## 10 AMP SUBMINIATURE POWER RELAY

## FEATURES

- Miniature size: Form A version: $0.63^{\prime \prime}(16 \mathrm{~mm})$ height, 1.10 " ( 30 mm ) length, 0.39 " ( 10 mm ) width
- High sensitivity, 100 mW pickup
- Dielectric strength 4000 Vrms
- Isolation spacing greater than 8 mm
- Approvals/Standards include: UL, VDE, IEC
- 10 Amp switching capability
- Epoxy sealed for automatic wave soldering and cleaning
- UL, CUR file E43203
- VDE file 40012571


## CONTACTS

| Arrangement | SPDT (1 Form C) <br> SPST (1 Form A), SPST (1 Form B) |
| :---: | :---: |
| Ratings | Resistive load: <br> Max. switched power: 300W or 2500VA <br> Max. switched current: 10A <br> Max. switched voltage: 240VDC* or 440VAC <br> *Note: If switching voltage is greater than 30VDC, special <br> precautions must be taken. Please contact the factory. |
| Rated Load <br> UL <br> VDE | 10A at 30VDC Resistive 10A at 250VAC General use <br> $1 / 4 \mathrm{HP}$ at 120VAC <br> $1 / 2 \mathrm{HP}$ at 250VAC <br> B300 Pilot duty <br> 1 Form A / 1 Form B (unsealed) <br> 10 A at 250 VAC , resistive, $85^{\circ} \mathrm{C}, 50 \mathrm{k}$ cycles <br> 1 Form C (unsealed) <br> 10 A at 250 VAC , resistive, $85^{\circ} \mathrm{C}, 50 \mathrm{k}$ cycles <br> 1 Form A/1 Form B/1 Form C (sealed) <br> 10 A at 250 VAC , resistive, $85^{\circ} \mathrm{C}, 10 \mathrm{k}$ cycles |
| Material | Silver tin oxide |
| Resistance | $<30$ milliohms initially (at 6V, 1A voltage drop method) |

## COIL

| Power <br> At Pickup Voltage <br> (typical) | 110 mW |
| :--- | :--- |
| Max. Continuous <br> Dissipation | 1.5 W at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ ambient |
| Temperature Rise | 1.2 W at $40^{\circ} \mathrm{C}\left(104^{\circ} \mathrm{F}\right)$ ambient |
| $20^{\circ} \mathrm{C}\left(36^{\circ} \mathrm{F}\right)$ at nominal coil voltage |  |
| Temperature | Max. $110^{\circ} \mathrm{C}\left(230^{\circ} \mathrm{F}\right)$ |

## GENERAL DATA

| Life Expectancy Mechanical Electrical | Minimumoperations <br> 10 million <br> 1 X 105 at $8 \mathrm{~A}, 250 \mathrm{VAC}$ Res. |
| :---: | :---: |
| 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 .) | 4000 Vrms coil to contact 1000 Vrms between open contacts |
| Insulation Resistance | 1000 megohms min. at $20^{\circ} \mathrm{C}, 500 \mathrm{VDC}$, $50 \%$ 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 $110^{\circ} \mathrm{C}\left(230^{\circ} \mathrm{F}\right)$ |
| Vibration | 0.062 " (1.5mm) DA at $10-55 \mathrm{~Hz}$ |
| Shock | 20 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 | 11 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.
4. It's recommended to remove vent nipple on sealed versions to expand life expectancy when switching higher loads.

## RELAY ORDERING DATA

| COIL SPECIFICATIONS |  |  |  |  |  |  |  |  |  | ORDER NUMBER |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Coil <br> VDC | Must Operate <br> VDC | Max Continuous <br> VDC | Coil Resistance <br> Ohms $\pm 10 \%$ | 1 Form A <br> (SPST-NO) |  |  |  |  |  |  |  |
| 5 | 3.5 | 12.0 | 110 | AZ696-1AE-5D | AZ696-1CE-5D |  |  |  |  |  |  |
| 6 | 4.2 | 14.5 | 160 | AZ696-1AE-6D | AZ696-1CE-6D |  |  |  |  |  |  |
| 9 | 6.3 | 22.0 | 360 | AZ696-1AE-9D | AZ696-1CE-9D |  |  |  |  |  |  |
| 12 | 8.4 | 29.5 | 660 | AZ696-1AE-12D | AZ696-1CE-12D |  |  |  |  |  |  |
| 18 | 12.6 | 44.0 | 1,500 | AZ696-1AE-18D | AZ696-1CE-18D |  |  |  |  |  |  |
| 24 | 16.8 | 54.0 | 2,200 | AZ696-1AE-24D | AZ696-1CE-24D |  |  |  |  |  |  |
| 48 | 33.6 | 102.0 | 8,000 | AZ696-1AE-48D | AZ696-1CE-48D |  |  |  |  |  |  |

* Substitute " 1 BE" in place of " 1 AE" for 1 Form B contact. Add Suffix "E" at the end of order number for sealed version. When suffix "E" is specified for Epoxy Seal, refer to AZ "Relay Technical Notes" on AZ website Product Resources. Consult factory for other PCB process conditions that may apply.

INTERNATIONAL APPROVALS

| Germany | VDE 0435/09.72 at 8 Amps |
| :--- | :--- |
|  | VDE 0631/12.83 at 8 Amps |
|  | VDE 0700/1/2.81 at 8 Amps |

MECHANICAL DATA


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

