

# AZ165

## MINIATURE POWER RELAY

### FEATURES

- Plug in/Solder terminals
- DPDT through 4PDT arrangement
- High switching capacity
- AC and DC coils
- Push To Test lever available on some models
- CE marked
- UL, CUR file E43203
- TÜV pending



### CONTACTS

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

### COIL

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

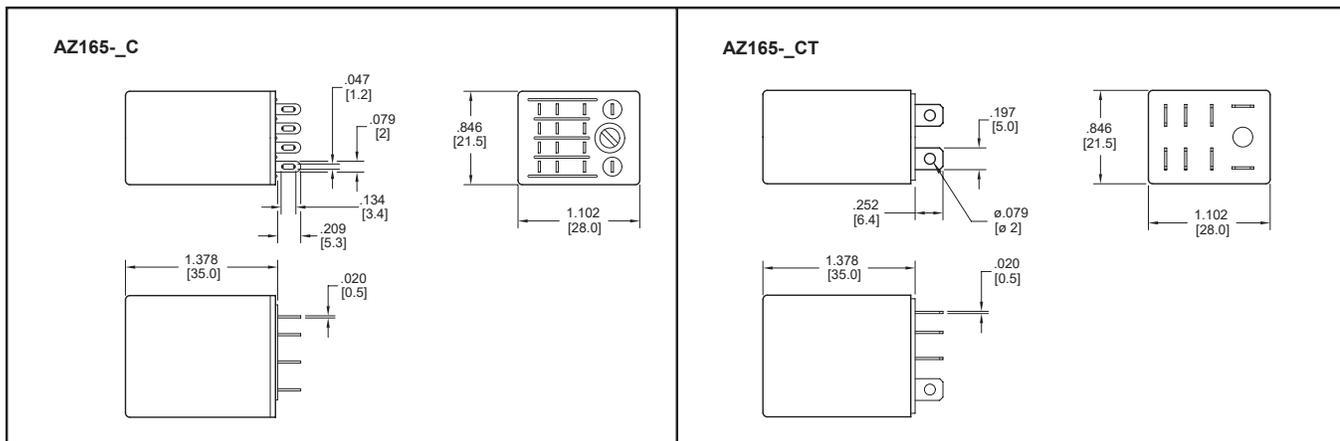
<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 2 x 10 <sup>7</sup> operations See UL/CUR ratings on page 2
<b>Operate Time</b>	25 msec max. at nominal coil voltage
<b>Release Time</b>	25 msec at nominal coil voltage (without suppression)
<b>Dielectric Strength (at sea level for 1 min.)</b>	1500 Vrms coil to contact 1000 Vrms contact to contact 1000 Vrms between contact sets
<b>Insulation Resistance</b>	100 megohms min. at 500 VDC, 20°C, 50% RH
<b>Dropout</b>	DC: > 10% of nominal coil voltage AC: > 30% of nominal coil voltage
<b>Ambient Temperature Operating Storage</b>	-55°C (-67°F) to 70°C (158°F) -55°C (-67°F) to 105°C (221°F)
<b>Vibration</b>	0.062" 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

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## CONTACT RATINGS

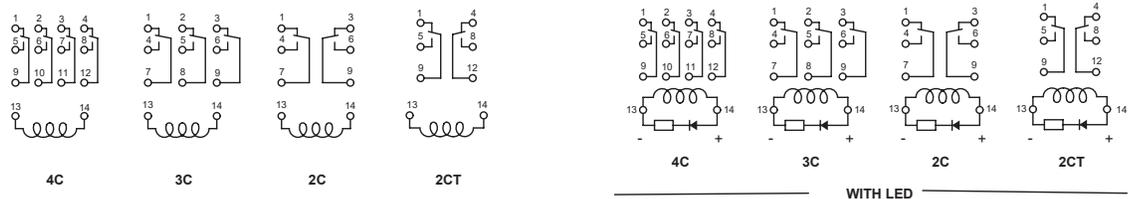
<p><b>Maximum Ratings</b></p> <p><b>DPDT Heavy duty, resistive load:</b>          Max. Switched Power: 300 W, 2500 VA          Max. Switched Current: 10 A          Max. Switched Voltage: 30 VDC, 250 VAC</p> <p><b>DPDT Standard duty, resistive load:</b>          Max. Switched Power: 210 W, 1750 VA   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



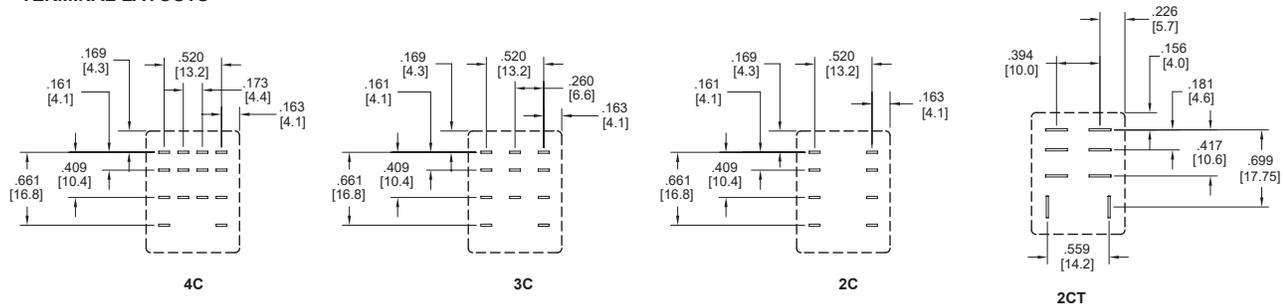
## WIRING DIAGRAM

Viewed Towards Terminal



## TERMINAL LAYOUTS

Viewed Towards Terminal



# AZ165

## 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 $\pm 10\%$	AZ165-2C-5D
6	4.8	6.6	150.0	40.0 $\pm 10\%$	AZ165-2C-6D
12	9.6	13.2	75.0	160 $\pm 10\%$	AZ165-2C-12D
24	19.2	26.4	36.9	650 $\pm 10\%$	AZ165-2C-24D
48	38.4	52.8	18.5	2600 $\pm 15\%$	AZ165-2C-48D
110	88.0	121.0	10.0	11,000 $\pm 15\%$	AZ165-2C-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 $\pm 10\%$	AZ165-2C-6A
12	9.6	14.3	100.0	46.0 $\pm 10\%$	AZ165-2C-12A
24	19.2	28.6	50.0	184 $\pm 10\%$	AZ165-2C-24A
48	38.4	57.1	25.0	735 $\pm 10\%$	AZ165-2C-48A
120	96.0	143.0	10.0	4,550 $\pm 10\%$	AZ165-2C-120A
220	176.0	261.0	5.5	14,400 $\pm 15\%$	AZ165-2C-220A
240	192.0	288.0	5.0	22,000 $\pm 15\%$	AZ165-2C-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	
5	4.0	5.5	181.0	27.5 $\pm 10\%$	AZ165-2CT-5D
6	4.8	6.6	150.0	40.0 $\pm 10\%$	AZ165-2CT-6D
12	9.6	13.2	75.0	160 $\pm 10\%$	AZ165-2CT-12D
24	19.2	26.4	36.9	650 $\pm 10\%$	AZ165-2CT-24D
48	38.4	52.8	18.5	2600 $\pm 15\%$	AZ165-2CT-48D
110	88.0	121.0	10.0	11,000 $\pm 15\%$	AZ165-2CT-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 $\pm 10\%$	AZ165-2CT-6A
12	9.6	14.3	100.0	46.0 $\pm 10\%$	AZ165-2CT-12A
24	19.2	28.6	50.0	184 $\pm 10\%$	AZ165-2CT-24A
48	38.4	57.1	25.0	735 $\pm 10\%$	AZ165-2CT-48A
120	96.0	143.0	10.0	4,550 $\pm 10\%$	AZ165-2CT-120A
220	176.0	261.0	5.5	14,400 $\pm 15\%$	AZ165-2CT-220A
240	192.0	288.0	5.0	22,000 $\pm 15\%$	AZ165-2CT-240A

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

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2/26/19

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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.