

## 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

<b>Arrangement</b>	SPST-N.O. (1 Form A), SPDT (1 Form C)
<b>Ratings (max.)</b> switched power switched current switched voltage	(resistive load) 300 W or 2770 VA 15 A AC, 10 A DC 30 VDC* or 300 VAC  * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Rated Loads</b> UL/CUR	10 A at 277 VAC, gen. use, 70°C, 100k cycles 10 A at 30 VDC, resistive, 70°C, (N.O.) 1.5 HP at 125 VAC, 70°C, 6k cycles, (N.O.) <b>1 Form A only</b> 15 A at 125 VAC, gen. use, 70°C, 6k cycles 12 A at 120 VAC, resistive, 70°C, 6k cycles 8 A at 125 VAC, tungsten, 70°C <b>1 Form C only</b> 10 A at 120 VAC, res., 70°C, 100k cycles, (N.O.) 10 A at 120 VAC, res., 70°C, 6k cycles, (N.C.) 7 A at 30 VDC, resistive, 70°C, (N.C.)
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 <b>1 Form A only</b> 10 A at 277 VAC, resistive, 85°C, 25k cycles
VDE	10 A at 250 VAC, resistive, 70°C, 50k cycles (N.O.) 12 A at 125 VAC, resistive, 25°C, 50k cycles (N.O.) <b>1 Form C only</b> 5 A at 250 VAC, res., 70°C, 50k cycles, (N.C.)
<b>Contact material</b>	AgSnO <sub>2</sub> (silver tin oxide)
<b>Initial resistance</b>	< 100 mΩ (1 A / 24 V - voltage drop method)

### COIL

<b>Nominal coil DC voltages</b>	5, 6, 9, 12, 18, 24, 36, 48
<b>Dropout voltage</b>	≥ 10% of nominal coil voltage
<b>Coil power</b> 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
<b>Temperature Rise</b>	32 K (58°F) at nominal coil voltage
<b>Max. temperature</b>	130°C (266°F) class B 155°C (311°F) class F

### GENERAL DATA

<b>Life Expectancy</b> mechanical electrical	(minimum operations) 1 x 10 <sup>6</sup> 1 x 10 <sup>5</sup> at 10 A, 277 VAC, resistive
<b>Operate Time</b> <b>Release Time</b>	10 ms (max.) at nominal coil voltage 5 ms (max.) at nominal coil voltage, without coil suppression
<b>Dielectric Strength</b>	(at sea level for 1 min.) 1500 V <sub>RMS</sub> coil to contact 1000 V <sub>RMS</sub> between open contacts
<b>Insulation Resistance</b>	100 MΩ (min.) at 20°C, 500 VDC, 50% RH
<b>Temperature Range</b> operating	(at nominal coil voltage) -40°C (-40°F) to 70°C (158°F) class B -40°C (-40°F) to 85°C (185°F) class F
<b>Vibration resistance</b> <b>Shock resistance</b>	0.062" (1.5 mm) DA at 10–55 Hz 10 g
<b>Enclosure</b> <b>Terminals</b>	P.B.T. polyester Tinned copper alloy, P. C.
<b>Soldering</b> max. temperature max. time	270 °C (518°F) 5 seconds
<b>Cleaning</b> max. solvent temp. max. immersion time	80°C (176°F) 30 seconds
<b>Dimensions</b> length width height	19.0 mm (0.748") 15.3 mm (0.600") 15.7 mm (0.615")
<b>Weight</b>	10 grams (approx.)
<b>Packing unit in pcs</b>	20 per plastic tube / 1000 per carton box
<b>Compliance</b>	UL 508, IEC 61810-1, IEC 60335-1 (GWT), RoHS, REACH

# AZ943

## COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm $\pm 10\%$
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

**Coil wire**  
 nil: Class B coil wire  
 F: Class F coil wire

**Sealing option**  
 nil: non sealed, flux proof  
 E: sealed version

**Nominal coil voltage**  
 see coil voltage specifications table

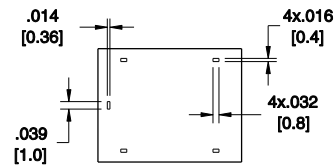
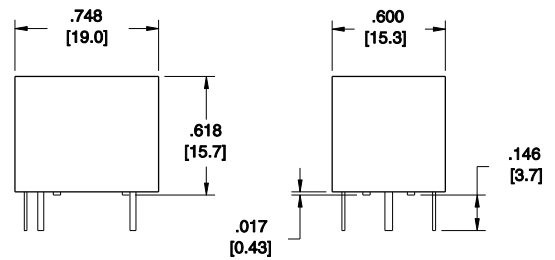
**Contact arrangement**  
 1A: 1 Form A (SPST-N.O.)  
 1C: 1 Form C (SPDT)

### 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

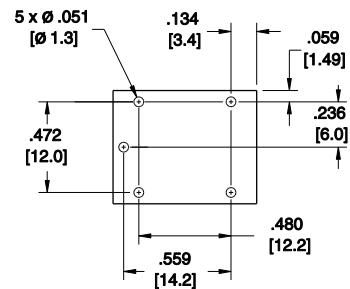
## MECHANICAL DATA

Dimensions in inches with metric equivalents in parentheses.  
 Tolerance:  $\pm 0.010"$



## PC BOARD LAYOUT

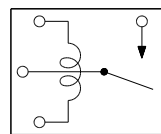
Recommendation for PC board layout.  
 Dimensions in inches with metric equivalents in parentheses.  
 Viewed towards terminals.



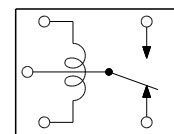
## WIRING DIAGRAMS

Viewed towards terminals.

1 Form A



1 Form C



## NOTES

- Specifications subject to change without notice.
- All values at 20°C (68°F) unless otherwise stated.
- Relay may pull in with less than "Must Operate" value.
- Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.
- Unsealed relays should not be dip cleaned.

## DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from [www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf](http://www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf)

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.

**ZETTLER electronics GmbH**

- A ZETTLER GROUP Company

Junkersstr. 3, D-82178 Puchheim, Germany

phone: +49 89 800 97-0  
 fax: +49 89 800 97-200

office@ZETTLERelectronics.com  
 www.ZETTLERelectronics.com

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