

## SUBMINIATURE PC BOARD RELAY

### FEATURES

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



### CONTACTS

<b>Arrangement</b>	SPDT (1 Form C) Welded crossbar construction
<b>Ratings</b>	Resistive load: Max. switched power: 30 W or 60 VA Max. switched current: 1 A Max. switched voltage: 150 VDC or 300 VAC <b>UL Rating:</b> 1 A at 30 VDC 0.5 A at 120 VAC
<b>Light Duty</b>	
<b>Heavy Duty</b>	Max. switched power: 60 W or 120 VA Max. switched current: 2 A Max. switched voltage: 150 VDC or 300 VAC <b>UL Rating:</b> 2 A at 30 VDC 1 A at 120 VAC
<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: 220 mW Sensitive coil: 100 mW
<b>Max. Continuous Dissipation</b>	1.1 W at 20°C (68°F) ambient .8 W 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 1 A, 30 VDC Res. 4 x 10 <sup>5</sup> at 0.5 A, 120 VAC Res.
<b>Electrical</b>	Heavy Duty: 2 x 10 <sup>5</sup> at 2 A, 30 VDC Res. 2 x 10 <sup>5</sup> at 1 A, 120 VAC Res.
<b>Operate Time (typical)</b>	Standard: 3 ms at nominal coil voltage Sensitive: 5 ms at nominal coil voltage
<b>Release Time (typical)</b>	1 ms at nominal coil voltage (with no coil suppression)
<b>Capacitance</b>	Coil to contact: 3.0 pF Contact to contact: 3.0 pF
<b>Bounce (typical)</b>	At 10 mA contact current 2 ms at operate 8 ms at release
<b>Dielectric Strength (at sea level for 1 min.)</b>	1250 Vrms coil to contact 500 Vrms between open contacts Meets FCC Part 68.302 1500 V lightning surge Meets FCC Part 68.304 1000 V dielectric
<b>Insulation Resistance</b>	100 megohms min. at 20°C, 500 VDC, 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: 10 g Sensitive: 6 g
<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

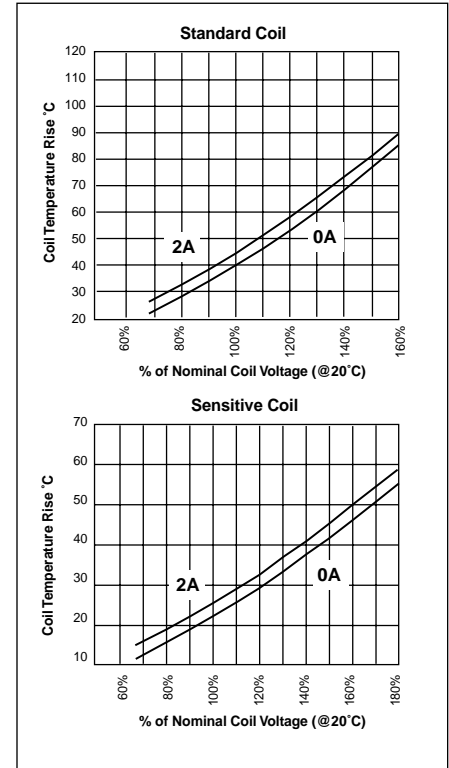


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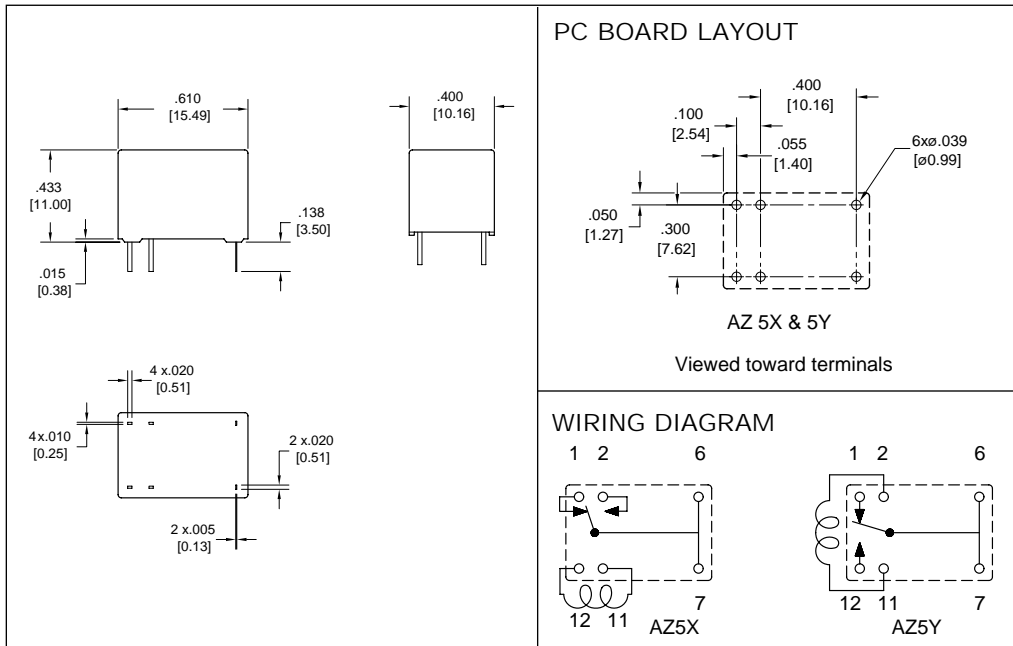
## RELAY ORDERING DATA

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

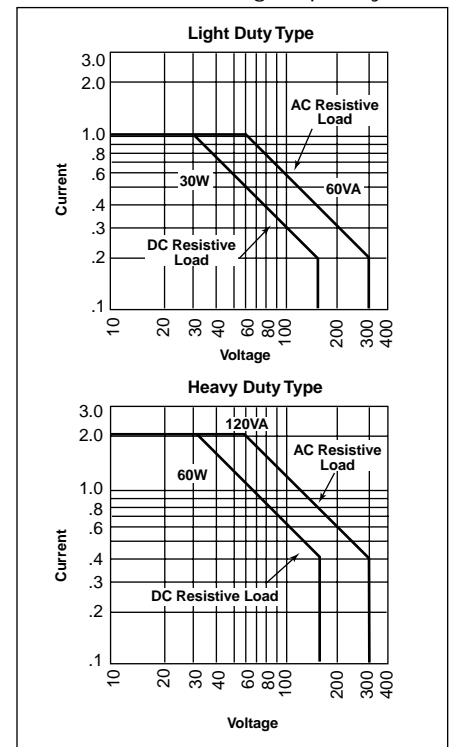


## MECHANICAL DATA



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

## Maximum Switching Capacity



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