## ULTRA-SENSITIVE SUBMINIATURE RELAY

## FEATURES

- Extremely small footprint utilizing only 0.16 square inch of PCB area
- Thin vertical profile only 0.2 " wide
- Slim SIP package
- 1 Form A contact with up to 5 Amp switching capability
- High sensitivity, 58 mW pickup
- Dielectric strength 2500 Vrms contact to coil
- Epoxy sealed
- UL, CUR file E43203
- TÜV file R50018790


## CONTACTS

| Arrangement | SPST (1 Form A) <br> Single button contact or bifurcated |
| :---: | :---: |
| Ratings | Resistive load: <br> Max. switched power: 150 W or 1250 VA <br> Max. switched current: 5 A <br> Max. switched voltage: 150 * VDC or 250 VAC <br> *Note: If switching voltage is greater than 30 VDC, special precautions must be taken. <br> Please contact the factory. |
| Rated Load UL, CUR TÜV | 5 A at 30 VDC or 250 VAC <br> General Use, 100k cycles [1] <br> 5 A at 30 VDC or 250 VAC Resistive, 100k cycles [1] <br> 3 A at 30 VDC or 250 VAC General Use, 75 k cycles[2] <br> 3 A at 30 VDC or 250 VAC Resistive, 75 k cycles [2] <br> [1] Single button contacts <br> [2] Bifurcated contacts |
| Material | Silver nickel (single button or bifurcated contacts), or silver tin oxide (single button contacts), gold plating available |
| Resistance | < 50 milliohms initially |

## COIL

| Power <br> At Pickup Voltage <br> (typical) | $58 \mathrm{~mW}(5-18 \mathrm{~V}$ coils) |
| :--- | :--- |
| Max. Continuous | $88 \mathrm{~mW}(24 \mathrm{~V}$ coil $)$ |
| Dissipation | 1.3 W at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ ambient |
| Temperature Rise <br> at nominal coil voltage | $12^{\circ} \mathrm{C}\left(22^{\circ} \mathrm{F}\right) 5-18 \mathrm{~V}$ coils <br> $17^{\circ} \mathrm{C}\left(31^{\circ} \mathrm{F}\right) \quad 24 \mathrm{~V}$ coil |
| Temperature | Max. $130^{\circ} \mathrm{C}\left(266^{\circ} \mathrm{F}\right)$ Class B <br>  <br>  $\mathbf{M a x . ~} 155^{\circ} \mathrm{C}\left(311^{\circ} \mathrm{F}\right)$ Class F |



GENERAL DATA

| Life Expectancy Mechanical Electrical | Minimum operations 20 million operations $1 \times 10^{5}$ at $5 \mathrm{~A}, 30 \mathrm{VDC}$ or 250 VAC |
| :---: | :---: |
| Operate Time (typical) | 6 ms at nominal coil voltage |
| Release Time (typical) | 3 ms at nominal coil voltage (with no coil suppression) |
| Dielectric Strength (at sea level for 1 min .) | 1000 Vrms between open contacts 2500 Vrms contact to coil |
| Insulation Resistance | 1000 megohms min. at $20^{\circ} \mathrm{C}, 500$ VDC, $50 \% \mathrm{RH}$ |
| Dropout | Greater than $10 \%$ of nominal coil voltage |
| Ambient Temperature Operating Storage | At nominal coil voltage $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $85^{\circ} \mathrm{C}\left(185^{\circ} \mathrm{F}\right)$ $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $105^{\circ} \mathrm{C}\left(221^{\circ} \mathrm{F}\right)$ |
| Vibration | 0.062" (1.5 mm) DA at $10-55 \mathrm{~Hz}$ |
| Shock | 15 g |
| Enclosure | P.B.T. polyester |
| Terminals | Tinned copper alloy, P.C. |
| Max. Solder Temp. | $270^{\circ} \mathrm{C}\left(518^{\circ} \mathrm{F}\right)$ |
| Max. Solder Time | 5 seconds |
| Max. Solvent Temp. | $80^{\circ} \mathrm{C}\left(176{ }^{\circ} \mathrm{F}\right)$ |
| Max. Immersion Time | 30 seconds |
| Weight | 3 grams |
| Packing unit in pcs | 100 per plastic tube / 1000 per carton box |

## 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

| COIL SPECIFICATIONS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Nominal Coil <br> VDC | Must Operate <br> VDC | Max. Continuous <br> VDC | Coil Resistance <br> Ohm $\pm 10 \%$ | ORDER NUMBER $^{*}$ |
| 5 | 3.5 | 16.5 | 208 | AZ920-1A-5DE |
| 6 | 4.2 | 19.9 | 300 | AZ920-1A-6DE |
| 9 | 6.3 | 29.8 | 675 | AZ920-1A-9DE |
| 12 | 8.4 | 39.8 | 1,200 | AZ920-1A-12DE |
| 18 | 12.6 | 59.6 | 2,700 | AZ920-1A-18DE |
| 24 | 16.8 | 65.0 | 3,200 | AZ920-1A-24DE |

* Substitute " $-1 A B$ " in place of " $-1 A$ " for bifurcated silver nickel contacts. Substitute " $-1 A H$ " in place of " $-1 A$ for silver tin oxide contacts. Add suffix "A" for gold plated contacts. Add suffix "K" for . 3 inch terminal spacing. Add suffix "F" for Class F insulation.

MECHANICAL DATA


Dimensions in inches with metric equivalents in parentheses. Tolerance: $\pm .010^{\prime \prime}$

## ZETTLER electronics GmbH

