

# AZ6991

## SENSITIVE SUBMINIATURE RELAY

### FEATURES

- Extremely small (5mm)
- 8 Amp switching capability
- High sensitivity, 95 mW pickup
- Dielectric strength 4000 Vrms contact to coil
- Isolation spacing greater than 8 mm
- Reinforced insulation, EN 60730-1 (VDE 0631, part 1)  
EN 60335-1 (VDE 0700, part 1)
- Epoxy sealed version available
- UL, CUR file E43203
- VDE certificate 40020561



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) SPDT (1 Form C)
<b>Ratings</b>	Resistive load:  Max. switched power: 180 W or 2216 VA Max. switched current: 8 A Max. switched voltage: 125 VDC or 400VAC  * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Rated Load UL, CUR</b>	1 Form A 8 A at 277 VAC, resistive, 85°C, 10k cycles 6 A at 277 VAC, resistive, 85°C, 60k cycles 6 A at 30 VDC, 85°C, 60k cycles C300, R300 pilot duty, 20°C, 30k cycles  1 Form C 8 A at 277 VAC, resistive, 85°C, 10k cycles (N.O.) 6 A at 277 VAC, resistive, 85°C, 30k cycles (N.O.) 6 A at 30 VDC, 85°C, 30k cycles (N.O.) C300, R300 pilot duty, 20°C, 30k cycles (N.O.) 6 A at 277 VAC, resistive, 85°C, 10k cycles (N.C.) 6 A at 30 VDC, 85°C, 10k cycles (N.C.) B300, R300 pilot duty, 85°C (N.C.)
<b>VDE</b>	1 Form A 6 A at 250 VAC, 85°C, 50k cycles 6 A at 30 VDC, 85°C, 60k cycles  1 Form C 6 A at 250 VAC, 85°C, 10k cycles 6 A at 30 VDC, 85°C, 10k cycles
<b>Material</b>	Silver nickel or silver tin oxide, gold plating available
<b>Resistance</b>	< 50 milliohm initially

### NOTES

<ol style="list-style-type: none"> <li>1. All values at 20°C (68°F)</li> <li>2. Relay may pull in with less than "Must Operate" value.</li> <li>3. Specification subject to change without notice.</li> <li>4. When install 1 Form C type of AZ6991, please do not mount "X" marked side down.</li> </ol>
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### GENERAL DATA

<b>Life Expectancy Mechanical Electrical</b>	Minimum operations 1 X 10 <sup>7</sup> operations 1 X 10 <sup>5</sup> at 5 A, 250 VAC
<b>Operate Time (typical)</b>	5 ms at nominal coil voltage
<b>Release Time (typical)</b>	3 ms at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength (at sea level for 1 min.)</b>	1000 Vrms between open contacts 4000 Vrms contact to coil 6000 V surge, contact to coil
<b>Insulation Resistance</b>	1000 megohms min. at 20°C, 500 VDC, 50% RH
<b>Dropout</b>	Greater than 5% of nominal coil voltage
<b>Ambient Temperature Operating Storage</b>	At nominal coil voltage -40°C (-40°F) to 85°C (158°F) -40°C (-40°F) to 105°C (221°F)
<b>Vibration</b>	1 mm DA at 10–500 Hz
<b>Shock</b>	5 g
<b>Enclosure</b>	P.B.T. polyester 94V-0
<b>Terminals</b>	Tinned copper alloy, P.C.
<b>Max. Solder Temp.</b>	260°C (500°F)
<b>Max. Solder Time</b>	5 seconds
<b>Max. Solvent Temp.</b>	80°C (176°F)
<b>Max. Immersion Time</b>	30 seconds
<b>Weight</b>	6 grams
<b>Packing unit in pcs horizontal version vertical version</b>	20 per plastic tube / 1000 per carton box 100 per plastic tube / 2000 per carton box

### COIL

<b>Power At Pickup Voltage (typical)</b>	95 mW (3 - 24 VDC coils) 112 mW (48 - 60 VDC coils)
<b>Max. Continuous Dissipation</b>	0.9 W at 20°C (68°F) ambient
<b>Temperature Rise</b>	20°C (36°F) at nominal coil voltage
<b>Temperature</b>	Max. 105°C (221°F)

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This product specification to be used only together with the application notes  
which can be downloaded from <http://www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf>

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## RELAY ORDERING DATA

COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	1 Form A	1 Form C
5	3.75	11.2	147	AZ6991-1A-5D	AZ6991-1C-5D
12	9.0	26.8	848	AZ6991-1A-12D	AZ6991-1C-12D
24	18.0	53.7	3,390 ( $\pm 15\%$ )	AZ6991-1A-24D	AZ6991-1C-24D
48	36.0	100.0	10,600 ( $\pm 15\%$ )	AZ6991-1A-48D	AZ6991-1C-48D
60	45.0	120.0	16,600 ( $\pm 15\%$ )	AZ6991-1A-60D	AZ6991-1C-60D

\* "1A" or "1C" denote silver nickel contacts.

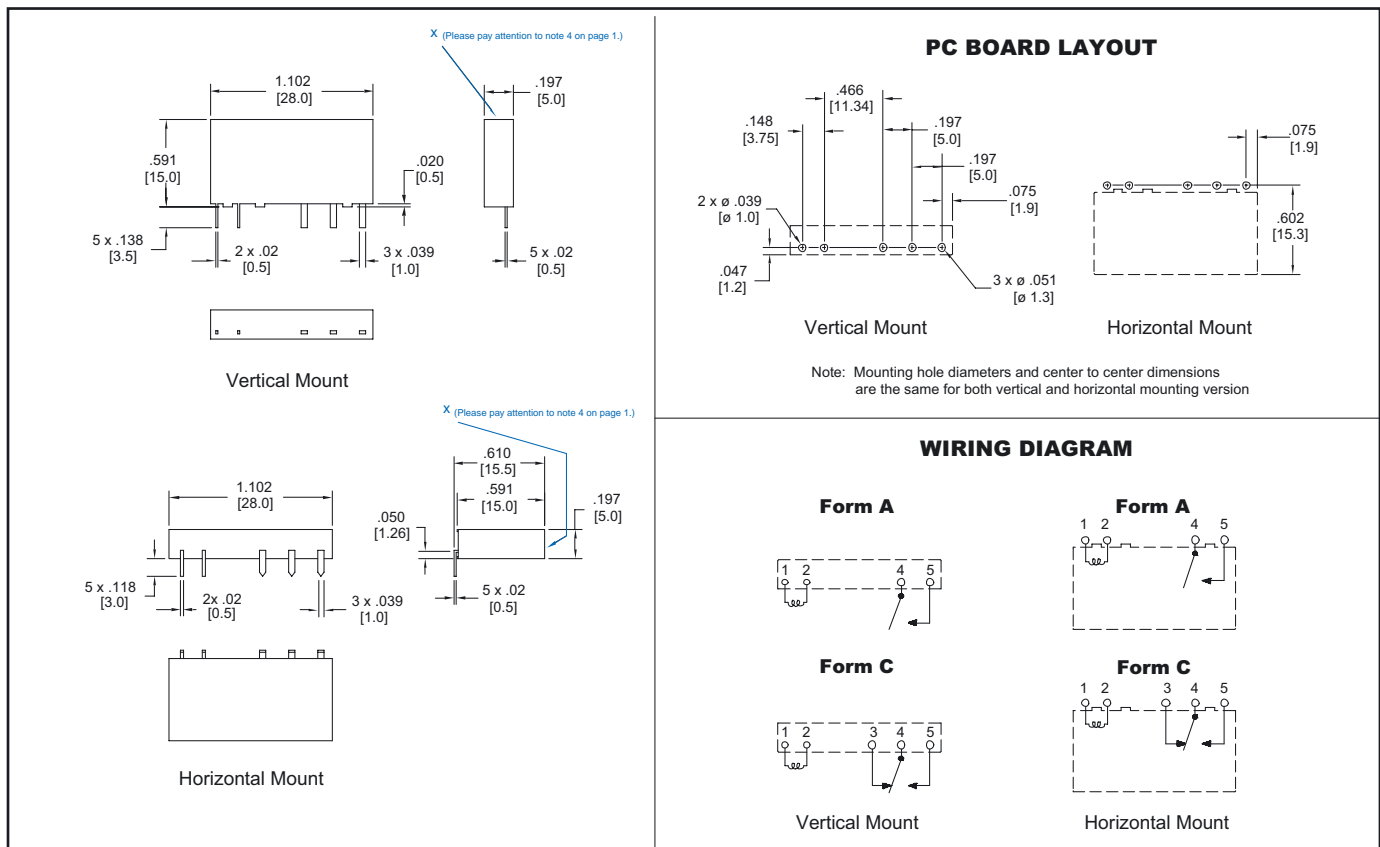
Substitute "1AE" or "1CE" in place of "1A" or "1C" for silver tin oxide contacts.

Add suffix "E" at the end of order number for epoxy sealed version..

Add suffix "A" at the end of order number for gold plated contacts.

Add suffix "H" at the end of order number for horizontal mounting.

## MECHANICAL DATA



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

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