

## SUBMINIATURE PC BOARD RELAY

### FEATURES

- Subminiature size for high density packaging
- Coil sensitivity to 100mW
- Extremely low cost
- Coils to 24VDC
- Epoxy sealed for automatic wave soldering
- 1 Amp and 2 Amp contacts
- Life expectancy to 10 million operations
- Meets FCC Part 68.302 1500V lightning surge
- Meets FCC Part 68.304 1000V dielectric
- UL file E43203; CSA file 74120



### CONTACTS

<b>Arrangement</b>	SPDT (1 Form C) Welded crossbar construction
<b>Ratings</b>	Resistive load:
<b>Light Duty</b>	Max. switched power: 30W or 60VA Max. switched current: 1A Max. switched voltage: 150VDC or 300VAC <b>UL Rating:</b> 1A at 30VDC 0.5A at 120VAC
<b>Heavy Duty</b>	Max. switched power: 60W or 120VA Max. switched current: 2A Max. switched voltage: 150VDC or 300VAC <b>UL Rating:</b> 2A at 30VDC 1A at 120VAC
<b>Material</b>	
<b>Light Duty</b>	Silver palladium, gold clad
<b>Heavy Duty</b>	Silver nickel
<b>Resistance</b>	< 50 milliohms initially

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	Standard coil: 220mW Sensitive coil: 100mW
<b>Max. Continuous Dissipation</b>	1.1W at 20°C (68°F) ambient 0.8W at 40°C (104°F) ambient
<b>Temperature Rise</b>	Standard: 40°C (72°F) at nominal coil voltage Sensitive: 22°C (40°F) at nominal voltage
<b>Temperature</b>	Max. 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. Other coil resistances and sensitivities available upon request.
4. Specifications subject to change without notice.

### GENERAL DATA

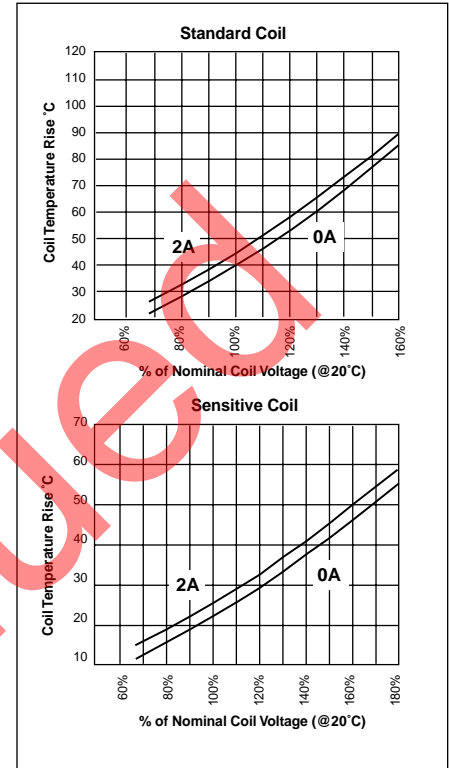
<b>Life Expectancy</b>	Minimum operations 10 million operations
<b>Mechanical</b>	Standard Duty: 5 x 10 <sup>5</sup> at 1A, 30VDC Res. 4 x 10 <sup>5</sup> at 0.5A, 120VAC Res.
<b>Electrical</b>	Heavy Duty: 2 x 10 <sup>5</sup> at 2A, 30VDC Res. 2 x 10 <sup>5</sup> at 1A, 120VAC Res.
<b>Operate Time (typical)</b>	Standard: 3ms at nominal coil voltage Sensitive: 5ms at nominal coil voltage
<b>Release Time (typical)</b>	1ms at nominal coil voltage (with no coil suppression)
<b>Capacitance</b>	Coil to contact: 3.0pF Contact to contact: 3.0pF
<b>Bounce (typical)</b>	At 10mA contact current 2ms at operate 8ms at release
<b>Dielectric Strength (at sea level for 1 min.)</b>	1250Vrms coil to contact 500Vrms between open contacts Meets FCC Part 68.302 1500V lightning surge Meets FCC Part 68.304 1000V dielectric
<b>Insulation Resistance</b>	100 megohms min. at 20°C, 500VDC, 50% RH
<b>Dropout</b>	Greater than 10% of nominal coil voltage
<b>Ambient Temperature</b>	At nominal coil voltage
<b>Operating</b>	Standard: -25°C (-13°F) to 60°C (140°F) Sensitive: -25°C (-13°F) to 75°C (167°F)
<b>Storage</b>	Both: -25°C (-13°F) to 105°C (221°F)
<b>Vibration</b>	0.062" DA at 10–55 Hz
<b>Shock</b>	Standard: 10g Sensitive: 6g
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy
<b>Max. Solder Temp.</b>	270°C (518°F)
<b>Max. Solder Time</b>	5 seconds
<b>Max. Immersion Time</b>	30 seconds
<b>Weight</b>	3.5 grams

# AZ5

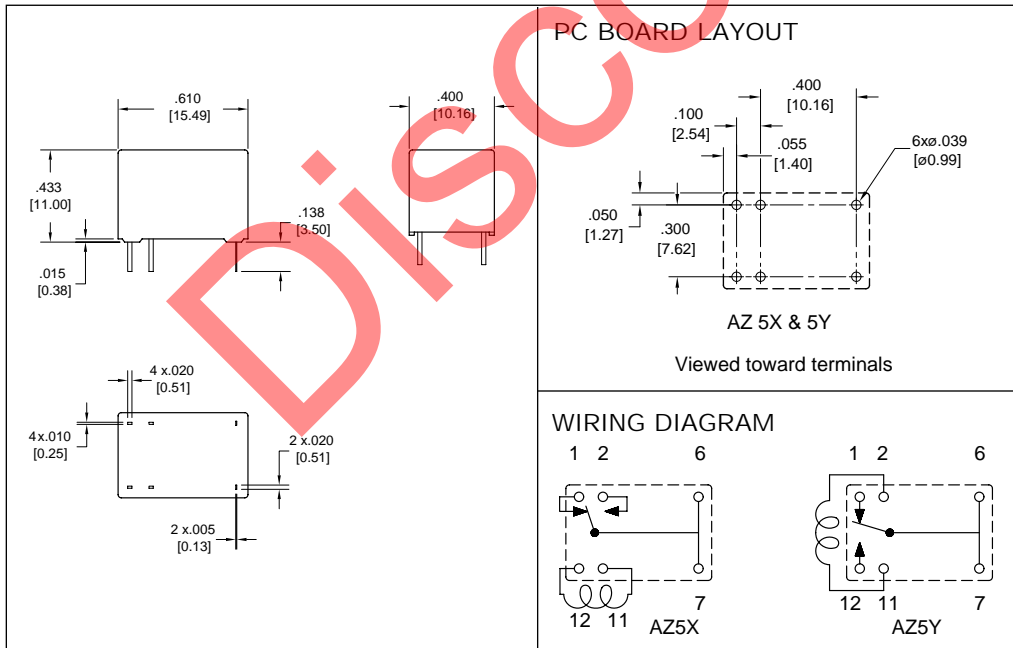
## RELAY ORDERING DATA

STANDARD RELAYS: Light Duty Type					
COIL SPECIFICATIONS				ORDER NUMBER	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	AZ5X Footprint	AZ5Y Footprint
5	6.8	56	3.5	AZ5X-1C-5DE	AZ5Y-1C-5DE
6	8.1	80	4.2	AZ5X-1C-6DE	AZ5Y-1C-6DE
9	12.2	180	6.3	AZ5X-1C-9DE	AZ5Y-1C-9DE
12	16.2	320	8.4	AZ5X-1C-12DE	AZ5Y-1C-12DE
24	32.4	1,280	16.8	AZ5X-1C-24DE	AZ5Y-1C-24DE
SENSITIVE RELAYS: Light Duty Type					
COIL SPECIFICATIONS				ORDER NUMBER	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	AZ5X Footprint	AZ5Y Footprint
5	10.0	120	3.5	AZ5X-1C-5DSE	AZ5Y-1C-5DSE
6	12.0	180	4.2	AZ5X-1C-6DSE	AZ5Y-1C-6DSE
9	18.0	405	6.3	AZ5X-1C-9DSE	AZ5Y-1C-9DSE
12	24.0	700	8.4	AZ5X-1C-12DSE	AZ5Y-1C-12DSE
24	48.0	2,800	16.8	AZ5X-1C-24DSE	AZ5Y-1C-24DSE
STANDARD RELAYS: Heavy Duty Type					
COIL SPECIFICATIONS				ORDER NUMBER	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	AZ5X Footprint	AZ5Y Footprint
5	6.8	56	3.5	AZ5X-1CH-5DE	AZ5Y-1CH-5DE
6	8.1	80	4.2	AZ5X-1CH-6DE	AZ5Y-1CH-6DE
9	12.2	180	6.3	AZ5X-1CH-9DE	AZ5Y-1CH-9DE
12	16.2	320	8.4	AZ5X-1CH-12DE	AZ5Y-1CH-12DE
24	32.4	1,280	16.8	AZ5X-1CH-24DE	AZ5Y-1CH-24DE

## Coil Temperature Rise

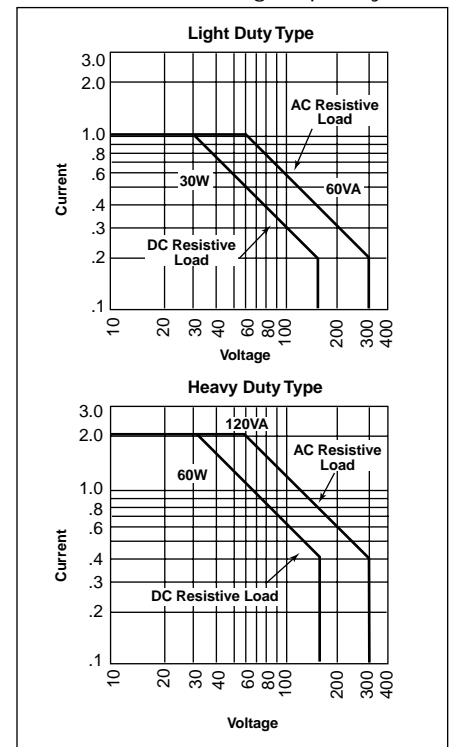


## MECHANICAL DATA



Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm .010''$

## Maximum Switching Capacity



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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.