## MINIATURE

## PC BOARD RELAY

## FEATURES

- Subminiature size
- High sensitivity, 110 mW pickup
- Coils to 48 VDC
- Hermetically sealed version available
- Epoxy sealed for automatic wave soldering
- Contacts rated at 3, 6 or 10 Amps
- Withstands 6 kV IEEE Lightning Surge (special order)
- Class B insulation $\left(130^{\circ} \mathrm{C}\right)$ standard
- Class F insulation $\left(155^{\circ} \mathrm{C}\right)$ version available
- UL, CUR file E44211
- VDE approved versions available (Class A Insulation only)


## CONTACTS

| Arrangement | SPDT (1 Form C) <br> SPST (1 Form A) 10 A version only |
| :--- | :--- |
| Ratings <br> Light Duty <br> Medium Duty | Resistive load: <br> Max. switched power: 100 W or 600 VA <br> Max. switched current: 3 A <br> Max. switched voltage: 150 VDC or 300 VAC <br> UL Rating: See chart on Page 3 <br> Max. switched power: 180 W or 1800 VA <br> Max. switched current: 6 A <br> Max. switched voltage: 150 VDC or 300 VAC <br> UL Rating: See chart on Page 3 <br> Max. switched power: 300 W or 2400 VA <br> Max. switched current: 10 A <br> Max. switched voltage: 150 VDC or 300 VAC <br> UL Rating: See chart on Page 3 |
| Material | Light duty: Silver <br> Medium duty: Silver nickel <br> Heavy duty: Silver cadmium oxide |
| Resistance | <100 milliohms initially |

COIL

| Power <br> At Pickup Voltage <br> (typical) | Standard coil: 210 mW <br>  <br>  <br> Max. Continuous <br> Sissipation |
| :--- | :--- |
|  | Sensitive coil: 140 mW |
|  | Heavy duty: 228 mW |
| (110 mW available) |  |
| Temperature Rise | Class B: $2.0 \mathrm{~W} 20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ ambient |
|  | $1.6 \mathrm{~W} 40^{\circ} \mathrm{C}\left(1044^{\circ} \mathrm{F}\right)$ ambient |
|  | Class F: $2.5 \mathrm{~W} 20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ ambient |
| $2.1 \mathrm{~W} 40^{\circ} \mathrm{C}\left(104^{\circ} \mathrm{F}\right)$ ambient |  |
|  | At nominal coil voltage |
|  | Standard coil: $38^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ |
|  | Sensitive coil: $28^{\circ} \mathrm{C}\left(50^{\circ} \mathrm{F}\right)$ |
| Temperature | Max. $105^{\circ} \mathrm{C}\left(221^{\circ} \mathrm{F}\right) \mathrm{Class} \mathrm{A}$ |
|  | Max. $130^{\circ} \mathrm{C}\left(266^{\circ} \mathrm{F}\right) \mathrm{Class} \mathrm{B}$ |
|  | Max. $155^{\circ} \mathrm{C}\left(311^{\circ} \mathrm{F}\right) \mathrm{Class} \mathrm{F}$ |

## GENERAL DATA

| Life Expectancy <br> Mechanical <br> Electrical Light Duty <br> Medium Duty <br> Heavy Duty | Minimum operations <br> 100 million operations <br> $3 \times 10^{5}$ at 3 A, 120 VAC <br> $1.8 \times 105$ at $6 \mathrm{~A}, 120 \mathrm{VAC}$ |
| :--- | :--- |
| $1 \times 105$ at $10 \mathrm{~A}, 120 \mathrm{VAC}$ |  |,

## 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. Unsealed relays should not be dip cleaned.
5. Specifications subject to change without notice.

## RELAY ORDERING DATA

| COIL SPECIFICATIONS |  |  |  | ORDER NUMBER* |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STANDARD RELAYS: 1 Form C (SPDT) |  |  |  | LIGHT DUTY (3 Amp contact) |  | MEDIUM DUTY (6 Amp contact) |  |
| Nominal Coil VDC | Max. VDC Continuous | $\begin{gathered} \text { Resistance } \\ \pm 10 \% \\ \hline \end{gathered}$ | Must Operate VDC | Unsealed | Epoxy Sealed | Unsealed | Epoxy Sealed |
| 5 | 10.6 | 56 | 3.25 | AZ8-1C-5D | AZ8-1C-5DE | AZ8-1CH-5D | AZ8-1CH-5DE |
| 6 | 12.6 | 80 | 3.90 | AZ8-1C-6D | AZ8-1C-6DE | AZ8-1CH-6D | AZ8-1CH-6DE |
| 9 | 19.0 | 180 | 5.85 | AZ8-1C-9D | AZ8-1C-9DE | AZ8-1CH-9D | AZ8-1CH-9DE |
| 12 | 25.0 | 320 | 7.80 | AZ8-1C-12D | AZ8-1C-12DE | AZ8-1CH-12D | AZ8-1CH-12DE |
| 18 | 37.8 | 720 | 11.7 | AZ8-1C-18D | AZ8-1C-18DE | AZ8-1CH-18D | AZ8-1CH-18DE |
| 24 | 50.0 | 1,280 | 15.60 | AZ8-1C-24D | AZ8-1C-24DE | AZ8-1CH-24D | AZ8-1CH-24DE |
| 48 | 87.0 | 3,800 | 31.20 | AZ8-1C-48D | AZ8-1C-48DE | AZ8-1CH-48D | AZ8-1CH-48DE |
| SENSITIVE RELAYS: 1 Form C (SPDT) |  |  |  | LIGHT DUTY (3 Amp contact) |  | MEDIUM DUTY (6 Amp contact) |  |
| Nominal Coil VDC | Max. VDC Continuous | $\begin{gathered} \text { Resistance } \\ \pm 10 \% \\ \hline \end{gathered}$ | Must Operate VDC | Unsealed | Epoxy Sealed | Unsealed | Epoxy Sealed |
| 5 | 12.6 | 80 | 3.25 | AZ8-1C-5DS | AZ8-1C-5DSE | AZ8-1CH-5DS | AZ8-1CH-5DSE |
| 6 | 14.8 | 110 | 3.90 | AZ8-1C-6DS | AZ8-1C-6DSE | AZ8-1CH-6DS | AZ8-1CH-6DSE |
| 9 | 22.4 | 250 | 5.85 | AZ8-1C-9DS | AZ8-1C-9DSE | AZ8-1CH-9DS | AZ8-1CH-9DSE |
| 12 | 30.0 | 440 | 7.80 | AZ8-1C-12DS | AZ8-1C-12DSE | AZ8-1CH-12DS | AZ8-1CH-12DSE |
| 24 | 60.0 | 1,780 | 15.60 | AZ8-1C-24DS | AZ8-1C-24DSE | AZ8-1CH-24DS | AZ8-1CH-24DSE |
| 48 | 120.0 | 7,120 | 31.20 | AZ8-1C-48DS | AZ8-1C-48DSE | AZ8-1CH-48DS | AZ8-1CH-48DSE |
| STANDARD RELAYS: 1 Form C (SPDT) |  |  |  | HEAVY DUTY (10 Amp contact) |  |  |  |
| Nominal Coil VDC | Max. VDC Continuous | $\begin{gathered} \text { Resistance } \\ \pm 10 \% \end{gathered}$ | Must Operate VDC | Unsealed |  | Epoxy Sealed |  |
| 5 | 10.6 | 56 | 4.0 | AZ8-1CT-5D |  | AZ8-1CT-5DE |  |
| 6 | 12.6 | 80 | 4.8 | AZ8-1CT-6D |  | AZ8-1CT-6DE |  |
| 9 | 19.0 | 180 | 7.2 | AZ8-1CT-9D |  | AZ8-1CT-9DE |  |
| 12 | 25.0 | 320 | 9.6 | AZ8-1CT-12D |  | AZ8-1CT-12DE |  |
| 24 | 50.0 | 1,280 | 19.2 | AZ8-1CT-24D |  | AZ8-1CT-24DE |  |
| 48 | 87.0 | 3,800 | 38.4 | AZ8-1CT-48D |  | AZ8-1CT-48DE |  |

*To indicate Class F version, add suffix "F". Other coil resistances and sensitivities available. Please contact the factory. Substitute "1AT" in place of " 1 CT " to indicate 1 Form A. For Hermetically sealed version, substitute "H" for "E".

## RELAY ORDERING DATA - VDE APPROVED VERSIONS

| COIL SPECIFICATIONS |  |  | ORDER NUMBER |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| STANDARD RELAYS: 1 Form C (SPDT) - VDE |  | MEDIUM DUTY |  |  |  |
| Nominal <br> Coil VDC | Max. VDC <br> Continuous | Resistance <br> $\pm 10 \%$ | Must Operate <br> VDC | Unsealed <br> 6 Amp | AZ8-1CH-5DA |

## UL, CUR RATINGS

| Light Duty | 2 A at 28 VDC or 300 VAC <br> $1 / 8 \mathrm{HP}$ at 120 VAC <br> $1 / 10 \mathrm{HP}$ at 120/240 VAC ( $100,000 \mathrm{cyc}$ ) <br> 1.2/0.6 A at 120/240 VAC, Pilot Duty 100,000 cyc <br> 3.0/1.5 A at 120/240 VAC General Use 100,000 cyc |
| :---: | :---: |
| Medium Duty | 6 A at 28 VDC or 300 VAC <br> $1 / 8 \mathrm{HP}$ at $120 / 240$ VAC ( $100,000 \mathrm{cyc}$ ) <br> 1.5/0.8 A at 120/240 VAC, Pilot Duty 100,000 cyc <br> 3.8/1.9 A at 120/240 VAC General Use 100,000 cyc |
| Heavy Duty | SPST: <br> 10 A at 24 VDC / 125 VAC Resistive <br> $1 / 4 \mathrm{HP}$ at $120 / 125$ VAC <br> $1 / 2 \mathrm{HP}$ at 250 VAC <br> 7 A at 277 VAC Resistive <br> SPDT: <br> 10 A at 250 VAC General Use <br> 7 A at 277 VAC Resistive <br> 6 A at 24 VDC Resistive <br> $1 / 4 \mathrm{HP}$ at 125 VAC |

## VDE RATINGS

| Sealed | 5 A at 250 VAC resistive, 10,000 cycles |
| :--- | :--- |
| Unsealed | 6 A at 250 VAC resistive, 50,000 cycles |
|  |  |

## MECHANICAL DATA



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

## Coil Temperature Rise



## Maximum Switching Capacity



MECHANICAL DATA


