

# AZ9321

## 20 AMP MINIATURE PC BOARD RELAY



### FEATURES

- High performance
- 6kV lightning surge withstand
- Flux tight and sealed versions available
- Class F insulation system standard
- UL, CUR file E44211

### CONTACTS

<b>Arrangement</b>	SPST - N.O. (1 Form A) SPDT (1 Form C)
<b>Ratings</b>	Form A and C Max. switched power: 480 W or 4700VA Max. switched current: 16A (DC), 20A (AC) Max. switched voltage: 30VDC or 277VAC
<b>Rated Load</b> <b>UL/CUR</b>	<p>1 Form A 20A at 125VAC, Res., 100k cycles [1][2] 17A at 277VAC, Res., 100k cycles [2] 15A at 125VAC, Res., 100k cycles [1][2] 16A at 250VAC, Res., 50k cycles [1] 1HP at 250VAC [1][2] 1HP at 125VAC [2] TV-8 at 125VAC [1]</p> <p>1 Form C 20A at 125VAC Res. 100k cycles N.O. [1][2] 20A at 125VAC Res. 50k cycles N.C.[2] 20A at 125VAC Res. 17k cycles N.C.[1] 17A at 125VAC Res. 50k cycles N.C.[1] 17A at 277VAC Res. 100k cycles N.O. [2] 15A at 277VAC Res. 50k cycles N.C. [2] 1HP at 250VAC N.O. [1][2] 1HP at 125VAC N.O. [2] 1/2HP at 125VAC N.C. [2] 1/2HP at 277VAC N.C. [2] TV-8 at 125VAC N.O./ N.C. [1]</p>
<b>Material</b>	Silver nickel [2] or Silver tin oxide [1] (gold plating available)
<b>Resistance</b>	< 100 milliohms initially (6V, 1A voltage drop method)

### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	1x10 <sup>7</sup> 5 x 10 <sup>4</sup> at 20A, 120VAC Res.
<b>Operate Time</b>	10ms max.
<b>Release Time</b>	5ms max. (with no coil suppression)
<b>Dielectric Strength</b> (at sea level for 1 min.)	3000Vrms contact to coil 1000Vrms across contacts
<b>Insulation Resistance</b>	100 megohms min. at 500VDC, 50% RH
<b>Dropout</b>	Greater than 10% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b> <b>Storage</b>	At nominal coil voltage -40°C(-40°F) to 95°C(203°F) -40°C(-40°F) to 155°C(311°F)
<b>Vibration</b>	0.062" DA at 10–55 Hz
<b>Shock</b>	10 g
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy, P.C.
<b>Max. Solder Temp.</b>	270°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 (approx.)</b>	14 grams

### COIL

<b>Power</b> <b>At Pickup Voltage</b> <b>Max Continuous</b> <b>Dissipation</b>	203mW 1.4W at 20°C (68°F)
<b>Temperature Rise</b> (at nominal coil voltage)	20°C (36°F)
<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. Unsealed relays should not be dip cleaned.
4. Specifications subject to change without notice.

# AZ9321

## RELAY ORDERING DATA

STANDARD RELAYS				ORDER NUMBER*	
COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance	Must Operate VDC	1 Form A (SPST-N.O.)	1 Form C (SPDT)
5	6.0	70 ±10%	3.8	AZ9321-1A-5DF	AZ9321-1C-5DF
6	7.2	100 ±10%	4.5	AZ9321-1A-6DF	AZ9321-1C-6DF
9	10.8	225 ±10%	6.8	AZ9321-1A-9DF	AZ9321-1C-9DF
12	14.4	400 ±10%	9.0	AZ9321-1A-12DF	AZ9321-1C-12DF
18	21.6	900 ±10%	13.5	AZ9321-1A-18DF	AZ9321-1C-18DF
24	28.8	1,600 ±15%	18.0	AZ9321-1A-24DF	AZ9321-1C-24DF
48	57.6	6,400 ±15%	36.0	AZ9321-1A-48DF	AZ9321-1C-48DF

\*Replace "-1A" or "-1C" with "-1AE" or "-1CE" for silver tin oxide contacts. Replace "F" with "EF" for epoxy sealed version.  
 Replace "F" or "EF" with "AF" or "AEF" for gold plated contacts.

## MECHANICAL DATA

### Outline Dimensions

Top View Dimensions:  
 Left side: .827 (21) width, .079 (2.00) terminal width, .480 (12.20) terminal spacing.  
 Right side: .630 (16) width, .089 (2.25) terminal width, .236 (6.00) terminal spacing.  
 Height: .799 (20.3) inches.

Bottom View Dimensions:  
 Left side: .012 (0.30) terminal width, .039 (1.00) terminal width, 2x.020 (0.50) terminal spacing.  
 Right side: 2x.039 (1.00) terminal width, 2x.020 (0.50) terminal spacing, 2x.018 (0.45) terminal spacing.

### PC Board Layout

FORM "A" Dimensions:  
 .079 (2.00) terminal width, .157 (4.00) terminal width, .089 (2.25) terminal width, .236 (6.00) terminal width, .472 (12.00) terminal width, .480 (12.20) terminal width, 2x.039 (ø1.0) terminal width, 2x.051 (ø1.3) terminal width.

FORM "C" Dimensions:  
 .079 (2.00) terminal width, .157 (4.00) terminal width, .089 (2.25) terminal width, .236 (6.00) terminal width, .472 (12.00) terminal width, .480 (12.20) terminal width, 2x.039 (ø1.0) terminal width, 3x.051 (ø1.3) terminal width.

### Wiring Diagram

FORM "A" wiring diagram shows terminals 1, 2, 3, 4, and 5. Terminal 1 is the coil, 2 is the common, 3 is the normally open contact, 4 is the normally closed contact, and 5 is the ground.

FORM "C" wiring diagram shows terminals 1, 2, 3, 4, and 5. Terminal 1 is the coil, 2 is the common, 3 is the normally open contact, 4 is the normally closed contact, and 5 is the ground.