## 12 A SPDT MINIATURE POWER RELAY

## FEATURES

- Dielectric strength 5000 Vrms
- Low cost
- Epoxy sealed versions available
- 12 Amp switching
- AC and DC coils
- Class B $\left(130^{\circ} \mathrm{C}\right)$ standard
- Class F ( $155^{\circ} \mathrm{C}$ ) versions available
- Isolation spacing greater than 10 mm
- UL, CUR file E44211, VDE 40006031


## CONTACTS

| Arrangement | $\begin{aligned} & \text { SPDT (1 Form C) } \\ & \text { SPST (1 Form A, } 1 \text { Form B) } \end{aligned}$ |
| :---: | :---: |
| Ratings | Resistive load: <br> Max. switched power: 360 W or 3324 VA <br> Max. switched current: 12 A <br> Max. switched voltage: $150^{*}$ VDC or 400 VAC <br> *Note: If switching voltage is greater than 30 VDC , special precautions must be taken. Please contact the factory. |
| Rated Load UL, CUR <br> VDE | 12 A at 277 VAC resistive, 50 k cycles (standard coils) [1] <br> 12 A at 277 VAC resistive, 100 k cycles (standard coils) [2] [3] <br> 10 A at 250 VAC resistive, 100 k cycles (sensitive coils) [1] <br> $1 / 2$ HP at 250 VAC (1 Form A) [1] <br> $1 / 2 \mathrm{HP}$ at 120 VAC [1] 5 mm spacing 1 pole $1 / 3$ HP at 125 VAC (1 Form A) [1] <br> B300 Pilot Duty [2] <br> R300 Pilot Duty [2] <br> 12 A at 250 VAC resistive, 30k cycles [1] and 20k cycles [2] <br> Contact factory for additional VDE ratings <br> [1] Silver cadmium oxide, [2] Silver tin oxide <br> [3] Silver nickel |
| Material | Silver cadmium oxide or silver tin oxide or silver nickel Gold plating available |
| Resistance | < 50 milliohms initially (using 6 V 1 A method) |

## COIL

| Power |  |
| :---: | :---: |
| At Pickup Voltage | 196 mW , (DC, standard) |
| (typical) | 141 mW , (DC, sensitive) |
|  | 0.43 VA (AC) |
| Max. Continuous |  |
| Dissipation | 1.7 W at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ ambient |
| Temperature Rise | $26^{\circ} \mathrm{C}\left(47^{\circ} \mathrm{F}\right)$ at nominal coil voltage <br> $17^{\circ} \mathrm{C}\left(31^{\circ} \mathrm{F}\right)$ at nominal coil voltage, sensitive coil |
| Max. Temperature | $130^{\circ} \mathrm{C}\left(266^{\circ} \mathrm{F}\right)$ Class B $155^{\circ} \mathrm{C}\left(311^{\circ} \mathrm{F}\right)$ Class F |

## GENERAL DATA

| Life Expectancy Mechanical Electrical | Minimum operations $1 \times 10^{7}$ <br> $1 \times 105$ at 12 A 240 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 1000 Vrms between open contacts |
| Insulation Resistance | 1000 megohms min. at $20^{\circ} \mathrm{C}$ <br> 500 VDC $50 \%$ RH |
| Dropout | Greater than $10 \%$ of nominal coil voltage (DC) Greater than $15 \%$ of nominal coil voltage (AC) |
| Ambient Temperature Operating <br> Storage | At nominal coil voltage <br> $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $100^{\circ} \mathrm{C}\left(212^{\circ} \mathrm{F}\right)$ <br> $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $105^{\circ} \mathrm{C}\left(221^{\circ} \mathrm{F}\right)$ sensitive coil <br> $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $130^{\circ} \mathrm{C}\left(266^{\circ} \mathrm{F}\right)$ Class B <br> $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $155^{\circ} \mathrm{C}\left(311^{\circ} \mathrm{F}\right)$ Class F |
| Vibration | 0.062" DA at 10-55 Hz |
| Shock | 10 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 | 14 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.

RELAY ORDERING DATA

| COIL SPECIFICATIONS - 12 A RATING - DC COIL | Coil <br> Nominal Coil <br> VDC <br> 5Must Operate <br> VDC |  | Max. Continuous <br> VDC | ORDER NUMBER* <br> Resistance $\pm 10 \%$ | Unsealed |
| :---: | :---: | :---: | :---: | :---: | :---: |

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.

| COIL SPECIFICATIONS - AC COIL |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Coil <br> VAC | Must Operate <br> VAC | Max. Continuous <br> VAC | Coil Current (mA) | Coil Resistance | Unsealed |  |
| 24 | 18.0 | 31.2 | 31.6 | $350 \pm 10 \%$ | AZ761-1C-24AF | AZ761-1C-24AEF |
| 115 | 86.3 | 149.5 | 6.6 | $8,100 \pm 15 \%$ | AZ761-1C-115AF | AZ761-1C-115AEF |
| 230 | 172.5 | 299.0 | 3.2 | $32,500 \pm 15 \%$ | AZ761-1C-230AF | AZ761-1C-230AEF |

Substitute " $1 A$ " or " $1 B$ " in place of " $1 C$ " for Form $A$ or $B$ respectively. Add suffix " $E$ " to " $1 A$ " or " $1 B$ " or " $1 C$ " for silver tin oxide contacts. Add suffix " $B$ " to " $1 A$ " or " 1 B " or " 1 C " for silver nickel contacts. Add suffix " $A$ " for gold plated contacts. *Add suffix "K" for 5 mm pin spacing version. Add suffix " $F$ " for $C l a s s ~ F ~ v e r s i o n ~(D C ~$ coils only).

HARDWARE ORDERING DATA

| DESCRIPTION | ORDER NUMBER | DESCRIPTION | ORDER NUMBER |
| :---: | :---: | :---: | :---: |
| Socket | ST482-U1 | Retainer | ST482-3 |

## MECHANICAL DATA



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

