

# AZ987

## 30 AMP MICRO AUTOMOTIVE RELAY

### FEATURES

- Up to 30 Amp switching capability in a compact size
- Form A and Form C contacts available
- Single and Dual (Twin) relay versions
- Designed for high in-rush applications
- Epoxy sealed
- ISO/TS 16949, ISO 9001, ISO 14000
- Tested in accordance with J2544



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) DPST (2 Form A) SPDT (1 Form C) DPDT (2 Form C)
<b>Ratings</b>	Resistive load:  Max. switched power: 480 W Max. switched current: 30 A / 25 A (N.O. / N.C.) Max. switched voltage: 16 VDC  Rated load: 30 A at 16 VDC
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 50 milliohms initially (6 V, 1 A voltage drop method)

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	187 mW
<b>Max. Continuous Dissipation</b>	2.6 W at 20°C (68°F) ambient
<b>Temperature Rise</b>	34°C (94°F) at nominal coil voltage
<b>Max Temperature</b>	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.

### GENERAL DATA

<b>Life Expectancy</b>	Minimum operations
<b>Mechanical</b>	1 x 10 <sup>6</sup>
<b>Electrical</b>	3 x 10 <sup>5</sup> at 20 A 14 VDC Res.
<b>Operate Time</b>	3 ms typical at nominal coil voltage
<b>Release Time</b>	1.5 ms typical at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength (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 20°C, 500 VDC 50% RH
<b>Dropout</b>	Greater than 12.5% of nominal coil voltage
<b>Ambient Temperature</b>	At nominal coil voltage
<b>Operating</b>	-40°C (-40°F) to 105°C (221°F)
<b>Storage</b>	-40°C (-40°F) to 105°C (221°F)
<b>Vibration</b>	6 g at 10-500 Hz
<b>Shock</b>	30 g, 6 ms
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy, P.C.
<b>Weight</b>	4 / 8 grams (Single / Twin)
<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>Packing unit in pcs</b>	
<b>Single</b>	25 per plastic tube / 2000 per carton box
<b>Twin</b>	10 per plastic tube / 1000 per carton box

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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					
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	ORDER NUMBER*	
				Form A (DPST)	Form C (DPDT)
6	3.5	13.2	63	AZ987-1A-6DT	AZ987-1C-6DT
10	5.7	22.0	181	AZ987-1A-10DT	AZ987-1C-10DT
12	6.9	26.0	254	AZ987-1A-12DT	AZ987-1C-12DT

\* Substitute "1A" or "1C" with "2A" or "2C" to indicate Twin relay.  
Substitute "DT" with "DET" for epoxy sealed version.

## MECHANICAL DATA

### SINGLE RELAY

Dimensions: 12.3 max., 2.50, 0.60, 7.65  $\pm 0.3$ , 10.20 max., 0.40, 5.80, 2.80  $\pm 0.2$ , 13.22 max., 0.95.

PC Board Layout Dimensions: 10.20  $\pm 0.1$ , 3.60  $\pm 0.1$ , 3.00  $\pm 0.1$ , 1.36  $\pm 0.1$ , 2 x 1.20 x 0.60, 2 x  $\varnothing 0.50$ , 1.00 x 1.00, 0.5  $\pm 0.1$ , 7.5  $\pm 0.1$ , 1.75  $\pm 0.1$ , 8.5  $\pm 0.1$ .

### TWIN RELAY

Dimensions: 24.0 max., 2.50, 0.60, 7.65  $\pm 0.3$ , 10.20 max., 0.40, 2.80  $\pm 0.2$ , 13.22 max., 0.95.

PC Board Layout Dimensions: 24.0 max., 4 x 1.20 x 0.60, 4 x  $\varnothing 0.50$ .

### PC BOARD LAYOUTS

#### SINGLE RELAY

\* not used on 1 Form A version

#### TWIN RELAY

\* not used on 2 Form A version

Viewed toward component side

### WIRING DIAGRAMS

#### SINGLE RELAY

\* not used on 1 Form A version

#### TWIN RELAY

\* not used on 2 Form A version

Viewed toward terminals

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