# AZ21501

## **MINIATURE 50 A POWER RELAY**

#### **FEATURES**

- 50 Amp switching capability
- 1 Form A, B and C contacts available
- · Small dimensions and footprint
- Low coil power consumption
- Class F (155°C) insulation system standard
- Available with an epoxy seal for automatic wave soldering and immersion cleaning
- UL, CUR file E44211



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Arrangement SPST-N.O. (1 Form A)

SPST-N.C. (1 Form B) SPDT (1 Form C)

Ratings (max.) (resistive load) switched power 1500 W or 12000 VA

switched current 50 A (N.O. contacts), 35 A (N.C. contacts)

switched voltage 30 VDC\* or 300 VAC

\* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please

contact the factory.

Rated Loads

UL N.O. contacts

50 A at 250 VAC, 10k cycles, resistive, 40°C 40 A at 250 VAC, 50k cycles, resistive, 40°C

N.C. contacts

35 A at 250 VAC, 10k cycles, resistive, 40°C 30 A at 250 VAC, 50k cycles, resistive, 40°C

Contact materials AgSnO<sub>2</sub> (silver-tin-oxide)

Initial resistance  $\leq 30 \text{ m}\Omega$ 

COIL

Nominal coil DC voltages see coil voltage specifications table

> 10% of nominal coil voltage

Coil power (typ.)
nominal 1.5 W
at pickup voltage < 850 mW

Max. continuous dissipation 2.5 W at 20°C (68°F) ambient

Temperature Rise56 K (133°F) at nominal coil voltageMax. temperature155°C (311°F) - class F coil wire

**GENERAL DATA** 

**Life Expectancy** (minimum operations)

Mechanical 1 x 10<sup>7</sup>

Electrical 5 x 10<sup>4</sup> at 40 A 250 VAC resistive (N.O.)

Operate Time 15 ms (max.)

at nominal coil voltage

Release Time 10 ms (max.)

nease Time 10 ms (max.)

at nominal coil voltage, w/o coil suppression

Dielectric Strength (at sea level for 1 min.)

4000 V<sub>RMS</sub> coil to contact

1500 V<sub>RMS</sub> between open contacts

Insulation Resistance  $\,$  1000 M $\Omega$  (min.) at 20°C, 500 VDC, 50% RH  $\,$ 

**Temperature Range** (at nominal coil voltage)
Operating -55°C (-67°F) to 85°C (185°F)

Vibration resistance 1.5 mm (0.062") DA at 10–55 Hz

Shock 20 g

Terminals Tinned copper alloy, P. C.

Soldering

Max. Temperature 270°C (518°F)
Max. Time 5 seconds

Cleaning

Max. Solvent Temp. 80°C (176°F) Max. Immersion Time 30 seconds

**Dimensions** 

length 32.5 mm (1.280") width 27.6 mm (1.087") height 20.5 mm (0.807")

Weight 30 grams

Compliance IEC 61810-1, UL 508, RoHS, REACH Packing unit in pcs 15 per plastic tube / 300 per carton box

#### **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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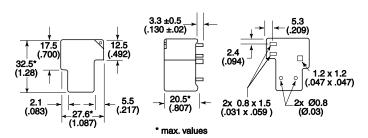
# **AZ21501**

#### **COIL VOLTAGE SPECIFICATIONS**

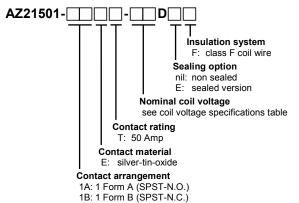
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.25	3.9	6
5	3.75	6.5	16.7
6	4.5	7.8	24
9	6.75	11.7	54
12	9.0	15.6	96
15	11.25	19.5	150
18	13.5	23.4	216
24	18.0	31.2	384
48	36.0	62.4	1536
110	82.5	143	8067

#### **MECHANICAL DATA**

Dimensions in mm. Inch equivalents in parentheses for information purposes.



#### **ORDERING DATA**



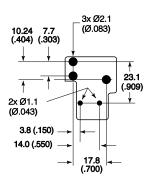
## 1C: 1 Form C (SPDT)

#### Example ordering data

AZ21501-1AET-12DF 1 Form A, 12 VDC nominal coil voltage, non sealed AZ21501-1CET-24DEF 1 Form C, 24 VDC nominal coil voltage, sealed

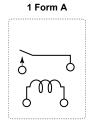
#### PC BOARD LAYOUT

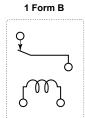
Dimensions in mm. Inch equivalents in parentheses for information purposes. Viewed towards terminals.

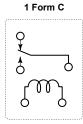


#### **WIRING DIAGRAMS**

Viewed towards terminals.







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