

AZ166

MINIATURE POWER RELAY

FEATURES

- Top panel mount
- DPDT through 4PDT arrangement
- High switching capacity
- AC and DC coils
- CE marked
- UL, CUR file E43203
- TÜV pending



CONTACTS

| | |
|---------------------|---|
| Arrangement | DPDT (2 Form C) 3PDT (3 Form C) 4PDT (4 Form C) |
| Ratings | See chart on page 2 |
| UL, CUR | See chart on page 2 |
| Minimum Load | 5 VDC, 0.1 A |
| Material | -2C and 2CT contact Silver cerium -3C contact Silver cerium -4C contact Silver cerium |
| Resistance | < 50 milliohms initially (24 V, 1 A voltage drop method) |

COIL

| | |
|------------------------------------|---|
| Power | |
| At Pickup Voltage (typical) | DC: 576 mW, 6 to 48 VDC 704 mW, 110 VDC AC: .768 VA |
| Max. Continuous Dissipation | DC: 1.2 W (110 V : 1.5 W) at 20°C (68°F) AC: 1.7 VA at 20°C (68°F) |
| Temperature | 105°C (221°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

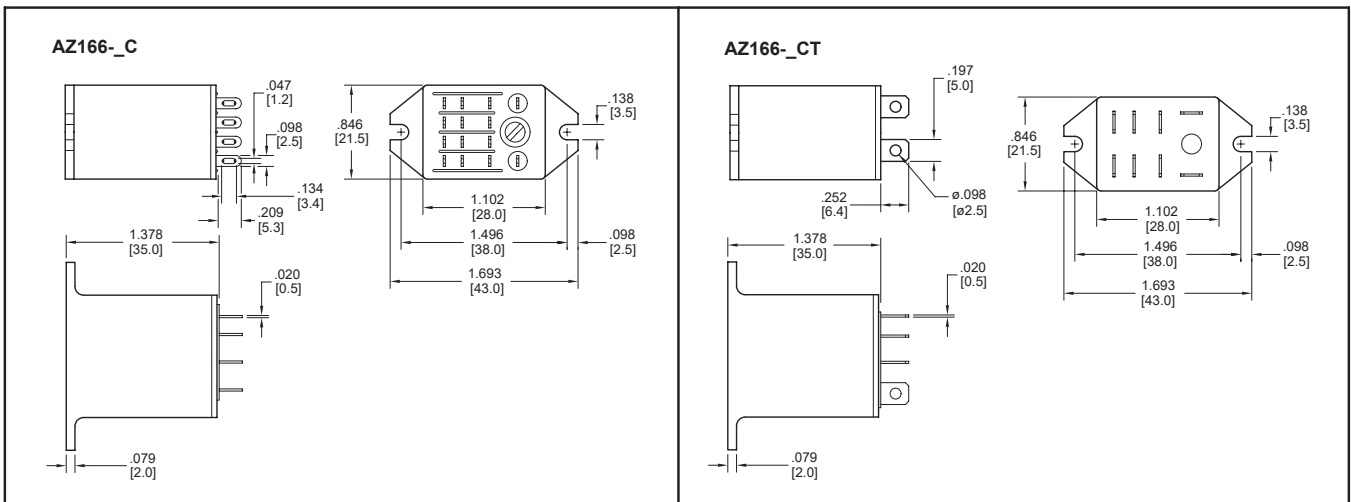
| | |
|--|---|
| Life Expectancy Mechanical Electrical | Minimum operations 2 x 10 ⁷ operations See UL/CUR ratings on page 2 |
| Operate Time | 25 msec max. at nominal coil voltage |
| Release Time | 25 msec at nominal coil voltage (without suppression) |
| Dielectric Strength (at sea level for 1 min.) | 1500 Vrms coil to contact 1000 Vrms contact to contact 1000 Vrms between contact sets |
| Insulation Resistance | 100 megohms min. at 20°C, 500 VDC, 50% RH |
| Dropout | DC: > 10% of nominal coil voltage AC: > 30% of nominal coil voltage |
| Ambient Temperature Operating Storage | -55°C (-67°F) to 70°C (158°F) -55°C (-67°F) to 105°C (221°F) |
| Vibration | 0.062" DA at 10–55 Hz |
| Shock | 20g |
| Enclosure | Polycarbonate |
| Terminals | Plug-in |
| Max. Solder Temp. | 250°C (482°F) |
| Max. Solder Time | 5 seconds |
| Weight | 37 grams |

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CONTACT RATINGS

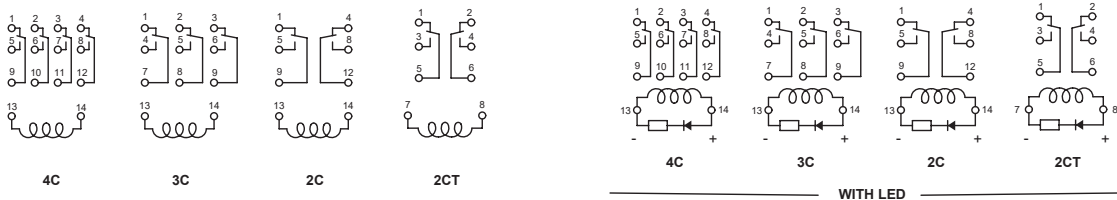
| | | | |
|------------------------|--|-----------------------|---|
| Maximum Ratings | DPDT Heavy duty, resistive load: Max. Switched Power: 300 W, 2500 VA Max. Switched Current: 10 A Max. Switched Voltage: 30 VDC, 250 VAC | UL/CUR Ratings | DPDT Heavy duty: 10 A, 250 VAC, 100k, General use 10 A, 30 VDC, 100k, Resistive 1/3 HP, 120/240 VAC, 100k Motor load |
| | DPDT Standard duty, resistive load: Max. Switched Power: 210 W, 1750 VA Max. Switched Current: 7 A Max. Switched Voltage: 30 VDC, 250 VAC | | DPDT, Standard duty: 7A, 250 VAC, 100k Resistive 7A, 30 VDC, 100k, Resistive 3A, 240 VAC/30 VDC, 100k, General use |
| | 3PDT, 4PDT, Standard duty, resistive load: Max. Switched Power: 150 W, 1250 VA Max. Switched Current: 5 A Max. Switched Voltage: 30 VDC, 250 VAC | | 3PDT, 4PDT, Standard duty: 5A, 250 VAC, 100k, Resistive 5A, 30 VDC, 100k, Resistive 3A, 240 VAC/30 VDC, 100k, General use |

MECHANICAL DATA



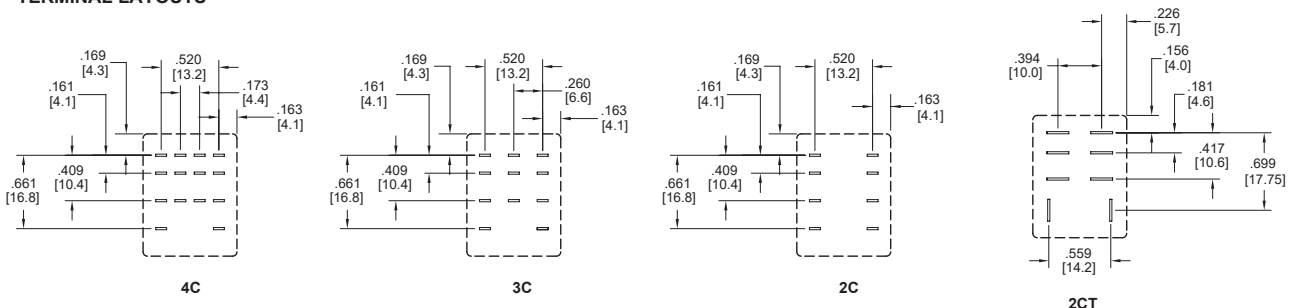
WIRING DIAGRAM

Viewed Towards Terminal



TERMINAL LAYOUTS

Viewed Towards Terminal



AMERICAN ZETTLER, INC.

www.azettler.com

75 COLUMBIA • ALISO VIEJO, CA 92656 • PHONE: (949) 831-5000 • FAX: (949) 831-8642 • E-MAIL: SALES@AZETTLER.COM

03/28/17

AZ166

RELAY ORDERING DATA

| STANDARD RELAYS: DC Coil | | | | | |
|--------------------------|------------------|---------------------|-------------------------------|-------------------|---------------|
| COIL SPECIFICATIONS | | | | | ORDER NUMBER* |
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Nominal Current mA $\pm 10\%$ | Coil Resistance | |
| 5 | 4.0 | 5.5 | 181.0 | 27.5 $\pm 10\%$ | AZ166-2C-5D |
| 6 | 4.8 | 6.6 | 150.0 | 40.0 $\pm 10\%$ | AZ166-2C-6D |
| 12 | 9.6 | 13.2 | 75.0 | 160 $\pm 10\%$ | AZ166-2C-12D |
| 24 | 19.2 | 26.4 | 36.9 | 650 $\pm 10\%$ | AZ166-2C-24D |
| 48 | 38.4 | 52.8 | 18.5 | 2600 $\pm 15\%$ | AZ166-2C-48D |
| 110 | 88.0 | 121.0 | 10.0 | 11,000 $\pm 15\%$ | AZ166-2C-110D |

| STANDARD RELAYS: AC Coil (50/60 Hz) | | | | | |
|-------------------------------------|------------------|---------------------|-------------------------------|-------------------|---------------|
| COIL SPECIFICATIONS | | | | | ORDER NUMBER* |
| Nominal Coil VAC | Must Operate VAC | Max. Continuous VAC | Nominal Current mA $\pm 10\%$ | Coil Resistance | |
| 6 | 4.8 | 7.1 | 200.0 | 11.5 $\pm 10\%$ | AZ166-2C-6A |
| 12 | 9.6 | 14.3 | 100.0 | 46.0 $\pm 10\%$ | AZ166-2C-12A |
| 24 | 19.2 | 28.6 | 50.0 | 184 $\pm 10\%$ | AZ166-2C-24A |
| 48 | 38.4 | 57.1 | 25.0 | 735 $\pm 10\%$ | AZ166-2C-48A |
| 120 | 96.0 | 143.0 | 10.0 | 4,550 $\pm 10\%$ | AZ166-2C-120A |
| 220 | 176.0 | 261.0 | 5.5 | 14,400 $\pm 15\%$ | AZ166-2C-220A |
| 240 | 192.0 | 288.0 | 5.0 | 22,000 $\pm 15\%$ | AZ166-2C-240A |

* For 3PDT or 4PDT substitute "-3C" or "-4C" for "-2C". For LED add "1" to the end of p/n.

RELAY ORDERING DATA

| HEAVY DUTY RELAYS: DC Coil | | | | | |
|----------------------------|------------------|---------------------|-------------------------------|-------------------|----------------|
| COIL SPECIFICATIONS | | | | | ORDER NUMBER* |
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Nominal Current mA $\pm 10\%$ | Coil Resistance | |
| 5 | 4.0 | 5.5 | 181.0 | 27.5 $\pm 10\%$ | AZ166-2CT-5D |
| 6 | 4.8 | 6.6 | 150.0 | 40.0 $\pm 10\%$ | AZ166-2CT-6D |
| 12 | 9.6 | 13.2 | 75.0 | 160 $\pm 10\%$ | AZ166-2CT-12D |
| 24 | 19.2 | 26.4 | 36.9 | 650 $\pm 10\%$ | AZ166-2CT-24D |
| 48 | 38.4 | 52.8 | 18.5 | 2600 $\pm 15\%$ | AZ166-2CT-48D |
| 110 | 88.0 | 121.0 | 10.0 | 11,000 $\pm 15\%$ | AZ166-2CT-110D |

| HEAVY DUTY RELAYS: AC Coil (50/60 Hz) | | | | | |
|---------------------------------------|------------------|---------------------|-------------------------------|-------------------|----------------|
| COIL SPECIFICATIONS | | | | | ORDER NUMBER* |
| Nominal Coil VAC | Must Operate VAC | Max. Continuous VAC | Nominal Current mA $\pm 10\%$ | Coil Resistance | |
| 6 | 4.8 | 7.1 | 200.0 | 11.5 $\pm 10\%$ | AZ166-2CT-6A |
| 12 | 9.6 | 14.3 | 100.0 | 46.0 $\pm 10\%$ | AZ166-2CT-12A |
| 24 | 19.2 | 28.6 | 50.0 | 184 $\pm 10\%$ | AZ166-2CT-24A |
| 48 | 38.4 | 57.1 | 25.0 | 735 $\pm 10\%$ | AZ166-2CT-48A |
| 120 | 96.0 | 143.0 | 10.0 | 4,550 $\pm 10\%$ | AZ166-2CT-120A |
| 220 | 176.0 | 261.0 | 5.5 | 14,400 $\pm 15\%$ | AZ166-2CT-220A |
| 240 | 192.0 | 288.0 | 5.0 | 22,000 $\pm 15\%$ | AZ166-2CT-240A |

* For LED add "1" to the end of p/n.

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