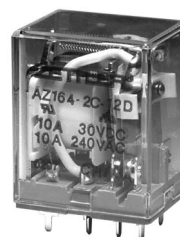


## MINIATURE POWER RELAY

### FEATURES

- PC Terminals
- SPDT through 4PDT arrangement
- High switching capacity
- AC and DC coils
- Push To Test lever available on some models
- CE marking
- UL, CUR file E43203
- TÜV pending



### CONTACTS

|                    |                                                                                                                                  |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Arrangement</b> | SPDT (1 Form C)<br>DPDT (2 Form C)<br>3PDT (3 Form C)<br>4PDT (4 Form C)                                                         |
| <b>Ratings</b>     | See chart on page 2                                                                                                              |
| <b>UL, CUR</b>     | See chart on page 2                                                                                                              |
| <b>Material</b>    | -1CT contact Silver cadmium oxide<br>-2C and 2CT contact Silver cerium<br>-3C contact Silver cerium<br>-4C contact Silver cerium |
| <b>Resistance</b>  | < 50 milliohms initially<br>(24 V, 1 A voltage drop method)                                                                      |

### COIL

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

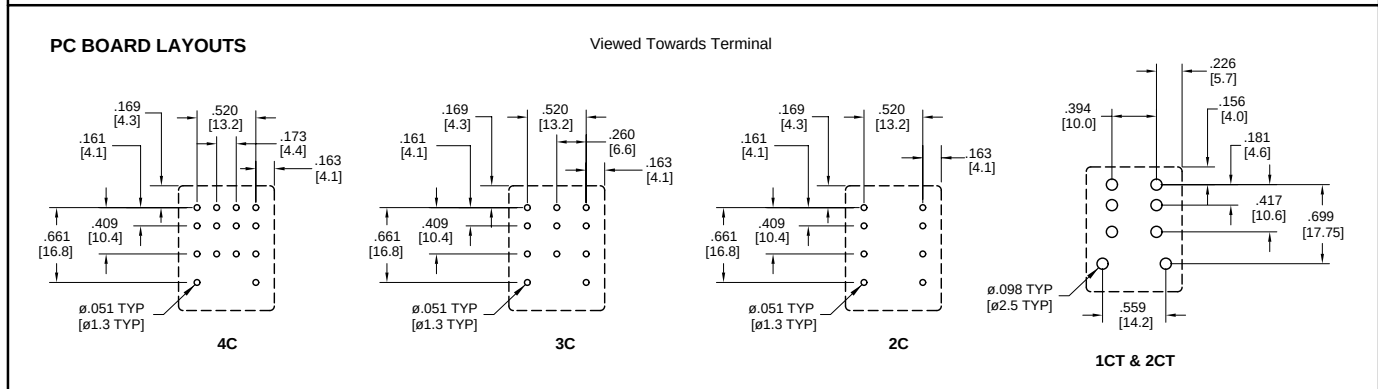
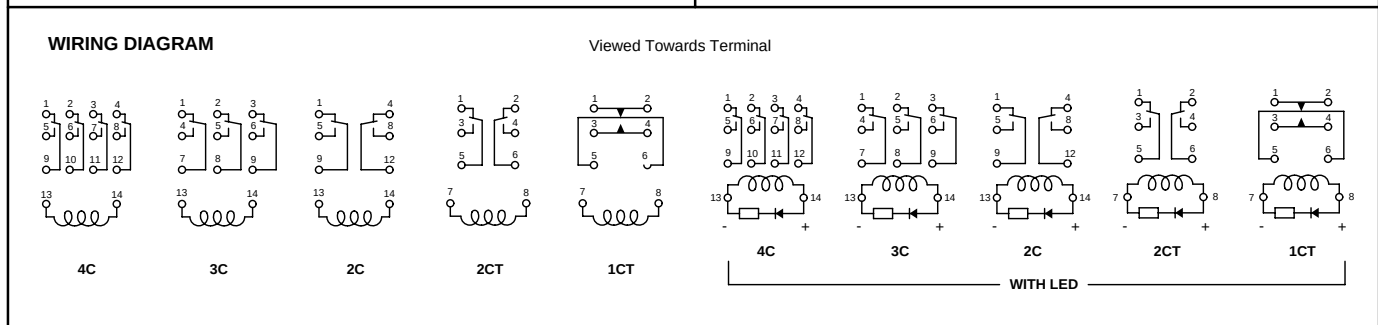
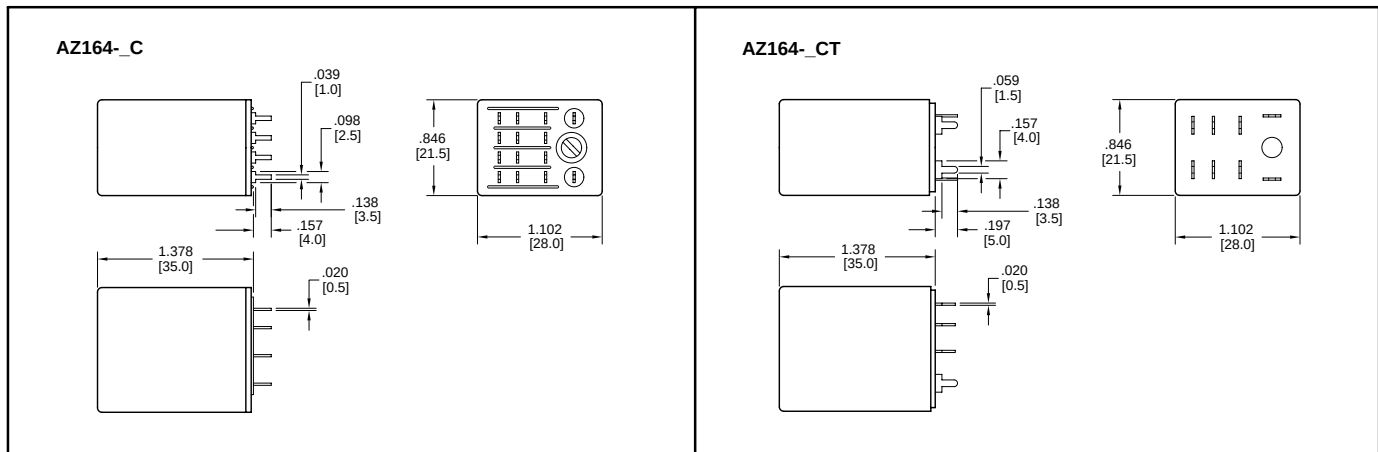
|                                                                  |                                                                                             |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Life Expectancy</b><br><b>Mechanical</b><br><b>Electrical</b> | Minimum operations<br>2 x 10 <sup>7</sup> operations<br>See UL/CUR ratings on page 2        |
| <b>Operate Time</b>                                              | 25 msec max. at nominal coil voltage                                                        |
| <b>Release Time</b>                                              | 25 msec at nominal coil voltage<br>(without suppression)                                    |
| <b>Dielectric Strength (at sea level for 1 min.)</b>             | 1500 Vrms coil to contact<br>1000 Vrms contact to contact<br>1000 Vrms between contact sets |
| <b>Insulation Resistance</b>                                     | 100 megohms min. at 500 VDC,<br>20°C, 50% RH                                                |
| <b>Dropout</b>                                                   | DC: > 10% of nominal coil voltage<br>AC: > 30% of nominal coil voltage                      |
| <b>Ambient Temperature</b><br><b>Operating</b><br><b>Storage</b> | -55°C (-67°F) to 70°C (158°F)<br>-55°C (-67°F) to 105°C (221°F)                             |
| <b>Vibration</b>                                                 | 0.062" (1.5 mm) DA at 10–55 Hz                                                              |
| <b>Shock</b>                                                     | 20 g                                                                                        |
| <b>Enclosure</b>                                                 | Polycarbonate                                                                               |
| <b>Terminals</b>                                                 | PC                                                                                          |
| <b>Max. Solder Temp.</b>                                         | 250°C (482°F)                                                                               |
| <b>Max. Solder Time</b>                                          | 5 seconds                                                                                   |
| <b>Weight</b>                                                    | 37 grams                                                                                    |

# AZ164

## CONTACT RATINGS

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Maximum Ratings</b> | <b>SPDT Heavy duty, resistive load:</b><br>Max. Switched Power: 450 W, 3750 VA<br>Max. Switched Current: 15 A<br>Max. Switched Voltage: 30 VDC, 250 VAC<br><b>DPDT Heavy duty, resistive load:</b><br>Max. Switched Power: 300 W, 2500 VA<br>Max. Switched Current: 10 A<br>Max. Switched Voltage: 30 VDC, 250 VAC<br><b>DPDT Standard duty, resistive load:</b><br>Max. Switched Power: 210 W, 1750 VA<br>Max. Switched Current: 7 A<br>Max. Switched Voltage: 30 VDC, 250 VAC<br><b>3PDT, 4PDT, Standard duty, resistive load:</b><br>Max. Switched Power: 150 W, 1250 VA<br>Max. Switched Current: 5 A<br>Max. Switched Voltage: 30 VDC, 250 VAC | <b>UL/CUR Ratings</b> | <b>SPDT Heavy duty:</b><br>15 A, 250 VAC 100k, Resistive<br>15 A, 30 VDC, 100k N.O., 30k N.C., Resistive<br><b>DPDT Heavy duty:</b><br>10 A, 250 VAC, 100k, General use<br>10 A, 30 VDC, 100k, Resistive<br>1/3 HP, 120/240 VAC, 100k Motor load<br><b>DPDT, Standard duty:</b><br>7A, 250 VAC, 100k Resistive<br>7A, 30 VDC, 100k, Resistive<br>3A, 240 VAC/30 VDC, 100k, General use<br><b>3PDT, 4PDT, Standard duty:</b><br>5A, 250 VAC, 100k, Resistive<br>5A, 30 VDC, 100k, Resistive<br>3A, 240 VAC/30 VDC, 100k, General use |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## MECHANICAL DATA



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2003-07-30

# AZ164

## 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 Ohm |               |
| 5                        | 4.0              | 5.5                 | 181.0                         | 27.5 $\pm 10\%$     | AZ164-2C-5D   |
| 6                        | 4.8              | 6.6                 | 150.0                         | 40.0 $\pm 10\%$     | AZ164-2C-6D   |
| 12                       | 9.6              | 13.2                | 75.0                          | 160 $\pm 10\%$      | AZ164-2C-12D  |
| 24                       | 19.2             | 26.4                | 36.9                          | 650 $\pm 10\%$      | AZ164-2C-24D  |
| 48                       | 38.4             | 52.8                | 18.5                          | 2600 $\pm 15\%$     | AZ164-2C-48D  |
| 110                      | 88.0             | 121.0               | 10.0                          | 11,000 $\pm 15\%$   | AZ164-2C-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 Ohm |               |
| 6                                   | 4.8              | 7.1                 | 200.0                         | 11.5 $\pm 10\%$     | AZ164-2C-6A   |
| 12                                  | 9.6              | 14.3                | 100.0                         | 46.0 $\pm 10\%$     | AZ164-2C-12A  |
| 24                                  | 19.2             | 28.6                | 50.0                          | 184 $\pm 10\%$      | AZ164-2C-24A  |
| 48                                  | 38.4             | 57.1                | 25.0                          | 735 $\pm 10\%$      | AZ164-2C-48A  |
| 120                                 | 96.0             | 143.0               | 10.0                          | 4,550 $\pm 10\%$    | AZ164-2C-120A |
| 220                                 | 176.0            | 261.0               | 5.5                           | 14,400 $\pm 15\%$   | AZ164-2C-220A |
| 240                                 | 192.0            | 288.0               | 5.0                           | 22,000 $\pm 15\%$   | AZ164-2C-240A |

\* For 3PDT or 4PDT substitute "-3C" or "-4C" for "-2C". For LED add "1" to the end of p/n. "-2C" and "-4C" versions are available with a lockable "push to test" lever. Add suffix "P" to part number for "Push to Test" lever.

## 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 Ohm |                |
| 5                          | 4.0              | 5.5                 | 181.0                         | 27.5 $\pm 10\%$     | AZ164-1CT-5D   |
| 6                          | 4.8              | 6.6                 | 150.0                         | 40.0 $\pm 10\%$     | AZ164-1CT-6D   |
| 12                         | 9.6              | 13.2                | 75.0                          | 160 $\pm 10\%$      | AZ164-1CT-12D  |
| 24                         | 19.2             | 26.4                | 36.9                          | 650 $\pm 10\%$      | AZ164-1CT-24D  |
| 48                         | 38.4             | 52.8                | 18.5                          | 2600 $\pm 15\%$     | AZ164-1CT-48D  |
| 110                        | 88.0             | 121.0               | 10.0                          | 11,000 $\pm 15\%$   | AZ164-1CT-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 Ohm |                |
| 6                                     | 4.8              | 7.1                 | 200.0                         | 11.5 $\pm 10\%$     | AZ164-1CT-6A   |
| 12                                    | 9.6              | 14.3                | 100.0                         | 46.0 $\pm 10\%$     | AZ164-1CT-12A  |
| 24                                    | 19.2             | 28.6                | 50.0                          | 184 $\pm 10\%$      | AZ164-1CT-24A  |
| 48                                    | 38.4             | 57.1                | 25.0                          | 735 $\pm 10\%$      | AZ164-1CT-48A  |
| 120                                   | 96.0             | 143.0               | 10.0                          | 4,550 $\pm 10\%$    | AZ164-1CT-120A |
| 220                                   | 176.0            | 261.0               | 5.5                           | 14,400 $\pm 15\%$   | AZ164-1CT-220A |
| 240                                   | 192.0            | 288.0               | 5.0                           | 22,000 $\pm 15\%$   | AZ164-1CT-240A |

\* For DPDT substitute "-2CT" for "-1CT". For LED add "1" to the end of p/n.

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2003-07-30

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