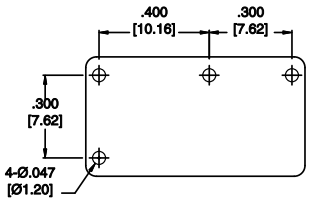
Bistable dual coil latching type



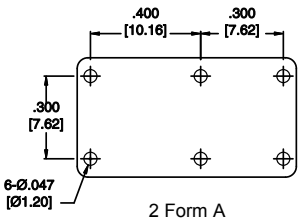
PC BOARD LAYOUT

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

Monostable non-latching and single coil bistable latching types



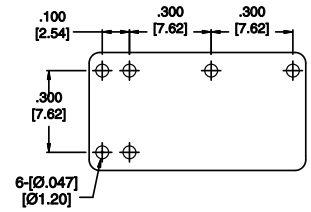
1 Form A



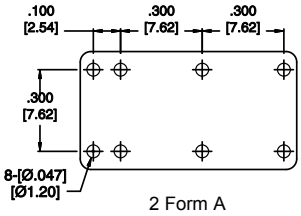
2 Form A

1 Form A / 1 Form B

Bistable dual coil latching type



1 Form A



2 Form A

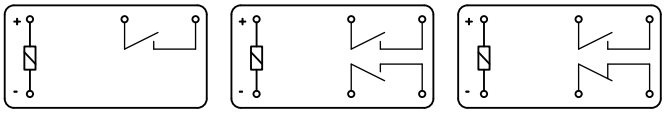
1 Form A / 1 Form B

WIRING DIAGRAMS

Viewed towards terminals, shown in deenergized / reset condition.

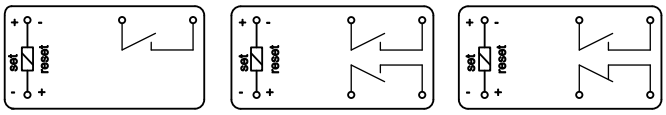
Note: The diagrams show the standard coil polarity. The polarity is reversed for types with reverse polarity option 'R'

Monostable non-latching type



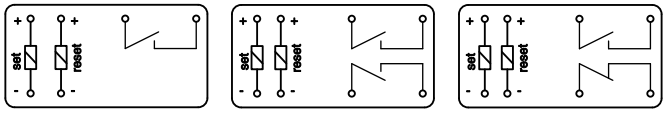
1 Form A | 2 Form A | 1 Form A / 1 Form B

Bistable single coil latching type



1 Form A | 2 Form A | 1 Form A / 1 Form B

Bistable dual coil latching type



1 Form A | 2 Form A | 1 Form A / 1 Form B