

AZ963

SPDT SUBMINIATURE POWER RELAY

FEATURES

- 4 kV dielectric strength, 5 kV surge
- Proof tracking index (PTI/CTI) 250
- 6 Amp switching
- 10 A version (1 Form A) upon request
- Epoxy sealed
- UL, CUR file E43203
- VDE file 40011689



CONTACTS

| | |
|-------------------------------|--|
| Arrangement | SPDT (1 Form C) SPST (1 Form A and 1 Form B) |
| Ratings | Resistive load: Max. switched power: 180 W or 1500 VA Max. switched current: 6A Max. switched voltage: 220 VDC* or 380 VAC * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory. |
| Rated Load UL, CUR | 6 A at 250 VAC, Resistive 6 A at 24 VDC, Resistive |
| VDE | 5 A at 250 VAC, Resistive [1] 4 A at 250 VAC, Resistive [2] |
| Material | Silver nickel [1] or silver tin oxide [2] |
| Resistance | <100 milliohms initially |

COIL

| | |
|--|-------------------------------------|
| Power At Pickup Voltage (typical) | 113 mW |
| Max. Continuous Dissipation | 0.96 W at 20°C (68°F) ambient |
| Temperature Rise | 30°C (54°F) at nominal coil voltage |
| Temperature | Max. 155°C (266°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

| | |
|--|--|
| Life Expectancy Mechanical Electrical | Minimum operations 1 x 10 ⁷ 1 x 10 ⁵ at 6 A 250 VAC Res. |
| Operate Time (typical) | 6 ms at nominal coil voltage |
| Release Time (typical) | 4 ms at nominal coil voltage (with no coil suppression) |
| Dielectric Strength (at sea level for 1 min.) | 4000 Vrms coil to contact 1000 Vrms between open contacts |
| Surge Voltage Coil to contact | 5,000V (at 1.2x50 µs) |
| Insulation Resistance | 1000 megohms min. at 20°C 500 VDC 50% RH |
| Insulation (according to DIN VDE 0110, IEC 60664-1) | C250 Overvoltage category: III Pollution degree: 2 Nominal voltage: 250 VAC |
| Dropout | Greater than 10% of nominal coil voltage |
| Ambient Temperature Operating Storage | At nominal coil voltage -40°C (-40°F) to 85°C (185°F) -40°C (-40°F) to 105°C (221°F) |
| Vibration | 0.062" (1.5 mm) DA at 10–50 Hz |
| Shock | 20 g operating, 100 g damage |
| Enclosure | P.B.T. polyester |
| Terminals | Tinned copper alloy, P.C. |
| Max. Solder Temp. | 270°C (518°F) |
| Max. Solder Time | 5 seconds |
| Max. Solvent Temp. | 80°C (176°F) |
| Max. Immersion Time | 30 seconds |
| Weight | 5 grams |
| Packing unit in pcs | 20 per plastic tube / 1000 per carton box |

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RELAY ORDERING DATA

| STANDARD RELAYS | | | | | |
|---------------------|------------------|---------------------|--------------------------------|---------------|---------------|
| COIL SPECIFICATIONS | | | | ORDER NUMBER* | |
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm $\pm 10\%$ | Form A (SPST) | Form C (SPDT) |
| 3 | 2.25 | 6.6 | 45 | AZ963-1A-3DE | AZ963-1C-3DE |
| 5 | 3.75 | 11.0 | 125 | AZ963-1A-5DE | AZ963-1C-5DE |
| 6 | 4.5 | 13.2 | 180 | AZ963-1A-6DE | AZ963-1C-6DE |
| 9 | 6.75 | 19.6 | 405 | AZ963-1A-9DE | AZ963-1C-9DE |
| 12 | 9.0 | 26.4 | 720 | AZ963-1A-12DE | AZ963-1C-12DE |
| 18 | 13.5 | 36.6 | 1,620 | AZ963-1A-18DE | AZ963-1C-18DE |
| 24 | 18.0 | 52.8 | 2,880 | AZ963-1A-24DE | AZ963-1C-24DE |
| 36 | 27.0 | 79.2 | 6,480 | AZ963-1A-36DE | AZ963-1C-36DE |
| 48 | 36.0 | 105.6 | 11,520 | AZ963-1A-48DE | AZ963-1C-48DE |

* Substitute "1B" in place of "1A" for 1 Form B contact. Add suffix "E" to "1A" or "1B" or "1C" for silver tin oxide contacts.

MECHANICAL DATA

Top view dimensions: 20.3 max (width), 10.7 max (height), 3.5±0.2 (terminal height), 0.4 (terminal width).

Side view dimensions: 10.2 max (width), Ventilation (feature).

Bottom view dimensions: 0.8x0.3 (3x) (terminal spacing), $\varnothing 0.4$ (terminal diameter).

PC BOARD LAYOUT

Dimensions: $\varnothing 1$, $\varnothing 1.2(3x)$, 1.1, 7.62, 10.16, 7.62, $\varnothing 2.54$.

Notes: Not used on 1 Form B relay; Not used on 1 Form A relay.

Viewed toward terminals

WIRING DIAGRAM

Viewed toward terminals

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

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