

# AZ9422

## 16 AMP MINIATURE POWER RELAY

### FEATURES

- 20 Amp switching capability
- TV-8 capability
- 2kV dielectric strength
- Flux tight and sealed versions available
- Class F insulation system
- UL E469841
- TÜV R504894950001
- CQC 20002278184



### 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) 480W or 4700VA 16 A, 20 A 30 VDC* or 277 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	<b>1 Form A / 1 Form C (NO):</b> 16 A at 277 VAC, resistive, 100k cycles, 85°C 1HP at 250 VAC, 30k cycles, 85°C 20 A at 125 VAC, resistive, 100k cycles, 85°C TV-8 at 125 VAC, 25k cycles, 85°C  <b>1 Form C (NC):</b> 7A 277VAC Res. 100k cycles, 85°C
<b>TÜV</b>	<b>NO:</b> 16 A at 277 VAC, resistive, 100k cycles, 85°C <b>NC:</b> 7 A at 277 VAC, resistive, 100k cycles, 85°C
<b>CQC</b>	<b>NO:</b> 16 A at 277 VAC, resistive, 50k cycles, 85°C <b>NC:</b> 7 A at 277 VAC, resistive, 50k cycles, 85°C  Note: Approvals only with the vent hole open for RT III (wash tight) types.
<b>Contact material</b>	AgSnO <sub>2</sub> (silver tin oxide)
<b>Contact resistance</b> initial	≤100 mΩ initially (6V, 1A voltage drop method)

### COIL

<b>Nominal coil DC voltages</b>	3, 5, 6, 9, 12, 15, 18, 24, 36, 48
<b>Dropout voltage</b>	> 10% of nominal coil voltage
<b>Coil power</b> nominal at pickup voltage	(at 23°C) 360mW 207mW
<b>Temperature Rise</b>	42K (107.6°F) at nom. coil voltage
<b>Max. temperature</b>	Class F insulation - 155°C (311°F)

### GENERAL DATA

<b>Life Expectancy</b> mechanical electrical	(minimum operations) 1 x 10 <sup>7</sup> See UL/TÜV/CQC Rated Loads
<b>Operate Time</b>	10 ms (max.) at nominal coil voltage
<b>Release Time</b>	5 ms (max.) at nominal coil voltage, without coil suppression
<b>Dielectric Strength</b> coil to contacts	(at sea level for 1 min.) 2000 V <sub>RMS</sub>
<b>Insulation Resistance</b>	100 MΩ (min.) at 23°C, 500 VDC, 50% RH
<b>Insulation</b> coil to contacts	Basic insulation (rated voltage: 250 VAC, pollution degree: 2, overvoltage category: II)
<b>Temperature Range</b> operating storage	(at nominal coil voltage) -40°C (-40°F) to 85°C (185°F) -40°C (-40°F) to 130°C (266°F)
<b>Vibration resistance</b>	0.062" (1.5 mm) DA at 10–55 Hz
<b>Shock</b>	10 g
<b>Enclosure</b> protection category material group flammability	P.B.T. polyester RT II, flux proof; RT III, wash tight IIla UL94 V-0
<b>Terminals</b>	Tinned copper alloy, P. C.
<b>Soldering</b> max. temperature max. time	260 °C 5 s
<b>Cleaning</b> max. solvent temp. max. immersion time	(RT III wash tight types) 80°C (176°F) 30 seconds
<b>Dimensions</b> length width height	22.0 mm (0.866") 16.0 mm (0.630") 16.6 mm (0.655")
<b>Weight</b>	9.5 grams (approx.)
<b>Compliance</b>	UL 508, IEC 61810-1, RoHS, REACH
<b>Packing unit (pcs)</b>	100 per box / 1000 per carton box

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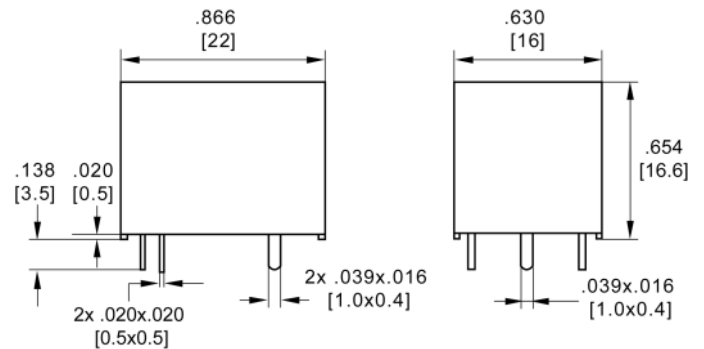
## COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Max. Cont. VDC	Resistance Ohm $\pm$ 10%
3	2.25	3.3	25
5	3.8	5.5	70
6	4.5	6.6	100
9	6.8	9.9	225
12	9.0	13.2	400
15	11.25	16.5	625
18	13.5	19.8	900
24	18.0	26.4	1600
36	27.0	39.6	3600
48	36.0	52.8	6400

Note: All values at 23°C (73°F), upright position, terminals downward.

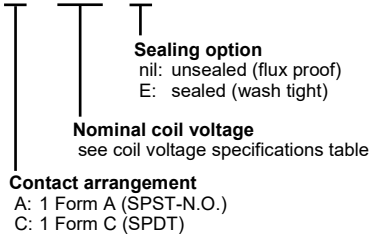
## MECHANICAL DATA

Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm$ .010"



## ORDERING DATA

AZ9422-1□E-□□D□F

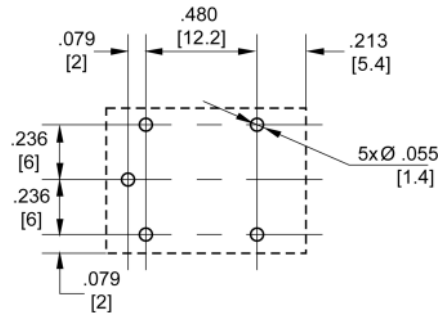


### Example ordering data

AZ9422-1AE-12DF 1 Form A, 12 VDC nominal coil voltage, flux proof  
AZ9422-1CE-5DEF 1 Form C, 5 VDC nominal coil voltage, epoxy sealed

## PC BOARD LAYOUT

Viewed towards terminals. Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm$ .010"

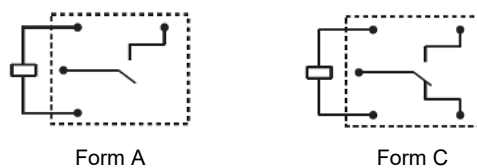


## NOTES

- All values at reference temperature of 23°C (73°F) unless stated otherwise.
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on terminals.
- Relay adjustment may be affected if excessive shock is applied to the relay.
- Specifications subject to change without notice.

## WIRING DIAGRAMS

Viewed towards terminals



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## 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.

## ZETTLER GROUP

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## SITES FOR ZETTLER RELAYS

### NORTH AMERICA

American Zettler, Inc.  
[www.azettler.com](http://www.azettler.com)  
[sales@azettler.com](mailto:sales@azettler.com)

### EUROPE

Zettler Electronics, GmbH  
[www.zettlerelectronics.com](http://www.zettlerelectronics.com)  
[office@zettlerelectronics.com](mailto:office@zettlerelectronics.com)

Zettler Electronics, Poland  
[www.zettlerelectronics.pl](http://www.zettlerelectronics.pl)  
[office@zettlerelectronics.pl](mailto:office@zettlerelectronics.pl)

### CHINA

Zettler Group, China  
[www.zettlercn.com](http://www.zettlercn.com)  
[relay@zettlercn.com](mailto:relay@zettlercn.com)

### ASIA PACIFIC

Zettler Electronics (HK) Ltd.  
[www.zettlerhk.com](http://www.zettlerhk.com)  
[sales@zettlerhk.com](mailto:sales@zettlerhk.com)



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