

# AZ983

## 80 AMP AUTOMOTIVE RELAY

### FEATURES

- 80 Amp contact rating
- High momentary carry current
- High operating temperature (85°C)
- SPST N.O. (1 Form A), SPDT (1 Form C), SPST N.C. (1 Form B)
- PCB terminals
- Epoxy sealed version available



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) SPST (1 Form B) SPDT (1 Form C)
<b>Ratings</b>	Resistive load:  <b>1 Form A</b> Max. switched power: 1120 W Max. switched current: 80 A Max. switched voltage: 28 VDC  <b>1 Form B</b> Max. switched power: 840 W Max. switched current: 60 A Max. switched voltage: 28 VDC  <b>1 Form C</b> Max. switched power: 840 W Max. switched current: 60 A Max. switched voltage: 28 VDC
<b>Rated Load</b>	Resistive load:  <b>1 Form A</b> 80 A at 14 VDC Resistive, 20°C 40 A at 28 VDC Resistive, 20°C 40 A at 14 VDC Resistive, 85°C 20 A at 28 VDC Resistive, 85°C  120 A at 28 VDC Resistive, 85°C (inrush for 3 seconds with make/break ratio 1:10)  <b>1 Form B</b> 60 A at 14 VDC Resistive, 20°C 30 A at 28 VDC Resistive, 20°C 30 A at 14 VDC Resistive, 85°C 15 A at 28 VDC Resistive, 85°C  <b>1 Form C</b> 60 A at 14 VDC Resistive, 20°C, (N.O.) 40 A at 28 VDC Resistive, 20°C, (N.O.) 40 A at 14 VDC Resistive, 85°C, (N.O.) 20 A at 28 VDC Resistive, 85°C, (N.O.)  60 A at 14 VDC Resistive, 20°C, (N.C.) 30 A at 28 VDC Resistive, 20°C, (N.C.) 30 A at 14 VDC Resistive, 85°C, (N.C.) 15 A at 28 VDC Resistive, 85°C, (N.C.)
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 50 milliohms initially (at 24 V, 1 A, voltage drop method)

### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>7</sup> 1 x 10 <sup>5</sup> at 80 A 14 VDC Res.
<b>Operate Time (typical)</b>	7 ms at nominal coil voltage
<b>Release Time (typical)</b>	5 ms at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength</b> <b>(at sea level for 1 min.)</b>	500 Vrms coil to contact 500 Vrms between open contacts
<b>Insulation Resistance</b>	100 megohms min. at 500 VDC, 20°C 50% RH
<b>Dropout</b>	Greater than 10% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b>	-40°C (-40°F) to 85°C (185°F)
<b>Vibration</b>	0.062" (1.5 mm) DA at 10-55 Hz
<b>Shock</b>	10 g
<b>Enclosure</b>	PA 66
<b>Terminals</b>	Copper alloy PCB
<b>Weight</b>	40 grams

### COIL

<b>Power</b> <b>At Pickup Voltage</b> <b>(typical)</b> <b>Max. Continuous</b> <b>Dissipation</b> <b>Temperature Rise</b>	0.76 W  3.0 W at 20°C (68°F)  68°C (122°F) at nominal coil voltage
<b>Temperature</b>	Max.155°C (311°F)

### 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.

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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 $\pm 10\%$	SPST	SPDT
6	3.9	7.8	20	AZ983-1A-6D	AZ983-1C-6D
12	7.8	15.6	80	AZ983-1A-12D	AZ983-1C-12D
24	15.6	31.2	320	AZ983-1A-24D	AZ983-1C-24D

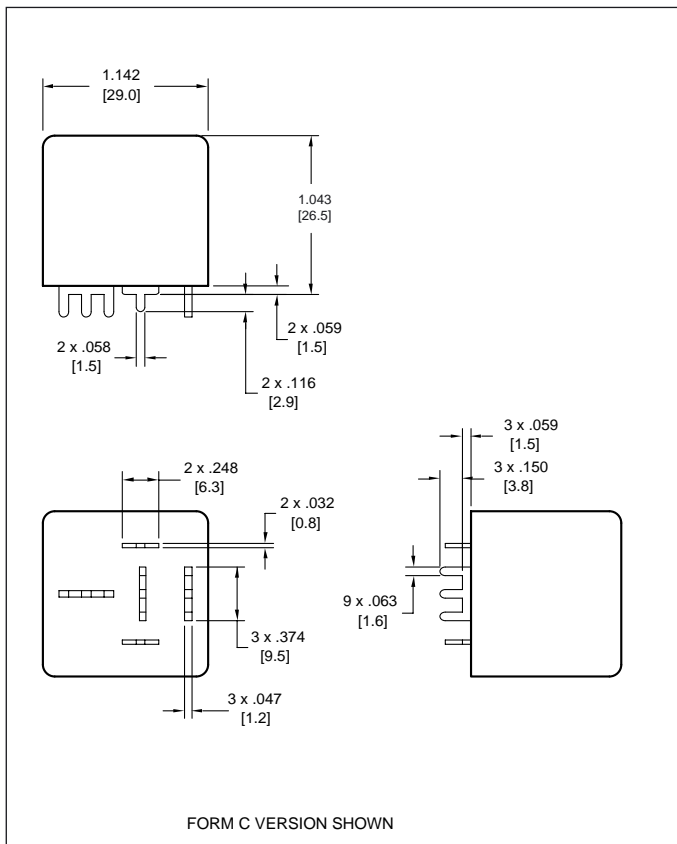
\* For SPST (N.C.) (1 Form B) relay, substitute "1B" for "1A".

Add suffix "R" for resistor in parallel with coil. Resistor values: 6V: 180  $\Omega$ , 12V: 680  $\Omega$ , 24V: 2700  $\Omega$ .

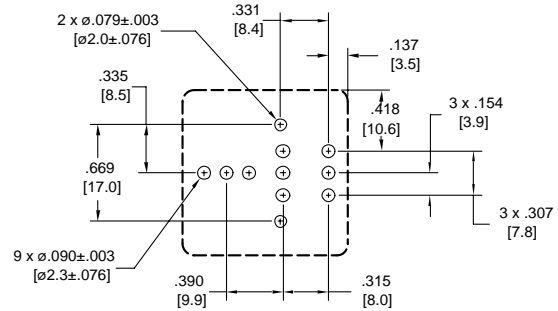
Add suffix "D" for diode across coil option (+ pole of power supply at terminal #86).

Add suffix "E" for epoxy sealed version.

## MECHANICAL DATA

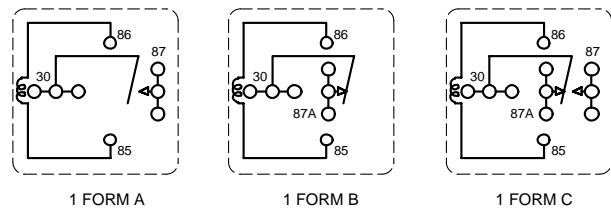


## PC BOARD LAYOUT



FORM C VERSION SHOWN  
VIEWED TOWARD TERMINALS

## WIRING DIAGRAMS



VIEWED TOWARD TERMINALS

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

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