## 10 AMP SUBMINIATURE POWER RELAY

## FEATURES

- High sensitivity, 120 mW pickup
- Dielectric strength 5000 Vrms
- Isolation spacing greater than 10 mm
-10kV surge voltage
- Proof tracking index (PTI/CTI) 250
-10 Amp switching capability
- Epoxy sealed
- UL, CUR file E43203
- VDE file 40010953


## CONTACTS

| Arrangement | SPDT (1 Form C), DPDT (2 Form C) <br> SPST (1 Form A) |
| :---: | :---: |
| Ratings | Resistive load: <br> Max. switched power: 240 W or 2500 VA <br> (2 Form C: 150 W or 1250 VA ) <br> Max. switched current: 10 A <br> (2 Form C: 5 A) <br> Max. switched voltage: 240 VDC* or 440 VAC <br> * Note: If switching voltage is greater than 30 VDC , special precautions must be taken. Please contact the factory. |
| Rated Load UL, CUR | 10 A at 250 VAC resistive, 30 k cycles (1 Form C) 10 A at 30 VDC resistive, 30k cycles (1 Form C) B300, R300 Pilot Duty (1 Form C) $1 / 2 \mathrm{HP}$ at $240 \mathrm{VAC}, 30 \mathrm{k}$ cycles (N.O.) $1 / 3$ HP at 120 VAC, 30k cycles (N.O.) 5 A at 250 VAC resistive, 30 k cycles (2 Form C) |
| VDE | 8 A at 250 VAC resistive, 100 k cycles <br> (1 Form A, and 1 Form C) |
| Material | Silver tin oxide |

## COIL

| Power |  |
| :--- | :--- |
| At Pickup Voltage |  |
| (typical) | 120 mW (up to 24 VDC coil) (1 pole) <br>  <br>  <br>  <br> Max. Continuous <br> (1 pole) (48 VDC and 60 VDC coil) <br> $176 \mathrm{~mW}(2$ pole) <br> Dissipation <br> Temperature Rise |
| 1.2 W at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ ambient |  |
| $20^{\circ} \mathrm{C}\left(36^{\circ} \mathrm{F}\right)$ at nominal coil voltage |  |
| Temperature | Max. $105^{\circ} \mathrm{C}\left(221^{\circ} \mathrm{F}\right)$ |

## GENERAL DATA

| Life Expectancy Mechanical Electrical | Minimum operations $3 \times 10^{7}$ <br> $1 \times 105$ at 8 A 250 VAC res. |
| :---: | :---: |
| Operate Time (typical) | 7 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.) | 5000 Vrms coil to contact 2500 Vrms between contact sets 1500 Vrms between open contacts |
| Insulation Resistance | 1000 megohms min. at $20^{\circ} \mathrm{C}, 500 \mathrm{VDC}$, $50 \% \mathrm{RH}$ |
| 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 | Break Contact: 5 g at $10 \ldots 500 \mathrm{~Hz}$ <br> Make Contact: 20 g at $10 \ldots 500 \mathrm{~Hz}$ |
| Shock | 10 g |
| Enclosure | P.B.T. polyester, UL94 V-O |
| 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 | 8 grams |

## NOTES

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## RELAY ORDERING DATA

| COIL SPECIFICATIONS - 1A \& 1C |  |  |  | ORDER NUMBER* |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Coil <br> VDC | Must Operate <br> VDC | Max. Continuous <br> VDC | Coil Resistance <br> Ohm | 1 Form A <br> (SPST-NO) | 1 Form C <br> (SPDT) |
| 5 | 3.5 | 11.6 | $113 \pm 10 \%$ | AZ6962-1AE-5DE | AZ6962-1CE-5DE |
| 6 | 4.2 | 14.0 | $164 \pm 10 \%$ | AZ6962-1AE-6DE | AZ6962-1CE-6DE |
| 9 | 6.3 | 20.8 | $360 \pm 10 \%$ | AZ6962-1AE-9DE | AZ6962-1CE-9DE |
| 12 | 8.4 | 27.2 | $620 \pm 10 \%$ | AZ6962-1AE-12DE | AZ6962-1CE-12DE |
| 15 | 10.5 | 31.0 | $800 \pm 10 \%$ | AZ6962-1AE-15DE | AZ6962-1CE-15DE |
| 18 | 12.6 | 39.4 | $1,295 \pm 10 \%$ | AZ6962-1AE-18DE | AZ6962-1CE-18DE |
| 24 | 16.8 | 53.1 | $2,350 \pm 10 \%$ | AZ6962-1AE-24DE | AZ6962-1CE-24DE |
| 48 | 33.6 | 98.0 | $8,000 \pm 15 \%$ | AZ6962-1AE-48DE | AZ6962-1CE-48DE |
| 60 | 42.0 | 122.4 | $12,500 \pm 15 \%$ | AZ6962-1AE-60DE | AZ6962-1CE-60DE |


| COIL SPECIFICATIONS - 2C |  |  |  | ORDER NUMBER* |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm | 2 Form A (DPST-NO) | 2 Form C (DPDT) |
| 5 | 3.5 | 10.0 | $70 \pm 10 \%$ | AZ6962-2AE-5DE | AZ6962-2CE-5DE |
| 6 | 4.2 | 12.0 | $100 \pm 10 \%$ | AZ6962-2AE-6DE | AZ6962-2CE-6DE |
| 9 | 6.3 | 18.0 | $225 \pm 10 \%$ | AZ6962-2AE-9DE | AZ6962-2CE-9DE |
| 12 | 8.4 | 24.0 | $400 \pm 10 \%$ | AZ6962-2AE-12DE | AZ6962-2CE-12DE |
| 15 | 10.5 | 30.0 | $625 \pm 10 \%$ | AZ6962-2AE-15DE | AZ6962-2CE-15DE |
| 18 | 12.6 | 36.0 | $900 \pm 10 \%$ | AZ6962-2AE-18DE | AZ6962-2CE-18DE |
| 24 | 16.8 | 48.0 | $1600 \pm 10 \%$ | AZ6962-2AE-24DE | AZ6962-2CE-24DE |
| 48 | 33.6 | 96.0 | $6,400 \pm 15 \%$ | AZ6962-2AE-48DE | AZ6962-2CE-48DE |
| 60 | 42.0 | 120.0 | $10,000 \pm 15 \%$ | AZ6962-2AE-60DE | AZ6962-2CE-60DE |

* Add suffix "A" for gold plated contacts.

AZ6962

## MECHANICAL DATA

| FORM C VERSION <br> * Not used on 1 Form C relay | FORM A VERSION |
| :---: | :---: |
| PC BOARD LAYOUT <br> VIEWED TOWARD TERMINALS | CIRCUIT DIAGRAM <br> VIEWED TOWARD TERMINALS |

## Coil Temperature Rise



Maximum Switching Capacity
( 1 Form A, and 1 Form C)


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


[^0]:    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.
