

# 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

<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, 0.1 A
<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

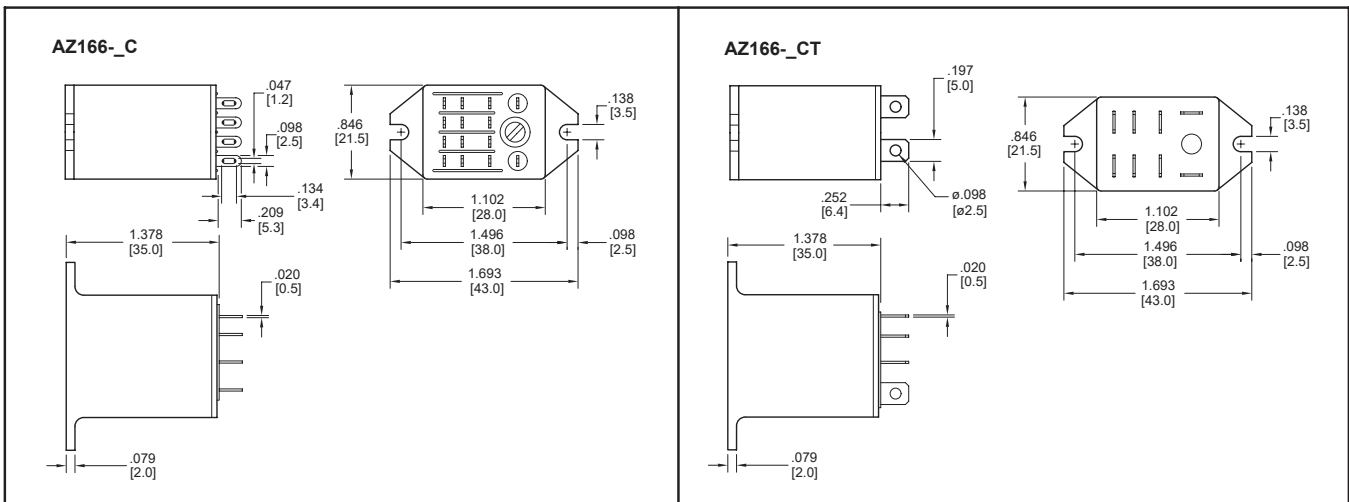
<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 2 x 10 <sup>7</sup> operations See UL/CUR ratings on page 2
<b>Operate Time</b>	25 msec max. at nominal coil voltage
<b>Release Time</b>	25 msec at nominal coil voltage (without suppression)
<b>Dielectric Strength (at sea level 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 20°C, 500 VDC, 50% RH
<b>Dropout</b>	DC: > 10% of nominal coil voltage AC: > 30% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b> <b>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>	20g
<b>Enclosure</b>	Polycarbonate
<b>Terminals</b>	Plug-in
<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

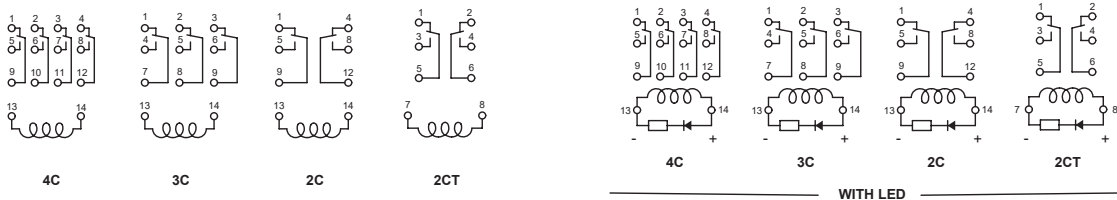
<b>Maximum Ratings</b>	<b>DPDT Heavy duty, resistive load:</b> Max. Switched Power: 300 W, 2500 VA Max. Switched Current: 10 A Max. Switched Voltage: 30 VDC, 250 VAC	<b>UL/CUR Ratings</b>	<b>DPDT Heavy duty:</b> 10 A, 250 VAC, 100k, General use 10 A, 30 VDC, 100k, Resistive 1/3 HP, 120/240 VAC, 100k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

## MECHANICAL DATA



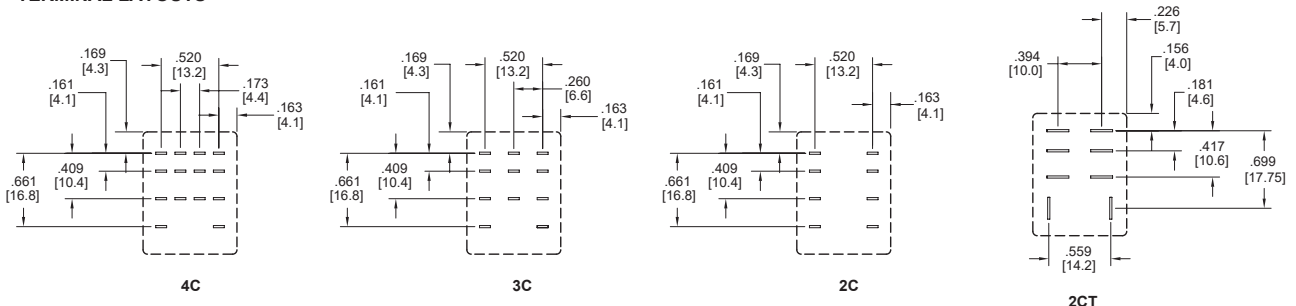
## WIRING DIAGRAM

Viewed Towards Terminal



## TERMINAL LAYOUTS

Viewed Towards Terminal



**AMERICAN ZETTLER, INC.**

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03/28/17

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## 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

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