## AZ9481F

## 16 AMP LOW PROFILE POWER RELAY

## FEATURES

- Quick connect and PC terminals
- High power switching (4000 VA)
- High sensitivity, 128 mW pickup
- Low profile (less than .55" height)
- SPST (1 Form A)
- UL Class F $\left(155^{\circ} \mathrm{C}\right)$ standard
- Epoxy sealed versions available
- DC coils up to 48 VDC
- UL file E43203, TÜV R50053055


## CONTACTS

| Arrangement | SPST (1 Form A) |
| :---: | :---: |
| Ratings <br> Standard <br> 1 Form A <br> High Capacity <br> 1 Form A | Resistive load: <br> Max. switched power: 300 W, 2500 VA <br> Max. switched current: 10 A <br> Max. switched voltage: 250 VAC / 30 VDC <br> Max. switch power: 300 W, 4000 VA <br> Max. switch current: 16 A <br> Max. switched voltage: 250 VAC / 30 VDC |
| Rated Load UL <br> TÜv | Standard 1 Form A <br> 10 A at 250 VAC Res. 100k cycles [1][2] <br> 10 A at 30 VDC Res. 100k cycles [1][2] <br> TV-5 [1][2] <br> High Capacity 1 Form A <br> 16 A at 125 VAC Res. 100k cycles [1][2] <br> 10 A at 30 VDC Res. 100k cycles [1][2] <br> TV-5 [1][2] <br> High Capacity 1 Form A <br> 16 A at 250 VAC Res. 100k cycles [1][2] <br> 8 A at 250 VAC cos phi $=0.4100 \mathrm{k}$ cycles [1][2] <br> 10 A at 30 VDC Res. 100k cycles [1][2] |
| Material | Silver cadmium oxide [1] or silver tin oxide [2] Gold plating available. |
| Resistance | < 100 milliohms initially <br> ( $6 \mathrm{~V}, 1 \mathrm{~A}$ voltage drop method) |

## GENERAL DATA

| Life Expectancy Mechanical Electrical | Minimum operations $1 \times 10^{7}$ <br> $1 \times 10510$ A 250 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 .) | 2500 Vrms coil to contact 1000 Vrms contact to contact |
| Insulation Resistance | 100 megohms min. at $20^{\circ} \mathrm{C}, 500$ 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 $155^{\circ} \mathrm{C}\left(333^{\circ} \mathrm{F}\right)$ |
| Vibration | 0.062 " DA at $10-55 \mathrm{~Hz}$ |
| Shock | 10 g operational, 100 g destructive |
| Enclosure | P.B.T. polyester |
| Terminals | Tinned copper alloy, P.C. with quick connect tabs <br> Note: Allow suitable slack on leads when wiring, and do not subject the terminals to excessive force. |
| 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 | 8 grams |

## COIL

| Power <br> At Pickup Voltage <br> (typical) | 128 mW |
| :--- | :--- |
| Max. Continuous <br> Dissipation | 1.34 W at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ |
| Temperature Rise | $13^{\circ} \mathrm{C}\left(23^{\circ} \mathrm{F}\right)$ at nominal coil voltage |
| Temperature | $\mathrm{Max} .155^{\circ} \mathrm{C}\left(333^{\circ} \mathrm{F}\right)$ |

## 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 SPST-NO (1 Form A) |  | ORDER NUMBER* |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Coil <br> VDC | Must Operate <br> VDC | Max. Continuous <br> VDC | Coil Resistance <br> $\pm 10 \%$ | AgCdO Contacts | AgSnO2 Contacts |
| 5 | 4 | 13.4 | 125 | AZ9481F-1A-5D | AZ9481F-1AE-5D |
| 6 | 4.8 | 16.1 | 180 | AZ9481F-1A-6D | AZ9481F-1AE-6D |
| 9 | 7.2 | 24.1 | 405 | AZ9481F-1A-9D | AZ9481F-1AE-9D |
| 12 | 9.6 | 32.2 | 720 | AZ9481F-1A-12D | AZ9481F-1AE-12D |
| 18 | 14.4 | 48.3 | 1620 | AZ9481F-1A-18D | AZ9481F-1AE-18D |
| 24 | 19.2 | 64.4 | 2880 | AZ9481F-1A-24D | AZ9481F-1AE-24D |
| 48 | 38.4 | 128.8 | 11520 | AZ9481F-1A-48D | AZ9481F-1AE-48D |

*Add suffix "E" for epoxy sealed version. Add suffix "A" for gold plated contacts.

| COIL SPECIFICATIONS SPST-NO (1 Form A) - HIGH CAPACITY |  |  | ORDER NUMBER* |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Coil <br> VDC | Must Operate <br> VDC | Max. Continuous <br> VDC | Coil Resistance <br> $\pm 10 \%$ | AgCdO Contacts | AgSnO2 Contacts |
| 5 | 4 | 13.4 | 125 | AZ9481F-1AT-5D | AZ9481F-1AET-5D |
| 6 | 4.8 | 16.1 | 180 | AZ9481F-1AT-6D | AZ9481F-1AET-6D |
| 9 | 7.2 | 24.1 | 405 | AZ9481F-1AT-9D | AZ9481F-1AET-9D |
| 12 | 9.6 | 32.2 | 720 | AZ9481F-1AT-12D | AZ9481F-1AET-12D |
| 18 | 14.4 | 48.3 | 1620 | AZ9481F-1AT-18D | AZ9481F-1AET-18D |
| 24 | 19.2 | 64.4 | 2880 | AZ9481F-1AT-24D | AZ9481F-1AET-24D |
| 48 | 38.4 | 128.8 | 11520 | AZ9481F-1AT-48D | AZ9481F-1AET-48D |

*Add suffix "E" for epoxy sealed version. Add suffix "A" for gold plated contacts.

## MECHANICAL DATA



Dimensions in inch with millimeters in brackets below. Tolerance: $\pm .010$ "

