

# AZ9871

## 30 AMP MICRO AUTOMOTIVE RELAY

### FEATURES

- Up to 30 Amp switching capability in a compact size
- Form A and C contacts available (single or twin relay)
- Vibration and shock resistant
- Epoxy sealed version available
- Designed for high in-rush applications
- Cost effective
- Single and Dual (Twin) relay versions
- ISO/TS 16949, ISO14001
- Tested in accordance with SAE 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: 280 W Max. switched current: 30 A / 25A N.O. / N.C. Max. switched voltage: 24 VDC  Rated load: 20 A at 14 VDC (Form A) 20/15 A at 14 VDC (Form C)
<b>Material</b>	Silver tin oxide (silver nickel available - contact factory)
<b>Resistance</b>	< 50 milliohms initially (3 milliohms at 10A)

### COIL

<b>Power 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 (61°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> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>7</sup> 1 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>	1000 megohms min. at 20°C, 500 VDC 50% RH
<b>Dropout</b>	Greater than 12.5% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b> <b>Storage</b>	At nominal coil voltage -40°C (-40°F) to 105°C (221°F) -40°C (-40°F) to 155°C (311°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>Max Solder Temp.</b>	270°C (518°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>	4 grams (single) 8 grams (twin)



**AMERICAN ZETTLER, INC.**

[www.azettler.com](http://www.azettler.com)

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5/23/07W

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## RELAY ORDERING DATA

STANDARD RELAYS - 1 FORM A, 1 FORM C (SINGLE)					
COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	1 Form A (SPST)	1 Form C (SPDT)
10	5.7	22.0	181	AZ9871-1A-10DT	AZ9871-1C-10DT
12	6.9	26.0	254	AZ9871-1A-12DT	AZ9871-1C-12DT

STANDARD RELAYS - 2 FORM A, 2 FORM C (TWIN)					
COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	2 Form A (DPST)	2 Form C (DPDT)
10	5.7	22.0	181	AZ9871-2A-10DT	AZ9871-2C-10DT
12	6.9	26.0	254	AZ9871-2A-12DT	AZ9871-2C-12DT

\*Change "D" to "DE" for sealed version. Add suffix "A" for gold plated contacts.

## MECHANICAL DATA

### Outline Dimensions

SINGLE  
Form 1A, 1C

BOTTOM VIEW

TWIN  
Form 2A, 2C

BOTTOM VIEW

### PC Board Layout

FORM 1A, 1C SINGLE

FORM 2A, 2C TWIN

View Toward Terminals

### Wiring Diagram

SINGLE

FORM 1A      FORM 1C

TWIN

FORM 2A      FORM 2C

Dimensions in inches with millimeters in brackets below. Tolerance:  $\pm .010$ "



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