## SUBMINIATURE POWER RELAY

## FEATURES

- Subminiature size for high density packaging
- Coil sensitivity to 116 mW
- Extremely low cost
- Coils to 24 VDC
- Epoxy sealed for automatic wave soldering
- 1 Amp, 3 Amp \& 5 Amp contacts
- Life expectancy to 10 million operations
- UL, CUR file E43203


## CONTACTS

| Arrangement | SPDT (1 Form C) |
| :---: | :---: |
| Ratings Light Duty | Resistive load: <br> Max. switched power: 30 W or 125 VA <br> Max. switched current: 1 A <br> Max. switched voltage: 150 VDC or 300 VAC <br> UL Rating: 1 A at 30 VDC <br> 1 A at 125 VAC |
| Medium Duty | Max. switched power: 90 W or 375 VA <br> Max. switched current: 3 A <br> Max. switched voltage: 150 VDC or 300 VAC <br> UL Rating: 3 A at 30 VDC <br> 3 A at 125 VAC |
| Heavy Duty | Max. switched power: 150 W or 625 VA <br> Max. switched current: 5 A <br> Max. switched voltage: 150 VDC or 300 VAC <br> UL Rating: 5 A at 30 VDC <br> 5 A at 125 VAC <br> 270 VA, 120 VAC Pilot Duty <br> N.O. 30k cycles, N.C. 6 k cycles |
| Material | Light and Medium Duty: Silver, gold plated Heavy Duty: Silver nickel gold plated |
| Resistance | < 100 milliohms initially |

## COIL

| Power |  |
| :--- | :--- |
| At Pickup Voltage | Standard Coil: 253 mW |
| (typical) | Sensitive coil: 116 mW |
| Max Continuous | 0.8 W at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ ambient |
| Dissipation | 0.6 W at $40^{\circ} \mathrm{C}\left(104^{\circ} \mathrm{F}\right)$ ambient |
| Temperature Rise | At nominal coil voltage: |
|  | Standard: $54^{\circ} \mathrm{C}\left(97^{\circ} \mathrm{F}\right)$ |
|  | Sensitive: $30^{\circ} \mathrm{C}\left(54^{\circ} \mathrm{F}\right)$ |
| Max. Temperature | $105^{\circ} \mathrm{C}\left(221^{\circ} \mathrm{F}\right)$ |



## GENERAL DATA

| Life Expectancy Mechanical Electrical | Minimum operations $1 \times 10^{7}$ <br> $1 \times 10^{5}$ at 3 A 120 VAC Res. |
| :---: | :---: |
| Operate Time (typical) | 5 ms at nominal coil voltage |
| Release Time (typical) | 1 ms at nominal coil voltage (with no coil suppressions) |
| Dielectric Strength (at sea level for 1 min.) | 1250 Vrms coil to contact 750 Vrms between open contacts |
| Insulation Resistance | 100 megohms min. at $20^{\circ} \mathrm{C}, 500$ VDC |
| Dropout | Greater than 10\% of nominal coil voltage |
| Ambient Temperature Operating <br> Storage | At nominal coil voltage <br> Standard: $-25^{\circ} \mathrm{C}\left(-13^{\circ} \mathrm{F}\right)$ to $55^{\circ} \mathrm{C}\left(131^{\circ} \mathrm{F}\right)$ <br> Sensitive: $-25^{\circ} \mathrm{C}\left(-13^{\circ} \mathrm{F}\right)$ to $75^{\circ} \mathrm{C}\left(167^{\circ} \mathrm{F}\right)$ <br> Both: $-25^{\circ} \mathrm{C}\left(-13^{\circ} \mathrm{F}\right)$ to $105^{\circ} \mathrm{C}\left(221^{\circ} \mathrm{F}\right)$ |
| Vibration | 0.062" DA at $10-55 \mathrm{~Hz}$ |
| Shock | 15 g |
| Enclosure | P.B.T. polyester |
| Terminals | Tinned copper alloy |
| 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 | 3.5 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. Other coil resistances and sensitivities available upon request.
4. Specifications subject to change without notice.

## AZ951/AZ952

## RELAY ORDERING DATA

| STANDARD RELAYS - Light Duty Type |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| COIL SPECIFICATIONS |  |  |  | ORDER NUMBER |  |
| Nominal Coil VDC | Max. Continuous VDC | $\begin{gathered} \hline \text { Coil Resistance } \\ \pm 10 \% \end{gathered}$ | Must Operate VDC |  |  |
| 5 | 6.7 | 56 | 3.75 | AZ951-1C-5DE | AZ952-1C-5DE |
| 6 | 8.0 | 80 | 4.50 | AZ951-1C-6DE | AZ952-1C-6DE |
| 12 | 16.0 | 320 | 9.00 | AZ951-1C-12DE | AZ952-1C-12DE |
| 24 | 32.0 | 1280 | 18.00 | AZ951-1C-24DE | AZ952-1C-24DE |

SENSITIVE RELAYS - Light Duty Type
COIL SPECIFICATIONS

| Nominal Coil <br> VDC | Max. Continuous <br> VDC | Coil Resistance <br> $\pm 10 \%$ | Must Operate <br> VDC |  | ORDER NUMBER |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 8.5 | 120 | 3.75 | AZ951-1C-5DSE | AZ952-1C-5DSE |  |
| 6 | 10.4 | 180 | 4.50 | AZ951-1C-6DSE | AZ952-1C-6DSE |  |
| 9 | 15.3 | 400 | 6.75 | AZ951-1C-9DSE | AZ952-1C-9DSE |  |
| 12 | 20.5 | 700 | 9.00 | AZ951-1C-12DSE | AZ952-1C-12DSE |  |
| 24 | 41.0 | 2800 | 18.00 | AZ951-1C-24DSE | AZ952-1C-24DSE |  |

STANDARD RELAYS — Medium Duty Type
COIL SPECIFICATIONS

| Nominal Coil <br> VDC |  |  |  |  |  |  | Max. Continuous <br> VDC | Coil Resistance <br> $\pm 10 \%$ | Must Operate <br> VDC | ORDER NUMBER |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 6.7 | 56 | 3.75 | AZ951-1CM-5DE | AZ952-1CM-5DE |  |  |  |  |  |  |
| 6 | 8.0 | 80 | 4.50 | AZ951-1CM-6DE | AZ952-1CM-6DE |  |  |  |  |  |  |
| 12 | 16.0 | 320 | 9.00 | AZ951-1CM-12DE | AZ952-1CM-12DE |  |  |  |  |  |  |
| 24 | 32.0 | 1280 | 18.00 | AZ951-1CM-24DE | AZ952-1CM-24DE |  |  |  |  |  |  |

## SENSITIVE RELAYS - Medium Duty Type

COIL SPECIFICATIONS

| Nominal Coil <br> VDC | Max. Continuous <br> VDC | Coil Resistance <br> $\pm 10 \%$ | Must Operate <br> VDC |  | ORDER NUMBER |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## STANDARD RELAYS — Heavy Duty Type

| COIL SPECIFICATIONS |  |  |  | ORDER NUMBER |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Coil VDC | Max. Continuous VDC | $\begin{gathered} \hline \text { Coil Resistance } \\ \pm 10 \% \end{gathered}$ | Must Operate VDC |  |  |
| 5 | 6.7 | 56 | 3.75 | AZ951-1CH-5DE | AZ952-1CH-5DE |
| 6 | 8.0 | 80 | 4.50 | AZ951-1CH-6DE | AZ952-1CH-6DE |
| 12 | 16.0 | 320 | 9.00 | AZ951-1CH-12DE | AZ952-1CH-12DE |
| 24 | 32.0 | 1280 | 18.00 | AZ951-1CH-24DE | AZ952-1CH-24DE |

MECHANICAL DATA

|  |  | AZ951 PC BOARD LAYOUT |
| :---: | :---: | :---: |
| AZ951 WIRING DIAGRAM <br> VIEWED TOWARD TERMINALS | AZ952 WIRING DIAGRAM <br> VIEWED TOWARD TERMINALS | AZ952 PC BOARD LAYOUT |

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

