12 AMP
MINIATURE PC BOARD RELAY

## FEATURES

- Extremely low cost
- High switching capacity - 12 Amps
- DC coils to 48 VDC
- Class B insulation for high temperature operation
- Class F insulation available
- Meets IEEE 5876 kV lightning surge
- UL, CUR file E43203
- VDE approved models available, please contact the factory


## CONTACTS

| Arrangement | SPST (1 Form A) <br> SPDT (1 Form C) |
| :---: | :---: |
| Ratings <br> Form A | Resistive load <br> Max. switched power: 196 W or 2770 VA <br> Max. switched current: 12 A <br> Max. switched voltage: 150 VDC* or 300 VAC <br> UL Rating: 10 A at 28 VDC, 100k cycles [1] [2] 10 A at 277 VAC, 100k cycles [1] <br> 10 A at 277 VAC, 25 k cycles [2] |
| Form C | Max. switched power: 196 W or 1939 VA <br> Max. switched current: 12 A <br> Max. switched voltage: 150 VDC* or 300 VAC <br> UL Rating: 7 A at 28 VDC, 100k cycles [1] [2] <br> 12 A at 125 VAC, 100 k cycles [1] <br> 12 A at 125 VAC, 100 k cycles N.O. [2] <br> 12 A at $125 \mathrm{VAC}, 50 \mathrm{k}$ cycles N.C. [2] <br> 7 A at $277 \mathrm{VAC}, 100 \mathrm{k}$ cycles [1] [2] <br> 4 FLA / 4 LRA at 240 VAC 100k cycles, <br> N.O. [2] <br> 2 FLA / 4 LAR at 240 VAC 100k cycles, <br> N.C. [2] <br> [1] Silver cadmium oxide <br> [2] Silver tin oxide <br> *NOTE: If switching voltage is greater than 30 VDC , special precautions must be taken. Please contact the factory. |
| Material | Silver cadmium oxide or silver tin oxide |
| Resistance | <100 milliohms initially <br> ( $24 \mathrm{~V}, 1$ A voltage drop method) |

COIL

| Power <br> At Pickup Voltage <br> (typical) | 230 mW |
| :--- | :--- |
| Max Continuous <br> Dissipation | Class B: 1.7 W at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ ambient <br> Class F: 2.2 W at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ ambient |
| Temperature Rise | $25^{\circ} \mathrm{C}\left(45^{\circ} \mathrm{F}\right)$ at nominal coil voltage |
| Temperature | Class B: Max. $130^{\circ} \mathrm{C}\left(266^{\circ} \mathrm{F}\right)$ <br> Class F: Max. $155^{\circ} \mathrm{C}\left(311^{\circ} \mathrm{F}\right)$ |

## GENERAL DATA

| Life Expectancy Mechanical Electrical | Minimum operations $1 \times 10^{7}$ <br> $1 \times 10^{5}$ at 10A 277 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 .) | 3000 Vrms contact to coil 1000 Vrms across contacts |
| Insulation Resistance | 100 megohms min. at $20^{\circ} \mathrm{C}, 500$ VDC, $50 \% \mathrm{RH}$ |
| Dropout | Greater than 10\% of nominal coil voltage |
| Ambient Temperature <br> Operating <br> Storage | At nominal coil voltage <br> Class B: $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $100^{\circ} \mathrm{C}\left(212^{\circ} \mathrm{F}\right)$ <br> Class F: $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $120^{\circ} \mathrm{C}\left(248^{\circ} \mathrm{F}\right)$ <br> Class B: $-55^{\circ} \mathrm{C}\left(-67^{\circ} \mathrm{F}\right)$ to $130^{\circ} \mathrm{C}\left(266^{\circ} \mathrm{F}\right)$ <br> Class F: $-55^{\circ} \mathrm{C}\left(-67^{\circ} \mathrm{F}\right)$ to $155^{\circ} \mathrm{C}\left(311^{\circ} \mathrm{F}\right)$ |
| Vibration | 0.062 " DA at 10-55Hz |
| Shock | 10 g |
| Enclosure | P.B.T. polyester |
| Terminals | Tinned copper alloy, P.C. |
| Max. Solder Temp. | $270^{\circ} \mathrm{C}$ ( $518^{\circ} \mathrm{F}$ ) |
| Max. Solder Time | 5 seconds |
| Max. Solvent Temp. | $80^{\circ} \mathrm{C}\left(176^{\circ} \mathrm{F}\right)$ |
| Max. Immersion Time | 30 seconds |
| Weight | 13 g |

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

RELAY ORDERING DATA

| STANDARD RELAYS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| COIL SPECIFICATIONS |  |  |  | ORDER NUMBER* |  |
| $\underset{\text { VDC }}{\text { Nominal Coil }}$ | $\begin{aligned} & \text { Must Operate } \\ & \text { VDC } \end{aligned}$ | $\begin{gathered} \hline \text { Max Continuous } \\ \text { VDC } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Coil Resistance } \\ \pm 10 \% \end{gathered}$ | $\begin{gathered} \text { Form A } \\ \text { (SPST-N.O.) } \end{gathered}$ | $\begin{aligned} & \hline \text { Form C } \\ & \text { (SPDT) } \end{aligned}$ |
| 3 | 2.4 | 6.5 | 25 | AZ942H-1A-3D | AZ942H-1C-3D |
| 5 | 4.0 | 11.0 | 70 | AZ942H-1A-5D | AZ942H-1C-5D |
| 6 | 4.8 | 13.0 | 100 | AZ942H-1A-6D | AZ942H-1C-6D |
| 9 | 7.2 | 20.0 | 225 | AZ942H-1A-9D | AZ942H-1C-9D |
| 12 | 9.6 | 26.0 | 400 | AZ942H-1A-12D | AZ942H-1C-12D |
| 24 | 19.2 | 52.0 | 1,600 | AZ942H-1A-24D | AZ942H-1C-24D |
| 48 | 38.4 | 104.0 | 6,200 | AZ942H-1A-48D | AZ942H-1C-48D |

*For epoxy sealed versions, add suffix "E". For silver tin oxide contacts add suffix "T". To indicate Class F version, add suffix "F".

IEEE STANDARD 587-1980 (ANSI/IEEE C62.41-1980) SURGE VOLTAGE WITHSTAND RATING

| Test | Rating | Description |
| :--- | :---: | :---: |
| $1.2 \times 50$ usec positive pulse | 6 kV | Contact to coil -5 pulses |
| $1.2 \times 50$ usec negative pulse | 6 kV | Contact to coil -5 pulses |
| 0.5 us 100 kHz ring wave | 6 kV | Contact to coil -5 waves |

## MECHANICAL DATA

(22.0)

[^0]
[^0]:    Dimensions in inches with metric equivalents in parentheses. Tolerance: $\pm 0.010^{\prime \prime}$

