# AZ942H

## 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 587 6 kV lightning surge
- UL, CUR file E44211
- VDE approved models available, please contact the factory

### CONTACTS

| | |
|---|---|
| **Arrangement** | SPST (1 Form A)<br>SPDT (1 Form C) |
| **Ratings** | Resistive load |
| **Form A** | 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]<br>10 A at 277 VAC, 100k cycles [1]<br>10 A at 277 VAC, 25k 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, 100k cycles [1]<br>12 A at 125 VAC, 100k cycles N.O. [2]<br>12 A at 125 VAC, 50k cycles N.C. [2]<br>7 A at 277 VAC, 100k cycles [1] [2]<br>4 FLA / 4 LRA at 240VAC 100k cycles, N.O. [2]<br>2 FLA / 4 LAR at 240 VAC 100k cycles, 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 V, 1 A voltage drop method) |

### COIL

| | |
|---|---|
| **Power** | |
| **At Pickup Voltage (typical)** | 230 mW |
| **Max Continuous Dissipation** | Class B: 1.7 W at 20°C (68°F) ambient<br>Class F: 2.2 W at 20°C (68°F) ambient |
| **Temperature Rise** | 25°C (45°F) at nominal coil voltage |
| **Temperature** | Class B: Max. 130°C (266°F)<br>Class F: Max. 155°C (311°F) |

### GENERAL DATA

| | |
|---|---|
| **Life Expectancy**<br>**Mechanical**<br>**Electrical** | Minimum operations<br>$1x10^7$<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<br>(with no coil suppression) |
| **Dielectric Strength (at sea level for 1 min.)** | 3000 Vrms contact to coil<br>1000 Vrms across contacts |
| **Insulation Resistance** | 100 megohms min. at 20°C, 500 VDC, 50% RH |
| **Dropout** | Greater than 10% of nominal coil voltage |
| **Ambient Temperature** | At nominal coil voltage |
| **Operating** | Class B: -40°C(-40°F) to 100°C(212°F)<br>Class F: -40°C(-40°F) to 120°C(248°F) |
| **Storage** | Class B: -55°C(-67°F) to 130°C(266°F)<br>Class F: -55°C(-67°F) to 155°C(311°F) |
| **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°C (518°F) |
| **Max. Solder Time** | 5 seconds |
| **Max. Solvent Temp.** | 80°C (176°F) |
| **Max. Immersion Time** | 30 seconds |
| **Weight** | 13 g |

### NOTES

1. All values at 20°C (68°F).
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.

AMERICAN ZETTLER, INC. www.azettler.com
[illegible]

5/15/05

# AZ942H

## RELAY ORDERING DATA

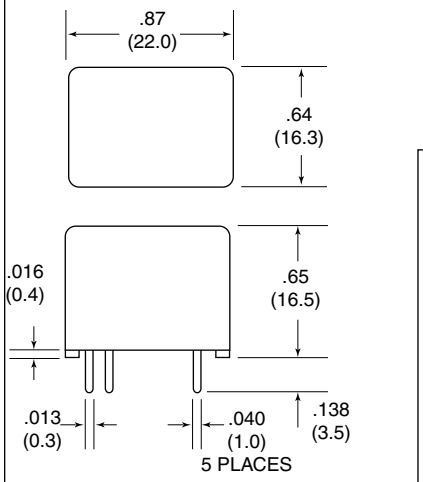
| STANDARD RELAYS | | | | | |
|---|---|---|---|---|---|
| COIL SPECIFICATIONS | | | | ORDER NUMBER* | |
| Nominal Coil VDC | Must Operate VDC | Max Continuous VDC | Coil Resistance ±10% | Form A (SPST-N.O.) | Form C (SPDT) |
| 3 | 2.4 | 6.5 | 25 | AZ942H–1A–3D | AZ942H–1C–3D |
| 5 | 4.0 | 11.0 | 70 | 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 x 50 usec positive pulse | 6 kV | Contact to coil – 5 pulses |
| 1.2 X 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 |

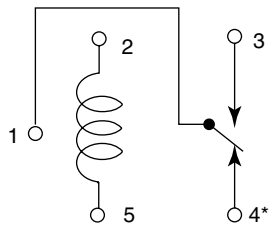
## MECHANICAL DATA




**TERMINAL DIMENSIONS**

| Terminal Number | Dimensions |
|---|---|
| 1<br>2, 3, 4, 5 | .015 X .040<br>.020 X .036 |

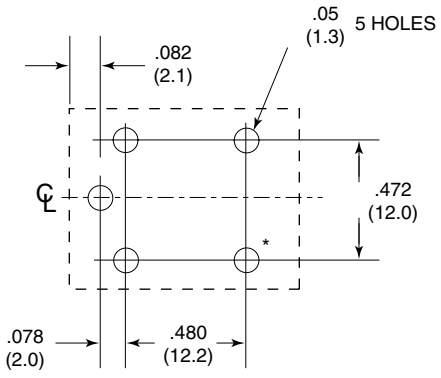
**WIRING DIAGRAM**




Viewed toward terminals

*Not used on Form A relay

**PC BOARD LAYOUT**




Viewed toward terminals

*Not used on Form A relay

Dimensions in inches with metric equivalents in parentheses. Tolerance: ±0.010"


AMERICAN ZETTLER, INC. www.azettler.com

[illegible] • ALISO VIEJO, CA [illegible] • PHONE: (949) [illegible] • FAX: (949) [illegible] • E-MAIL: [illegible]