

AZ951/AZ952

SUBMINIATURE POWER RELAY

FEATURES

- Subminiature size for high density packaging
- Coil sensitivity to 116 mW
- Extremely low cost
- Coils to 24 VDC
- Epoxy sealed for automatic wave soldering
- 1 Amp, 3 Amp & 5 Amp contacts
- Life expectancy to 10 million operations
- UL, CUR file E43203



CONTACTS

| | |
|--------------------|---|
| Arrangement | SPDT (1 Form C) |
| Ratings | Resistive load: |
| Light Duty | Max. switched power: 30 W or 125 VA Max. switched current: 1 A Max. switched voltage: 60 VDC or 220 VAC UL Rating: 1 A at 30 VDC 1 A at 125 VAC |
| Medium Duty | Max. switched power: 90 W or 375 VA Max. switched current: 3 A Max. switched voltage: 60 VDC or 220 VAC UL Rating: 3 A at 30 VDC 3 A at 125 VAC |
| Heavy Duty | Max. switched power: 150 W or 625 VA Max. switched current: 5 A Max. switched voltage: 60 VDC or 220 VAC UL Rating: 5 A at 30 VDC 5 A at 125 VAC 270 VA, 120 VAC Pilot Duty N.O. 30k cycles, N.C. 6k cycles |
| Material | Light and Medium Duty: Silver, gold plated Heavy Duty: Silver nickel gold plated |
| Resistance | < 100 milliohms initially |

COIL

| | |
|------------------------------------|---|
| Power | |
| At Pickup Voltage (typical) | Standard Coil: 253 mW Sensitive coil: 116 mW |
| Max Continuous Dissipation | 0.8 W at 20°C (68°F) ambient 0.6 W at 40°C (104°F) ambient |
| Temperature Rise | At nominal coil voltage: Standard: 54°C (97°F) Sensitive: 30°C (54°F) |
| Max. Temperature | 105°C (221°F) |

GENERAL DATA

| | |
|--|--|
| Life Expectancy Mechanical Electrical | Minimum operations 1 x 10 ⁷ 1 x 10 ⁵ at 3 A 120 VAC Res. |
| Operate Time (typical) | 5 ms at nominal coil voltage |
| Release Time (typical) | 1 ms at nominal coil voltage (with no coil suppressions) |
| Dielectric Strength (at sea level for 1 min.) | 1250 Vrms coil to contact 750 Vrms between open contacts |
| Insulation Resistance | 100 megohms min. at 20°C, 500 VDC |
| Dropout | Greater than 10% of nominal coil voltage |
| Ambient Temperature Operating | At nominal coil voltage Standard: -25°C (-13°F) to 55°C (131°F) Sensitive: -25°C (-13°F) to 75°C (167°F) |
| Storage | Both: -25°C (-13°F) to 105°C (221°F) |
| Vibration | 0.062" DA at 10–55Hz |
| Shock | 15 g |
| Enclosure | P.B.T. polyester |
| Terminals | Tinned copper alloy |
| 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 | 3.5 grams |

NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Other coil resistances and sensitivities available upon request.
4. Specifications subject to change without notice.

AMERICAN ZETTLER, INC.

10/9/17

AZ951/AZ952

RELAY ORDERING DATA

| STANDARD RELAYS — Light Duty Type | | | | | |
|-----------------------------------|---------------------|----------------------------|------------------|---------------|---------------|
| COIL SPECIFICATIONS | | | | ORDER NUMBER | |
| Nominal Coil VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Must Operate VDC | | |
| 3 | 3.3 | 20 | 2.25 | AZ951-1C-3DE | AZ952-1C-3DE |
| 5 | 6.7 | 56 | 3.75 | AZ951-1C-5DE | AZ952-1C-5DE |
| 6 | 8.0 | 80 | 4.50 | AZ951-1C-6DE | AZ952-1C-6DE |
| 12 | 16.0 | 320 | 9.00 | AZ951-1C-12DE | AZ952-1C-12DE |
| 24 | 32.0 | 1280 | 18.00 | AZ951-1C-24DE | AZ952-1C-24DE |

| SENSITIVE RELAYS — Light Duty Type | | | | | |
|------------------------------------|---------------------|----------------------------|------------------|----------------|----------------|
| COIL SPECIFICATIONS | | | | ORDER NUMBER | |
| Nominal Coil VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Must Operate VDC | | |
| 3 | 3.3 | 45 | 2.25 | AZ951-1C-3DSE | AZ952-1C-3DSE |
| 5 | 8.5 | 120 | 3.75 | AZ951-1C-5DSE | AZ952-1C-5DSE |
| 6 | 10.4 | 180 | 4.50 | AZ951-1C-6DSE | AZ952-1C-6DSE |
| 9 | 15.3 | 400 | 6.75 | AZ951-1C-9DSE | AZ952-1C-9DSE |
| 12 | 20.5 | 700 | 9.00 | AZ951-1C-12DSE | AZ952-1C-12DSE |
| 24 | 41.0 | 2800 | 18.00 | AZ951-1C-24DSE | AZ952-1C-24DSE |

| STANDARD RELAYS — Medium Duty Type | | | | | |
|------------------------------------|---------------------|----------------------------|------------------|----------------|----------------|
| COIL SPECIFICATIONS | | | | ORDER NUMBER | |
| Nominal Coil VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Must Operate VDC | | |
| 3 | 3.3 | 20 | 2.25 | AZ951-1CM-3DE | AZ952-1CM-3DE |
| 5 | 6.7 | 56 | 3.75 | AZ951-1CM-5DE | AZ952-1CM-5DE |
| 6 | 8.0 | 80 | 4.50 | AZ951-1CM-6DE | AZ952-1CM-6DE |
| 12 | 16.0 | 320 | 9.00 | AZ951-1CM-12DE | AZ952-1CM-12DE |
| 24 | 32.0 | 1280 | 18.00 | AZ951-1CM-24DE | AZ952-1CM-24DE |

| SENSITIVE RELAYS — Medium Duty Type | | | | | |
|-------------------------------------|---------------------|----------------------------|------------------|-----------------|-----------------|
| COIL SPECIFICATIONS | | | | ORDER NUMBER | |
| Nominal Coil VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Must Operate VDC | | |
| 3 | 3.3 | 45 | 2.25 | AZ951-1CM-3DSE | AZ952-1CM-3DSE |
| 5 | 8.5 | 120 | 3.75 | AZ951-1CM-5DSE | AZ952-1CM-5DSE |
| 6 | 10.4 | 180 | 4.50 | AZ951-1CM-6DSE | AZ952-1CM-6DSE |
| 9 | 15.3 | 400 | 6.75 | AZ951-1CM-9DSE | AZ952-1CM-9DSE |
| 12 | 20.5 | 700 | 9.00 | AZ951-1CM-12DSE | AZ952-1CM-12DSE |
| 15 | 25.6 | 1093 | 11.30 | AZ951-1CM-15DSE | AZ952-1CM-15DSE |
| 18 | 30.8 | 1575 | 13.50 | AZ951-1CM-18DSE | AZ952-1CM-18DSE |
| 24 | 41.0 | 2800 | 18.00 | AZ951-1CM-24DSE | AZ952-1CM-24DSE |

AZ951/AZ952

| STANDARD RELAYS — Heavy Duty Type | | | | ORDER NUMBER | |
|-----------------------------------|---------------------|----------------------------|------------------|----------------|----------------|
| COIL SPECIFICATIONS | | | | | |
| Nominal Coil VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Must Operate VDC | | |
| 3 | 3.3 | 20 | 2.25 | AZ951-1CH-3DE | AZ952-1CH-3DE |
| 5 | 6.7 | 56 | 3.75 | AZ951-1CH-5DE | AZ952-1CH-5DE |
| 6 | 8.0 | 80 | 4.50 | AZ951-1CH-6DE | AZ952-1CH-6DE |
| 12 | 16.0 | 320 | 9.00 | AZ951-1CH-12DE | AZ952-1CH-12DE |
| 24 | 32.0 | 1280 | 18.00 | AZ951-1CH-24DE | AZ952-1CH-24DE |

MECHANICAL DATA

| | | |
|------------------------------------|------------------------------------|-------------------------------------|
| | | <p>AZ951 PC BOARD LAYOUT</p> |
| <p>AZ951 WIRING DIAGRAM</p> | <p>AZ952 WIRING DIAGRAM</p> | <p>AZ952 PC BOARD LAYOUT</p> |

Dimensions in inches with metric equivalents in parentheses. Tolerance: $\pm 0.010''$

AMERICAN ZETTLER, INC.

10/9/17

PHONE: (949) 831-5000

www.azettler.com

E-MAIL: SALES@AZETTLER.COM

This specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.