

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) inches, .079 (2.00) inches, .480 (12.20) inches.
 Right side: .630 (16) inches, .089 (2.25) inches, .236 (6.00) inches.
 Height: .799 (20.3) inches, .157 (4) inches.

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

PC Board Layout

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

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

Wiring Diagram

FORM "A" terminals: 1, 2, 3, 5.

FORM "C" terminals: 1, 2, 3, 4, 5.