AZ943

15 AMP MINIATURE PCB RELAY

FEATURES

- 15 Amp switching capability
- Available in SPST-N.O. and SPDT versions
- Flux tight and sealed versions available
- UL Class F insulation system (155°C) available
- RoHS compliant
- UL / CUR file E44211
- TÜV file R50161256
- VDE certificate 40047375

Illustration similar

CONTACTS

Arrangement	SPST (1 Form A), SPDT (1 Form C)
Ratings (max.) switched power switched current switched voltage	(resistive load) 280 W or 2770 VA 15 A (AC), 10 A (DC) 30 VDC or 277 VAC
Rated Loads UL/CUR	**SPST (1 Form A)** 15 A at 125 VAC, gen. use, 6k cycles, 70°C 12 A at 125 VAC, gen. use, 100k cycles, 85°C 10 A at 277 VAC, gen. use, 100k cycles, 70°C 10 A at 277 VAC, gen. use, 100k cycles, 85°C* 10 A at 277 VAC, gen. use, 20k cycles, 85°C 10 A at 277 VAC, resistive, 100k cycles, 105°C* 12 A at 120 VAC, resistive, 6k cycles, 70°C TV-5 at 120 VAC, 70°C 500 W at 120 VAC, Tungsten, 70°C 9.8 FLA, ½HP at 125 VAC, 6k cycles, 70°C 125 VA at 120 VAC, Pilot Duty, 100k cycles, 70°C 10 A at 28 VDC, resistive, 100k cycles, 70°C **SPDT (1 Form C)** 10 A at 277 VAC, resistive, 100k cycles, 105°C, (NO)* 7 A at 277 VAC, resistive, 50k cycles, 105°C, (NC)* 5 A at 277 VAC, resistive, 100k cycles, 105°C, (NC)* 10 A at 120 VAC, resistive, 100k cycles, 70°C, (NO) 10 A at 120 VAC, resistive, 6k cycles, 70°C, (NC) 10 A at 277 VAC, gen. use, 100k cycles, 70°C, (NO/NC) 10 A at 277 VAC, gen. use, 20k cycles, 85°C, (NO) 8 A at 125 VAC, gen. use, 100k cycles, 85°C, (NO)* 9.8 FLA,58.8 LRA, ½HP at 125 VAC, 6k cyc., 70°C (NO) 10 A at 28 VDC, resistive, 100k cycles, 70°C (NO/NC)
TÜV	12 A at 125 VAC, resistive, 85°C, 10k cycles 10 A at 277 VAC, resistive, 85°C, 10k cycles 5 A at 250 VAC, resistive, 85°C, 25k cycles **SPST (1 Form A) only** 10 A at 277 VAC, resistive, 85°C, 25k cycles
VDE	10 A at 250 VAC, resistive, 70°C, 50k cycles (NO) 12 A at 125 VAC, resistive, 25°C, 50k cycles (NO) **SPDT (1 Form C) only** 5 A at 250 VAC, resisitve, 70°C, 50k cycles, (NC) Notes: * tested with open vent hole
Contact material	$AgSnO_2$ (silver tin oxide), gold plating available
Initial resistance max. typ.	(1A / 6V, voltage drop method) 100 mΩ < 15 mΩ

GENERAL DATA

Life Expectancy mechanical electrical	(minimum operations) 1 x 10^7 1 x 10^5 at 10 A, 277 VAC, resistive
Operate Time	10 ms (max.) at nominal coil voltage
Release Time	5 ms (max.) at nominal coil voltage, without coil suppression
Dielectric Strength	(at sea level for 1 min.) 1500 V_{RMS} coil to contact 750 V_{RMS} between open contacts
Insulation Resistance	100 MΩ (min.) at 20°C, 500 VDC, 50% RH
Temperature Range operating	(at nominal coil voltage) -40°C (-40°F) to 70°C (158°F) class B -40°C (-40°F) to 105°C (221°F) class F
Vibration resistance	0.062" (1.5 mm) DA at 10–55 Hz
Shock resistance	10 g
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy, P. C.
Soldering max. temperature max. time	 270 °C (518°F) 5 seconds
Cleaning max. solvent temp. max. immersion time	(sealed versions only) 80°C (176°F) 30 seconds
Dimensions length width height	 19.0 mm (0.748”) 15.3 mm (0.600”) 15.7 mm (0.615”)
Weight	10 grams (approx.)
Packing unit in pcs	20 per plastic tube / 1000 per carton box
Compliance	UL 508, IEC 61810-1, EC 60335-1 (GWT), RoHS, REACH

COIL

Nominal coil DC voltages	5, 6, 9, 12, 18, 24, 36, 48
Dropout voltage	≥ 10% of nominal coil voltage
Coil power nominal at pickup voltage max. cont. dissipation	 360 mW 203 mW 1.8 W at 20°C (68°F) class B 2.4 W at 20°C (68°F) class F
Temperature Rise	32 K (58°F) at nominal coil voltage
Max. temperature	130°C (266°F) class B 155°C (311°F) class F

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COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
5	3.8	11.2	70
6	4.5	13.4	100
9	6.8	20.1	225
12	9.0	26.8	400
18	13.5	40.2	900
24	18.0	53.4	1600
36	27.0	80.1	3600
48	36.0	107.3	6400

ORDERING DATA

AZ943-□□H-□□D□□□□□□

Material option
nil: standard version
GW: IEC 60335-1 (GWT) approved (no TÜV approval)

Thermal class option
nil: Class B coil wire
F: Class F coil wire

Plating option
nil: non plated
G: gold plating (no TÜV/VDE approval)

Sealing option
nil: non sealed, flux proof
E: sealed version, wash tight

Nominal coil voltage
see coil voltage specifications table

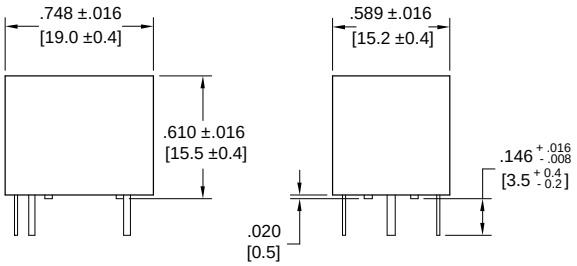
Contact arrangement
1A: 1 Form A (SPST-N.O.)
1C: 1 Form C (SPDT)

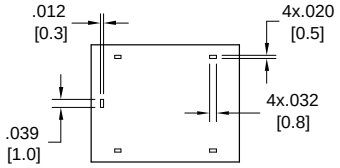
Example ordering data

AZ943-1AH-9D	1 Form A, 9 VDC nominal coil voltage, non sealed, class B coil wire
AZ943-1CH-12DEF	1 Form C, 12 VDC nominal coil voltage, sealed version, class F coil wire
AZ943-1CH-24DFGW	1 Form C, 24 VDC nominal coil voltage, non sealed, class F coil wire, EN 60335-1 (GWT) approved

MECHANICAL DATA

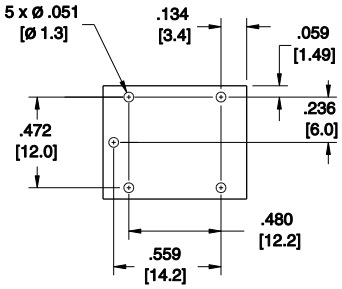
Dimensions in inches with metric equivalents in parentheses.
Note: Pin dimensions given without tin dipping and for reference only.





PC BOARD LAYOUT

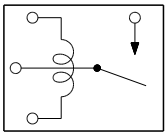
Recommendation for PC board layout.
Dimensions in inches with metric equivalents in parentheses.
Viewed towards terminals.



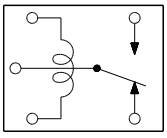
WIRING DIAGRAMS

Viewed towards terminals.

1 Form A



1 Form C



NOTES

1. All values at reference temperature of 23°C (73°F) unless stated otherwise.
2. Relay may pull in with less than “Must Operate” value.
3. “Max. Continuous Voltage” is the maximum voltage the coil can endure for a short period of time.
4. Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.
5. Relay adjustment may be affected if excessive shock is applied to the relay.
6. Relay adjustment may be affected if undue pressure is exerted on the relay case.
7. Unsealed relays should not be dip cleaned.
8. Specifications subject to change without notice.

DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from the regional ZETTLER relay websites. The specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.

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