## MICROMINIATURE

## POLARIZED RELAY

## FEATURES

- Microminiature size: Height: . 197 inches ( 5 mm ); Length: .551 inches ( 14 mm ); Width: .354 inches ( 9 mm )
- High sensitivity, 79 mW pickup
- Monostable and bistable (latching) single coil and two coil versions available
- Meets FCC Part 68.3021500 V lightning surge
- DIP terminal layout, fits 10 pin IC socket

- Epoxy sealed
- UL, CUR file E43203


## CONTACTS

| Arrangement | DPDT (2 Form C) <br> Bifurcated crossbar contacts |
| :--- | :--- |
| Ratings | Resistive load: <br> Max. switched power: 30 W or 62.5 VA <br> Max. switched current: 1 A <br> Max. switched voltage: 220 VDC* or 250 VAC <br> Max. carry current: 2 A <br> * Note: If switching voltage is greater than 30 VDC, <br> special precautions must be taken. <br> Please contact the factory. |
| Rated Load <br> UL, CUR | 1 A at 30 VDC resistive <br> 0.5 A at 125 VAC resistive |
| Material | Silver palladium; gold clad |
| Resistance | $<50$ milliohms initially |

COIL (Polarized)

| Power <br> At Pickup Voltage <br> (typical) | Single side stable: <br> Bistable (latching) single coil: 56-84 mW |
| :--- | :--- |
| Max. Continuous |  |
| Bistable (latching) two coil: 113-169 mW |  |
| Dissipation |  |
| Temperature Rise | 875 mW at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ ambient |
| $18^{\circ} \mathrm{C}\left(32^{\circ} \mathrm{F}\right)$ at nominal coil voltage |  |
| Temperature | Max. $105^{\circ} \mathrm{C}\left(221^{\circ} \mathrm{F}\right)$ |

## NOTES

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

GENERAL DATA

| Life Expectancy Mechanical Electrical | Minimum operations $1 \times 108$ <br> $2 \times 10^{5}$ at $1 \mathrm{~A}, 30 \mathrm{VDC}$, resistive $1 \times 10^{5}$ at $0.5 \mathrm{~A}, 125 \mathrm{VAC}$, resistive |
| :---: | :---: |
| Operate Time (typical) | 2 ms at nominal coil voltage |
| Release Time (typical) | 1 ms at nominal coil voltage (with no coil suppression) |
| Set Time (bistable versions) | 2 ms at nominal coil voltage (typical) Recommended coil pulse: 20 ms |
| Reset Time (bistable versions) | 2 ms at nominal coil voltage (typical) Recommended coil pulse: 20 ms |
| Dropout | Greater than 10\% of nominal coil voltage |
| Capacitance | Contact to contact: 0.4 pF Contact set to contact set: 0.2 pF Contact to coil: 0.9 pF |
| Dielectric Strength (at sea level) | 1000 Vrms between contact sets <br> 1000 Vrms across contacts <br> 1000 Vrms contact to coil <br> Meets FCC part 68.302 1500 V lightning surge |
| Insulation Resistance | 1000 megohms min. at $25^{\circ} \mathrm{C}, 500 \mathrm{VDC}$, $50 \%$ RH |
| Ambient Temperature Operating Storage | At nominal coil voltage $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $70^{\circ} \mathrm{C}\left(158^{\circ} \mathrm{F}\right)$ $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $105^{\circ} \mathrm{C}\left(221^{\circ} \mathrm{F}\right)$ |
| Vibration | .130" (3.3 mm) DA at 10-55 Hz |
| Shock | 50 g |
| Enclosure | LCP |
| Terminals | Tinned copper alloy, P.C. |
| Max. Solder Temp. | $250^{\circ} \mathrm{C}\left(482^{\circ} \mathrm{F}\right)$ |
| Max. Solder Time | 5 seconds |
| Max. Solvent Temp. | $80^{\circ} \mathrm{C}$ ( $176{ }^{\circ} \mathrm{F}$ ) |
| Max. Immersion Time | 30 seconds |
| Weight | 1.5 grams |
| Packing unit in pcs | 25 per plastic tube / 1000 per carton box |

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RELAY ORDERING DATA

| COIL SPECIFICATIONS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Standard Coil: Monostable |  |  |  | ORDER NUMBER |
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm $\pm 10 \%$ |  |
| 3 | 2.25 | 7.5 | 64.3 | AZ850-3 |
| 4.5 | 3.4 | 11.25 | 145.2 | AZ850-4.5 |
| 5 | 3.75 | 12.5 | 178 | AZ850-5 |
| 6 | 4.5 | 15.0 | 257 | AZ850-6 |
| 9 | 6.75 | 22.5 | 579 | AZ850-9 |
| 12 | 9.0 | 30.0 | 1,028 | AZ850-12 |
| 24 | 18.0 | 48.0 | 2,880 | AZ850-24 |
| 48 | 36.0 | 80.0 | 7,680 | AZ850-48 * |

* Not UL Approved

| Bistable (Latching): $\mathbf{1}$ Coil |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Coil <br> VDC | Set-/Reset <br> VDC | Max. Continuous <br> VDC | Coil Resistance <br> Ohm $\pm 10 \%$ |  |  |  |
| 3 | 2.25 | 8.7 | 90 | AZ850P1-3 |  |  |
| 4.5 | 3.4 | 13.0 | 203 | AZ850P1-4.5 |  |  |
| 5 | 3.75 | 14.5 | 250 | AZ850P1-5 |  |  |
| 6 | 4.5 | 17.4 | 360 | AZ850P1-6 |  |  |
| 9 | 6.75 | 26.1 | 810 | AZ850P1-9 |  |  |
| 12 | 9.0 | 34.8 | 1,440 | AZ850P1-12 |  |  |
| 24 | 18.0 | 57.6 | 3,840 | AZ850P1-24 |  |  |


| Bistable (Latching): $\mathbf{2}$ Coils |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Nominal Coil <br> VDC | Set-/Reset <br> VDC | Max. Continuous <br> VDC | Coil Resistance <br> Ohm $\mathbf{1 0 \%}$ |  |
| 3 | 2.25 | 6.0 | 45 | AZ850P2-3 |
| 4.5 | 3.4 | 13.0 | 102 | AZ850P2-4.5 |
| 5 | 3.75 | 10.0 | 125 | AZ850P2-5 |
| 6 | 4.5 | 12.0 | 405 | AZ850P2-6 |
| 9 | 6.75 | 18.0 | 720 | AZ850P2-9 |
| 12 | 9.0 | 24.0 | 1,920 | AZ850P2-12 |
| 24 | 18.0 | 40.0 | AZ850P2-24 |  |

## MECHANICAL DATA



Dimensions in inches with metric equivalents in parentheses. Tolerance: $\pm 0.010^{\prime \prime}$

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