

AZ942H

16 AMP MINIATURE PC BOARD RELAY

FEATURES

- 16 Amp switching capacity
- Proof tracking index (PTI/CTI) 250
- Clearance and creepage distance >2.5 mm
- Class F insulation (155 °C) standard
- Meets IEEE 587 6 kV lightning surge
- UL, CUR file E44211



CONTACTS

| | |
|--------------------------|--|
| Arrangement | SPST (1 Form A) SPDT (1 Form C) |
| Ratings | Resistive load: |
| 1 Form A | Max. switched power: 280 W or 4000 VA Max. switched current: 16 A Max. switched voltage: 28 VDC or 250 VAC |
| 1 Form C | Max. switched power: 196 W or 2500 VA Max. switched current: 12 A Max. switched voltage: 28 VDC or 250 VAC |
| Rated Load UL | 1 Form A 16 A at 250 VAC, resistive, 85°C, 50k cycles [2] 12 A at 250 VAC, resistive, 85°C, 100k cycles [2] 10 A at 277 VAC, resistive, 85°C, 25k cycles [2], [1] 10 A at 28 VDC, resistive, 85°C, 100k cycles [2], [1] 1/2 HP at 125 / 250 VAC [2] 1 Form C 16 A at 250 VAC, resistive, 85°C, 50k cycles (N.O.) [2] 12 A at 250 VAC, resistive, 85°C, 100k cycles (N.O.) [2] 12 A at 125 VAC, resistive, 85°C, 100k cycles (N.O.) [2], [1] 12 A at 125 VAC, resistive, 85°C, 100k cycles (N.C.) [2] 7 A at 277 VAC, resistive, 85°C, 100k cycles [2], [1] 7 A at 28 VDC, resistive, 85°C, 100k cycles [2], [1] 1/2 HP at 125 / 250 VAC [2] 4 FLA / 4 LRA at 240 VAC (N.O.) [2] 2 FLA / 4 LRA at 240 VAC (N.C.) [2] |
| Material | Silver cadmium oxide [1] or Silver tin oxide [2] |
| Resistance | < 100 milliohms initially |

NOTES

1. All values at 20°C (68°F)
2. Relay may pull in with less than "Must Operate" value.
3. Specifications subject to change without notice.

GENERAL DATA

| | |
|--|--|
| Life Expectancy Mechanical Electrical | Minimum operations 1 x 10 ⁷ 1 x 10 ⁵ at 10A 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.) | 2000 Vrms contact to coil 750 Vrms across contacts |
| Insulation Resistance | 100 megohms min. at 20°C, 500 VDC, 50% RH |
| Insulation (according to DIN VDE 0110, IEC 60664-1) | Overvoltage category: II Pollution degree: 2 Nominal voltage: 250 VAC |
| Dropout | Greater than 10% of nominal coil voltage |
| Ambient Temperature Operating | At nominal coil voltage -40°C(-40°F) to 85°C(185°F) |
| Storage | -40°C(-40°F) to 105°C(221°F) |
| Vibration | 0.062" (1.5 mm) 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 |
| Packing unit in pcs | 20 per plastic tube / 1000 per carton box |

COIL

| | |
|--|---|
| Power At Pickup Voltage (typical) | 230 mW |
| Max. Continuous Dissipation | 2.2 W at 20°C (68°F) ambient 26°C (47°F) at nominal coil voltage |
| Temperature Rise | |
| Temperature | Class F: Max. 155°C (311°F) |

AZ942H

RELAY ORDERING DATA

| STANDARD RELAYS | | | | ORDER NUMBER* | |
|---------------------|------------------|---------------------|--------------------------------|--------------------|----------------|
| COIL SPECIFICATIONS | | | | Form A (SPST-N.O.) | Form C (SPDT) |
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm $\pm 10\%$ | | |
| 3 | 2.4 | 3.9 | 25 | AZ942H-1A-3DT | AZ942H-1C-3DT |
| 5 | 4.0 | 6.5 | 70 | AZ942H-1A-5DT | AZ942H-1C-5DT |
| 6 | 4.8 | 7.8 | 100 | AZ942H-1A-6DT | AZ942H-1C-6DT |
| 9 | 7.2 | 11.7 | 225 | AZ942H-1A-9DT | AZ942H-1C-9DT |
| 12 | 9.6 | 15.6 | 400 | AZ942H-1A-12DT | AZ942H-1C-12DT |
| 18 | 14.4 | 23.4 | 900 | AZ942H-1A-18DT | AZ942H-1C-18DT |
| 24 | 19.2 | 31.2 | 1,600 | AZ942H-1A-24DT | AZ942H-1C-24DT |
| 48 | 38.4 | 62.4 | 6,200 | AZ942H-1A-48DT | AZ942H-1C-48DT |

For epoxy sealed version, substitute "DET" in place of "DT".

For silver cadmium oxide contacts remove suffix "T" (*contact factory for availability*).

Legacy part numbers may end with "F" indicating class F insulation

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

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

PC BOARD LAYOUT

VIEWED TOWARDS TERMINALS

WIRING DIAGRAMS

FORM A FORM C

VIEWED TOWARDS TERMINALS

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