

AZ942H

16 AMP MINIATURE PC BOARD RELAY

FEATURES

- Extremely low cost
- 16 Amp switching capacity
- Proof tracking index (PTI/CTI) 250
- Clearance and creepage distance >2.5 mm
- Class F insulation (155 °C) available
- Meets IEEE 587 6 kV lightning surge
- UL, CUR file E43203
- VDE file 40026048



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: 150 VDC* or 300 VAC
1 Form C	Max. switched power: 196 W or 1939 VA Max. switched current: 12 A Max. switched voltage: 150 VDC* or 300 VAC
	* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
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 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 4 FLA / 4 LRA at 240 VAC (N.O.) [2] 2 FLA / 4 LRA at 240 VAC (N.C.) [2]
VDE	1 Form A 10 A at 250 VAC, resistive, 85°C, 50k cycles [2] 1 Form C 10 A at 250 VAC, resistive, 85°C, 50k cycles (N.O.) [2] 7 A at 250 VAC, resistive, 85°C, 50k cycles [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.)	3000 Vrms contact to coil 1000 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 Storage	At nominal coil voltage Class B: -40°C(-40°F) to 70°C(158°F) Class F: -40°C(-40°F) to 85°C(185°F) -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	Class B: 1.7 W at 20°C (68°F) ambient Class F: 2.2 W at 20°C (68°F) ambient
Temperature Rise	26°C (47°F) at nominal coil voltage
Temperature	Class B: Max. 130°C (221°F) Class F: Max. 155°C (311°F)



AMERICAN ZETTLER, INC.

www.azettler.com

75 COLUMBIA • ALISO VIEJO, CA 92656 • PHONE: (949) 831-5000 • FAX: (949) 831-8642 • E-MAIL: SALES@AZETTLER.COM

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	6.5	25	AZ942H-1A-3DT	AZ942H-1C-3DT
5	4.0	11.0	70	AZ942H-1A-5DT	AZ942H-1C-5DT
6	4.8	13.0	100	AZ942H-1A-6DT	AZ942H-1C-6DT
9	7.2	20.0	225	AZ942H-1A-9DT	AZ942H-1C-9DT
12	9.6	26.0	400	AZ942H-1A-12DT	AZ942H-1C-12DT
18	14.4	39.0	900	AZ942H-1A-18DT	AZ942H-1C-18DT
24	19.2	52.0	1,600	AZ942H-1A-24DT	AZ942H-1C-24DT
48	38.4	104.0	6,200	AZ942H-1A-48DT	AZ942H-1C-48DT

* For epoxy sealed version, 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

Dimensions shown in inches with metric equivalents in parentheses:

- Main body width: .87 [22.0]
- Main body height: .65 [16.5]
- Terminal pin width: .64 [16.3]
- Terminal pin height: .138 [3.5]
- Terminal pin spacing: .016 [0.4]
- Terminal pin diameter: 4 x .020 [0.5]
- Terminal pin length: 4 x .036 [0.9]
- Terminal pin diameter (bottom): .040 [1.0]

PC BOARD LAYOUT

Dimensions shown in inches with metric equivalents in parentheses:

- Terminal pitch: .082 [2.1]
- Terminal diameter: .085 [2.15]
- Terminal offset: .236 [6.0]
- Terminal spacing: .472 [12.0]
- Terminal diameter (bottom): .078 [2.0]
- Terminal diameter (top): .480 [12.2]
- Terminal diameter (right): 5 x \varnothing .051 [\varnothing 1.3]

VIEWED TOWARDS TERMINALS

WIRING DIAGRAMS

FORM A

FORM C

VIEWED TOWARDS TERMINALS

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



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