

# AZ9891J

## 30 AMP SUB-MICRO AUTOMOTIVE RELAY

### FEATURES

- Up to 30 Amp switching capability in a very compact size
- Vibration and shock resistant
- Designed for power windows, door locks and wiper motors, seat adjusters, and more
- Epoxy sealed for automatic wave soldering
- ISO/TS 16949, ISO9001, ISO14000
- High Reliability
- Single and Dual (Twin) relay versions
- Standard and sensitive coils offered
- High operating temp. (105°C) available



### CONTACTS

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

### COIL

<b>Power At Nominal Voltage (typical)</b>	800mW for Standard Coil 640mW for Sensitive Coil
<b>Max. Continuous Dissipation</b>	2.2W at 20°C (68°F) ambient 40°C (72°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>6</sup> 1 x 10 <sup>5</sup> at 25A 14VDC locked motor
<b>Operate Time</b>	10ms typical at nominal coil voltage
<b>Release Time</b>	10ms typical at nominal coil voltage
<b>Dielectric Strength (at sea level for 1 min.)</b>	500VAC coil to contact 500VAC between open contacts
<b>Insulation Resistance</b>	100 megohms min. at 500 VDC 85% RH (at 40°C)
<b>Dropout</b>	Greater than 8.3% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b> <b>Storage</b>	At nominal coil voltage -40°C (-40°F) to 85°C (185°F) 'T' version 105°C (221°F) -40°C (-40°F) to 130°C (266°F)
<b>Vibration</b>	4.5g at 10-500Hz
<b>Shock</b>	10g operational, 100g destructive
<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>	3 seconds
<b>Max. Solvent Temp</b>	80°C (176°F)
<b>Max. Immersion Time</b>	30 Seconds
<b>Weight</b>	4.1 grams

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## RELAY ORDERING DATA

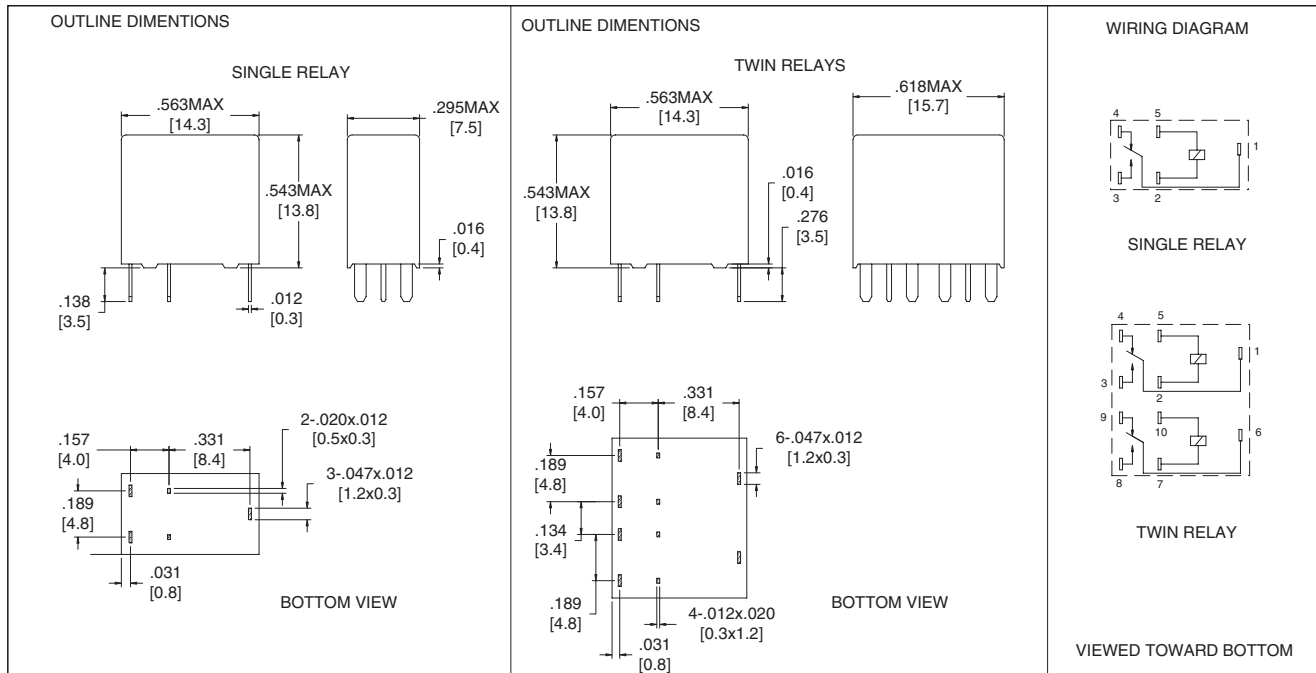
STANDARD RELAYS - 1 Form C SINGLE COIL				ORDER NUMBER
COIL SPECIFICATIONS				ORDER NUMBER
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	1 Form C (SPDT)
12	7.2	16.0	180	AZ9891J-1C-12DE
Sensitive Coil				
12	6.5	16.0	225	AZ9891J-1C-12DSE

add 'T' after 'J' for high temp. version

STANDARD RELAYS - 2 Form C TWIN COIL				ORDER NUMBER
COIL SPECIFICATIONS				ORDER NUMBER
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	2 Form C (DPDT)
12	7.2	16.0	180	AZ9891J-2C-12DE

add 'T' after 'J' for high temp. version

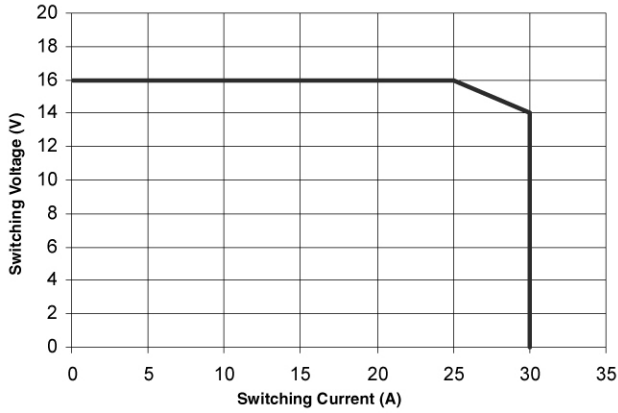
## MECHANICAL DATA



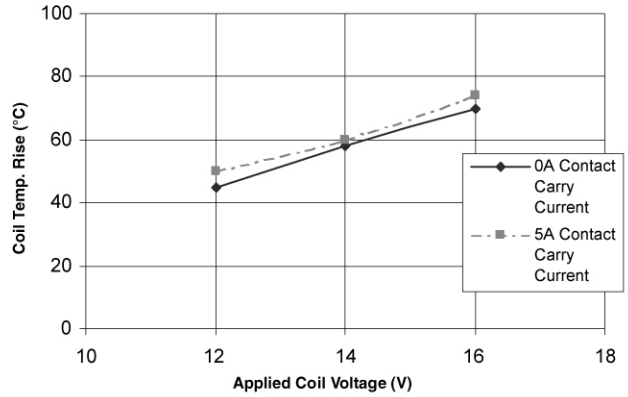
Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm .010$ "

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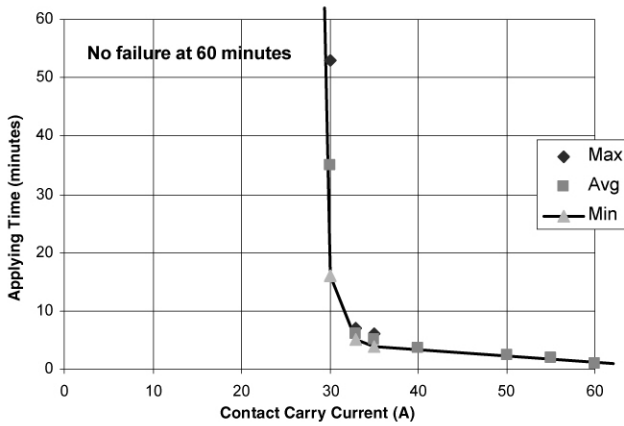
**Load Limit Curve**



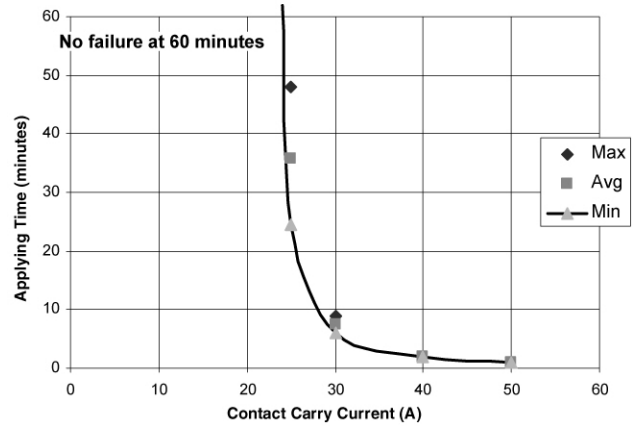
**Coil Temperature vs. Applied Voltage at 20°C (225Ω coil)**



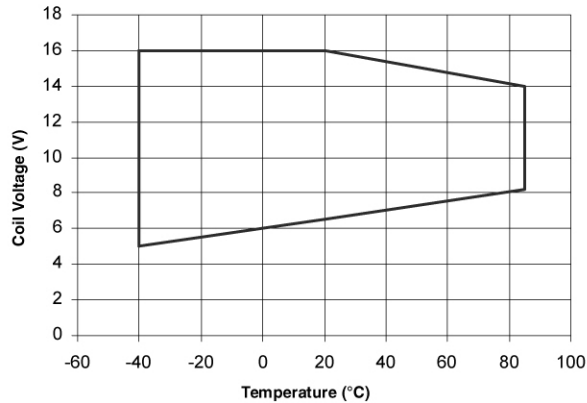
**Overcurrent Energization (20°C, 225Ω coil)**



**Overcurrent Energization (85°C, 225Ω coil)**



**Operating Voltage Range (180Ω coil)**



**Operating Voltage Range (225Ω coil)**

