

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

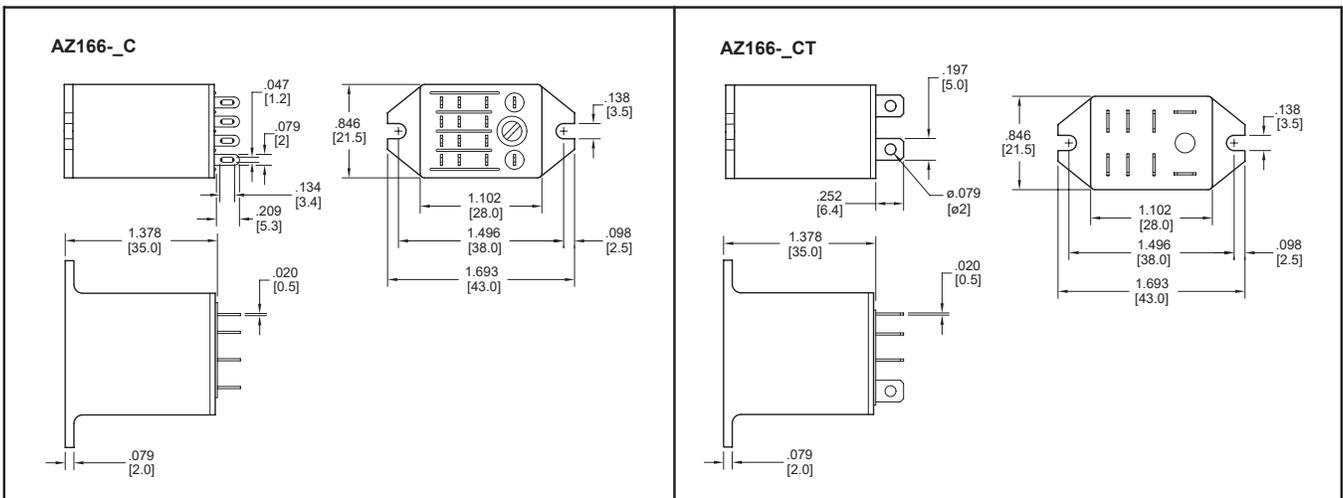
Life Expectancy Mechanical Electrical	Minimum operations 2 x 10 ⁷ operations See UL/CUR ratings on page 2
Operate Time	25 msec max. at nominal coil voltage
Release Time	25 msec at nominal coil voltage (without suppression)
Dielectric Strength (at sea level for 1 min.)	1500 Vrms coil to contact 1000 Vrms 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

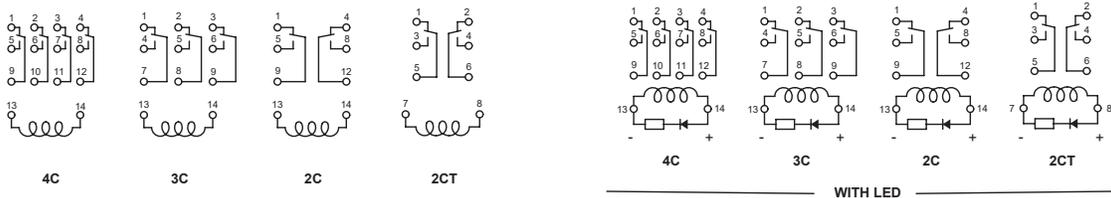
Maximum Ratings	DPDT Heavy duty, resistive load: Max. Switched Power: 300 W, 2500 VA Max. Switched Current: 10 A Max. Switched Voltage: 30 VDC, 250 VAC	UL/CUR Ratings	DPDT Heavy duty: 10 A, 250 VAC, 100k, General use 10 A, 30 VDC, 100k, Resistive 1/3 HP, 120/240 VAC, 100k Motor load
	DPDT Standard duty,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



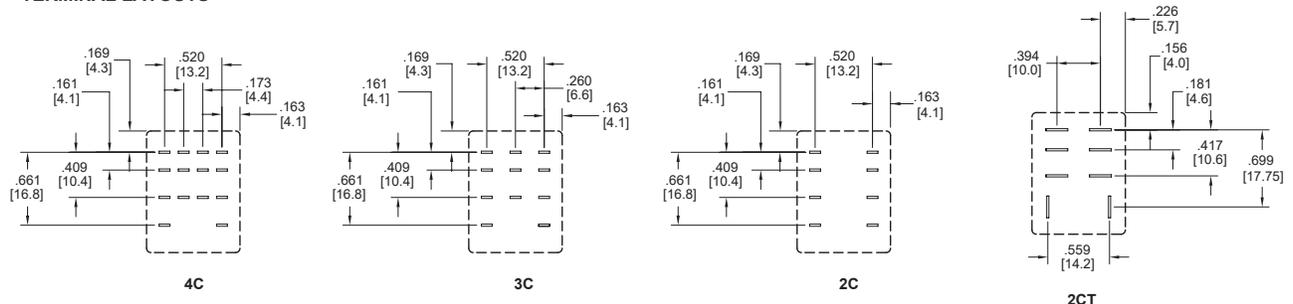
WIRING DIAGRAM

Viewed Towards Terminal



TERMINAL LAYOUTS

Viewed Towards Terminal



AMERICAN ZETTLER, INC.

02/28/19

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
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240	192.0	288.0	5.0	22,000 $\pm 15\%$	AZ166-2CT-240A

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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.