

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

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

GENERAL DATA

Life Expectancy Mechanical Electrical	1x10 ⁷ 5 x 10 ⁴ at 20A, 120VAC Res.
Operate Time	10ms max.
Release Time	5ms max. (with no coil suppression)
Dielectric Strength (at sea level for 1 min.)	3000Vrms contact to coil 1000Vrms across contacts
Insulation Resistance	100 megohms min. at 500VDC, 50% RH
Dropout	Greater than 10% of nominal coil voltage
Ambient Temperature Operating Storage	At nominal coil voltage -40°C(-40°F) to 95°C(203°F) -40°C(-40°F) to 155°C(311°F)
Vibration	0.062" DA at 10–55 Hz
Shock	10 g
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy, P.C.
Max. Solder Temp.	270°C (500°F)
Max. Solder Time	5 seconds
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Weight (approx.)	14 grams

COIL

Power At Pickup Voltage Max Continuous Dissipation	203mW 1.4W at 20°C (68°F)
Temperature Rise (at nominal coil voltage)	20°C (36°F)
Temperature	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.

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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, .157 (4) height from top edge to terminal centerline.
 Right side: .630 (16) width, .799 (20.3) height from top edge to terminal centerline.
 Terminal spacing: .079 (2.00) between terminals, .480 (12.20) between terminal pairs.
 Bottom view: .236 (6.00) between terminal pairs.

Bottom View Dimensions:
 Terminal width: .012 (0.30).
 Terminal spacing: 2x.039 (1.00), 2x.020 (0.50).
 Contact width: 2x.018 (0.45).
 Contact spacing: 2x.020 (0.50).

PC Board Layout

FORM "A" Dimensions:
 Hole spacing: .079 (2.00) between holes, .188 (4.80) between hole pairs.
 Hole diameter: 2x.051 (ø1.3).
 Pad diameter: .472 (12.00).
 Pad spacing: .236 (6.00).
 Pad diameter: 2x.039 (ø1.0).
 Pad spacing: .480 (12.20).

FORM "C" Dimensions:
 Hole spacing: .079 (2.00) between holes, .188 (4.80) between hole pairs.
 Hole diameter: 3x.051 (ø1.3).
 Pad diameter: .472 (12.00).
 Pad spacing: .236 (6.00).
 Pad diameter: 2x.039 (ø1.0).
 Pad spacing: .480 (12.20).

Wiring Diagram

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

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, and 4 is the normally closed contact. Terminal 5 is the other coil terminal.