## MINIATURE

## POWER RELAY

## FEATURES

- 1 Form A or 1 Form C
- Standard and sensitive coils
- All plastics rated 94V-0
- Epoxy sealed version available
- Class B insulation system
- UL, CUR file E43203


## CONTACTS

| Arrangement | $\begin{array}{ll} \text { SPST NO } & \text { ( } 1 \text { Form A) } \\ \text { SPDT } & \text { (1 Form C) } \end{array}$ |
| :---: | :---: |
| Ratings | Resistive load: <br> 1 Form A <br> Max. switched power: 150 W or 1250 VA <br> Max. switched current: 5 A <br> Max. switched voltage: 150 VDC* or 300 VAC <br> 1 Form C <br> Max. switched power: 150 W N.O. or 1250 VA <br> Max. switched current: 5 A <br> Max. switched voltage: 150 VDC* or 300 VAC <br> *NOTE: If switching voltage is greater then 30 VDC, special precautions must be taken. Please contact the factory. |
| UL, CUR | 1 Form A <br> 5 A at 250 VAC, General Use, 10k cycles [1] <br> 3 A at 30 VDC, Resistive, 10k cycles [1] <br> 5 A at 250 VAC, General Use, 100k cycles [2][3] <br> 1 Form C <br> 5 A at 250 VAC, General Use, 10k cycles [1] N.O. <br> 3 A at 250 VAC, General Use, 10 k cycles [1] N.C. <br> 5 A at 30 VDC, Resistive, 10 k cycles [1] N.O. <br> 3 A at 30 VDC , Resistive, 10 k cycles [1] N.C. <br> 5 A at 250 VAC, General Use, 100 k cycles [2][3] N.O. <br> 5 A at 250 VAC, General Use, 100k cycles [2][3] N.C. <br> B300 Pilot Duty N.O. [1] <br> Silver cadmium oxide [1], silver tin oxide [2], silver nickel [3] |
| Material | Silver cadmium oxide, silver tin oxide or silver nickel Gold plating available |

## COIL

| Power |  |
| :--- | :--- |
| At Pickup Voltage | Standard coil: 176 mW |
| (typical) | Sensitive coil: 129 mW |
| Max Continuous | 1.5 W at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ |
| Dissipation |  |
| Temperature Rise | At nominal coil voltage: <br>  <br>  <br>  <br> Standard coil: $27^{\circ} \mathrm{C}\left(49^{\circ} \mathrm{F}\right)$ <br> Sensitive coil: $20^{\circ} \mathrm{C}\left(36^{\circ} \mathrm{F}\right)$ <br> Max. Temperature $130^{\circ} \mathrm{C}\left(266^{\circ} \mathrm{F}\right)$ |

## GENERAL DATA

| Life Expectancy Mechanical Electrical | Minimum operations $1 \times 10^{7}$ <br> $1 \times 10^{5}$ at 5 A 240 VAC Res. N.O. |
| :---: | :---: |
| Operate Time (typical) | 10 ms at nominal coil voltage |
| Release Time (typical) | 5 ms at nominal coil voltage (with no coil suppression) |
| Dielectric Strength (at sea level for 1 min .) | 2000 Vrms coil to contact 1000 Vrms between open contacts 4000 surge ( $2 \times 10$ us) coil to contact |
| Insulation Resistance | 1000 megohms min. at 500 VDC, $20^{\circ} \mathrm{C}, 50 \% \mathrm{RH}$ |
| Dropout | Greater than 5\% of nominal coil voltage |
| Ambient Temperature Operating Standard: Sensitive: <br> Storage | $\begin{aligned} & 40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right) \text { to } 95^{\circ} \mathrm{C}\left(203^{\circ} \mathrm{F}\right) \\ & 40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right) \text { to } 100^{\circ} \mathrm{C}\left(212^{\circ} \mathrm{F}\right) \\ & 40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right) \text { to } 130^{\circ} \mathrm{C}\left(266^{\circ} \mathrm{F}\right) \end{aligned}$ |
| Vibration | 0.062" DA at 10-55 Hz |
| Shock | 10 g |
| Enclosure | P.B.T. polyester |
| 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. | $80^{\circ} \mathrm{C}\left(176{ }^{\circ} \mathrm{F}\right)$ |
| Max. Immersion Time | 30 seconds |
| Weight | 8 grams |

## NOTES

1. All values at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$.
2. Relay may pull in with less than "Must Operate" value.
3. Specifications subject to change without notice.

## RELAY ORDERING DATA

| STANDARD COIL |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| COIL SPECIFICATIONS |  |  |  | ORDER NUMBER* |  |
| Nominal Coil VDC | Max. Continuous VDC | $\begin{gathered} \hline \text { Coil Resistance } \\ \pm 10 \% \end{gathered}$ | Must Operate VDC | 1 Form A | 1 Form C |
| 3 | 6.1 | 25 | 2.1 | AZ961-1A-3D | AZ961-1C-3D |
| 5 | 10.2 | 69 | 3.5 | AZ961-1A-5D | AZ961-1C-5D |
| 6 | 12.2 | 100 | 4.2 | AZ961-1A-6D | AZ961-1C-6D |
| 9 | 18.4 | 225 | 6.3 | AZ961-1A-9D | AZ961-1C-9D |
| 12 | 24.5 | 400 | 8.4 | AZ961-1A-12D | AZ961-1C-12D |
| 18 | 36.7 | 900 | 12.6 | AZ961-1A-18D | AZ961-1C-18D |
| 24 | 48.9 | 1600 | 16.8 | AZ961-1A-24D | AZ961-1C-24D |
| 48 | 97.9 | 6400 | 33.6 | AZ961-1A-48D | AZ961-1C-48D |
| SENSITIVE COIL |  |  |  |  |  |
| COIL SPECIFICATIONS |  |  |  | ORDER NUMBER* |  |
| $\begin{gathered} \text { Nominal Coil } \\ \text { VDC } \end{gathered}$ | Max. Continuous VDC | $\begin{gathered} \hline \text { Coil Resistance } \\ \pm 10 \% \end{gathered}$ | $\begin{gathered} \text { Must Operate } \\ \text { VDC } \end{gathered}$ | 1 Form A | 1 Form C |
| 3 | 7.3 | 36 | 2.1 | AZ961-1A-3DS | AZ961-1C-3DS |
| 5 | 12.2 | 100 | 3.5 | AZ961-1A-5DS | AZ961-1C-5DS |
| 6 | 14.7 | 145 | 4.2 | AZ961-1A-6DS | AZ961-1C-6DS |
| 9 | 22.0 | 325 | 6.3 | AZ961-1A-9DS | AZ961-1C-9DS |
| 12 | 29.3 | 575 | 8.4 | AZ961-1A-12DS | AZ961-1C-12DS |
| 18 | 44.2 | 1300 | 12.6 | AZ961-1A-18DS | AZ961-1C-18DS |
| 24 | 58.9 | 2310 | 16.8 | AZ961-1A-24DS | AZ961-1C-24DS |
| 48 | 117.0 | 9220 | 33.6 | AZ961-1A-48DS | AZ961-1C-48DS |

*Add suffix " $E$ " to "-1A" or "-1C" for silver tin oxide contacts. Add suffix "B" to "-1A" or "-1C" for silver nickel conctacts. Add suffix "E" for epoxy sealed version. Add suffix "A" for gold plated contacts.

## MECHANICAL DATA



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

