## Microminiature - polarized relays. Monostable and bistable

**MONOSTABLE BISTABLE**

**AZ850** microminiature - polarized relays • Monostable and bistable (latching) single coil and two coil versions available • **DC coils: up to 48 V DC - monostable, up to 24 V DC - bistable** • High sensitivity, 79 mW pick up • 2,54 mm pinning • Standard PC 0,1" grid terminal spacing • DIP terminal layout, fits 10 pin IC socket • Epoxy sealed for automatic wave soldering and cleaning • Meets FCC Part 68.302 1500 V lightning surge • UL, CUR-E43203

## Contacts

| | |
|---|---|
| Contact number & arrangement | 2C/O DPDT (2 Form C) Bifurcated crossbar contacts |
| Contact material | AgPd/Au ❶ |
| Resistive load | |
| • max. switching power | 30 W / 62,5 VA |
| • max. switching current | 1 A |
| • max. switching voltage | 220 V DC ❷             250 V AC |
| • rated load | UL: 1 A / 30 V DC      0,5 A / 125 V AC (resistive) |
| Rated current | 2 A |
| Resistance | ≤ 50 mΩ  initially |

## Coil (Polarized)

| | | |
|---|---|---|
| Rated voltage | DC | 3-5-6-9-12-24-48 V ❸ |
| Must release voltage | | ≥ 0,1 $U_n$         monostable |
| Power consumption | DC | 0,1...0,3 W |
| Power at pickup voltage (typical value) | | 79-142 mW    monostable |
| | | 56-84 mW     bistable 1 coil |
| | | 113-169 mW   bistable 2 coils |
| Max. continuous dissipation | | 0,875 W   20ºC |
| Temperature rise at $U_n$ coil | | 18 ºC |
| Temperature | | max. 105 ºC |

## General data

| | | |
|---|---|---|
| Electrical life: | • AC1 | $10^5$   0,5 A, 125 V AC |
| | • DC1 | $2 \times 10^5$  1 A, 30 V DC |
| Mechanical life | | $10^8$ |
| Operating time (typical value) at $U_n$ coil | | 2 ms    monostable |
| | | 2 ms    bistable |
| Release time (typical value) at $U_n$ coil | | 1 ms    monostable   (with no coil suppression) |
| | | 2 ms    bistable |
| Min. time of power supply impulse | | 2 ms    at $U_n$ coil bistable |
| Capacitance | | 0,4 pF  contact to contact |
| | | 0,2 pF  between contact sets |
| | | 0,9 pF  contact to coil |
| Dielectric strength insulation | | 1 250 Vrms    contact to coil |
| (at sea level for 1 min.) | | 1 000 Vrms    contact to contact |
| | | 1 000 Vrms    between contact sets |
| Insulation resistance   25 ºC, 500 V DC, 50% RH | | min. 1000 MΩ |
| Dimensions (L x W x H) | | 14 x 9 x 5 mm |
| Weight | | 1,5 g |
| Enclosure | | LCP |
| Terminals | | alloy Cu-Sn |
| Ambient temperature | | |
| • storing | | -40...+105 ºC |
| • operating (at $U_n$ coil) | | -40...+70 ºC |
| Cover protection category | | IP 67 |
| Shock resistance | | 50 g |
| Vibration resistance | | stable amplitude to 3,3 mm DA at 10...55 Hz |
| Solder bath temperature | | max. 250 ºC |
| Solvent temperature | | max. 80 ºC |
| Immersion Time / Soldering time | | max. 30 s / max. 5 s |

❶ Min. current / voltage: 10 μA / 10 mV
❷ At switching voltage above 30 V DC, contact Relpol S.A.
❸ Bistable relays: coil voltage up to 24 V

**relpol** S.A.

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**Notes:** All values at 20 °C • Relays should not operate when the limit values are exceeded • Relay adjustment may be affected by undue pressure on relay case • Coil polarity is fixed • For complete insulation between the ralay's magnetic fields, it is recommended that 5,0 mm space be provided between adjacent relays • Bistable realys to be energized by pulse supply voltage only • Specifications subject to change without notice.

**Coil data -** monostable version | | | | Table 1

| Relay code | Nominal Coil V DC | Max. Continuous V DC | Coil Resistance ±10% Ω | Must Operate V DC |
|---|---|---|---|---|
| AZ850-3 | 3,0 | 7,5 | 64,3 | 2,1 |
| AZ850-5 | 5,0 | 12,5 | 178,0 | 3,5 |
| AZ850-6 | 6,0 | 15,0 | 257,0 | 4,2 |
| AZ850-9 | 9,0 | 22,5 | 579,0 | 6,3 |
| AZ850-12 | 12,0 | 30,0 | 1 028,0 | 8,4 |
| AZ850-24 | 24,0 | 48,0 | 2 880,0 | 16,8 |
| AZ850-48 | 48,0 | 80,0 | 7 680,0 | 36,0 |

**Coil data -** 1-coil bistable (latching) version | | | | Table 2

| Relay code | Nominal Coil V DC | Max. Continuous V DC | Coil Resistance ±10% Ω | Must Operate V DC |
|---|---|---|---|---|
| AZ850P1-3 | 3,0 | 8,7 | 90 | 2,1 |
| AZ850P1-5 | 5,0 | 14,5 | 250 | 3,5 |
| AZ850P1-6 | 6,0 | 17,4 | 360 | 4,2 |
| AZ850P1-9 | 9,0 | 26,1 | 810 | 6,3 |
| AZ850P1-12 | 12,0 | 34,8 | 1 440 | 8,4 |
| AZ850P1-24 | 24,0 | 57,6 | 3 840 | 16,8 |

**Coil data -** 2-coil bistable (latching) version | | | | Table 3

| Relay code | Nominal Coil V DC | Max. Continuous V DC | Coil Resistance ±10% Ω | | Must Operate V DC |
|---|---|---|---|---|---|
| | | | coil I | coil II | |
| AZ850P2-3 | 3,0 | 6,0 | 45 | 45 | 2,1 |
| AZ850P2-5 | 5,0 | 10,0 | 125 | 125 | 3,5 |
| AZ850P2-6 | 6,0 | 12,0 | 180 | 180 | 4,2 |
| AZ850P2-9 | 9,0 | 18,0 | 405 | 405 | 6,3 |
| AZ850P2-12 | 12,0 | 24,0 | 720 | 720 | 8,4 |
| AZ850P2-24 | 24,0 | 40,0 | 1 920 | 1 920 | 16,8 |

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### Dimensions

14

0,25

5

4 x 2,54    10 x 0,51

9

10 x 3,3

10 x 0,25

7,63
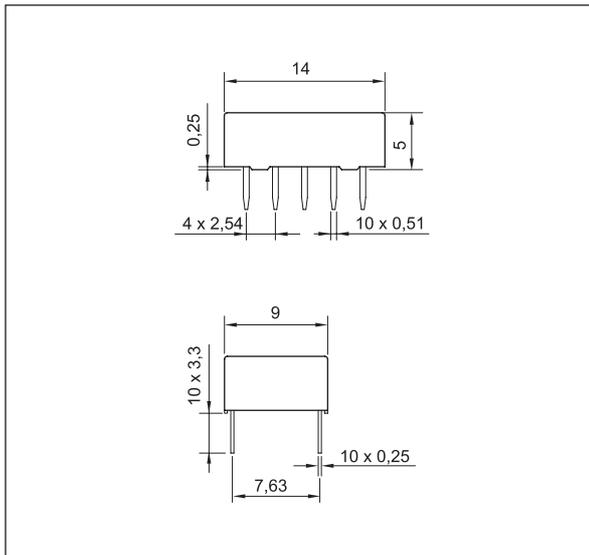
### Connections diagram (pin side view)

**MONOSTABLE RELAY**
**1-COIL BISTABLE RELAY**

relpol S.A.

1  2  3  4  5

(+)

Stripe on top of relay
indicates the position
of pins 1 & 10

(-)

10  9  8  7  6

**2-COIL BISTABLE RELAY**

1  2  3  4  5    Set Coil
(+)              (-)

(+)              (-)
10  9  8  7  6    Reset Coil
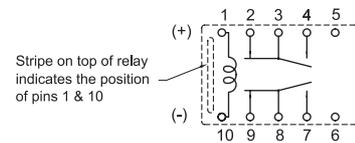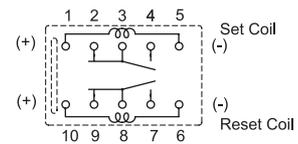
**Notes:**
Diagrams show the "reset" position before energized
with polarity as shown.

### Mounting holes layout

10 x Ø 0,85

0,69

7,62

1,9

4 x 2,54
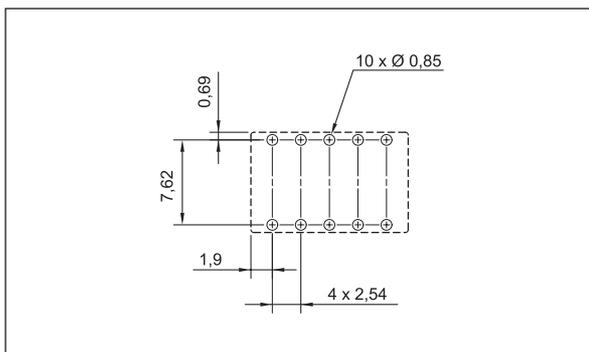
### Ordering codes

See **Coil data** - Tables 1, 2, 3