

# AZ951/AZ952

## SUBMINIATURE POWER RELAY

### FEATURES

- Subminiature size for high density packaging
- Coil sensitivity to 116 mW
- Extremely low cost
- Coils to 24 VDC
- Epoxy sealed for automatic wave soldering
- 1 Amp, 3 Amp & 5 Amp contacts
- Life expectancy to 10 million operations
- UL, CUR file E43203



### CONTACTS

<b>Arrangement</b>	SPDT (1 Form C)
<b>Ratings</b>	Resistive load:
<b>Light Duty</b>	Max. switched power: 30 W or 125 VA Max. switched current: 1 A Max. switched voltage: 150 VDC or 300 VAC UL Rating: 1 A at 30 VDC 1 A at 125 VAC
<b>Medium Duty</b>	Max. switched power: 90 W or 375 VA Max. switched current: 3 A Max. switched voltage: 150 VDC or 300 VAC UL Rating: 3 A at 30 VDC 3 A at 125 VAC
<b>Heavy Duty</b>	Max. switched power: 150 W or 625 VA Max. switched current: 5 A Max. switched voltage: 150 VDC or 300 VAC UL Rating: 5 A at 30 VDC 5 A at 125 VAC 270 VA, 120 VAC Pilot Duty N.O. 30k cycles, N.C. 6k cycles
<b>Material</b>	Light and Medium Duty: Silver, gold plated Heavy Duty: Silver nickel gold plated
<b>Resistance</b>	< 100 milliohms initially

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	Standard Coil: 253 mW Sensitive coil: 116 mW
<b>Max Continuous Dissipation</b>	0.8 W at 20°C (68°F) ambient 0.6 W at 40°C (104°F) ambient
<b>Temperature Rise</b>	At nominal coil voltage: Standard: 54°C (97°F) Sensitive: 30°C (54°F)
<b>Max. Temperature</b>	105°C (221°F)

### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>7</sup> 1 x 10 <sup>5</sup> at 3 A 120 VAC Res.
<b>Operate Time (typical)</b>	5 ms at nominal coil voltage
<b>Release Time (typical)</b>	1 ms at nominal coil voltage (with no coil suppressions)
<b>Dielectric Strength (at sea level for 1 min.)</b>	1250 Vrms coil to contact 750 Vrms between open contacts
<b>Insulation Resistance</b>	100 megohms min. at 20°C, 500 VDC
<b>Dropout</b>	Greater than 10% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b>	At nominal coil voltage Standard: -25°C (-13°F) to 55°C (131°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 10–55Hz
<b>Shock</b>	15 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. Solvent Temp.</b>	80°C (176°F)
<b>Max. Immersion Time</b>	30 seconds
<b>Weight</b>	3.5 grams

### 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.



**AMERICAN ZETTLER, INC.**

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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		
3	3.3	20	2.25	AZ951-1C-3DE	AZ952-1C-3DE
5	6.7	56	3.75	AZ951-1C-5DE	AZ952-1C-5DE
6	8.0	80	4.50	AZ951-1C-6DE	AZ952-1C-6DE
12	16.0	320	9.00	AZ951-1C-12DE	AZ952-1C-12DE
24	32.0	1280	18.00	AZ951-1C-24DE	AZ952-1C-24DE

SENSITIVE RELAYS — Light Duty Type					
COIL SPECIFICATIONS				ORDER NUMBER	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC		
3	3.3	45	2.25	AZ951-1C-3DSE	AZ952-1C-3DSE
5	8.5	120	3.75	AZ951-1C-5DSE	AZ952-1C-5DSE
6	10.4	180	4.50	AZ951-1C-6DSE	AZ952-1C-6DSE
9	15.3	400	6.75	AZ951-1C-9DSE	AZ952-1C-9DSE
12	20.5	700	9.00	AZ951-1C-12DSE	AZ952-1C-12DSE
24	41.0	2800	18.00	AZ951-1C-24DSE	AZ952-1C-24DSE

STANDARD RELAYS — Medium Duty Type					
COIL SPECIFICATIONS				ORDER NUMBER	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC		
3	3.3	20	2.25	AZ951-1CM-3DE	AZ952-1CM-3DE
5	6.7	56	3.75	AZ951-1CM-5DE	AZ952-1CM-5DE
6	8.0	80	4.50	AZ951-1CM-6DE	AZ952-1CM-6DE
12	16.0	320	9.00	AZ951-1CM-12DE	AZ952-1CM-12DE
24	32.0	1280	18.00	AZ951-1CM-24DE	AZ952-1CM-24DE

SENSITIVE RELAYS — Medium Duty Type					
COIL SPECIFICATIONS				ORDER NUMBER	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC		
3	3.3	45	2.25	AZ951-1CM-3DSE	AZ952-1CM-3DSE
5	8.5	120	3.75	AZ951-1CM-5DSE	AZ952-1CM-5DSE
6	10.4	180	4.50	AZ951-1CM-6DSE	AZ952-1CM-6DSE
9	15.3	400	6.75	AZ951-1CM-9DSE	AZ952-1CM-9DSE
12	20.5	700	9.00	AZ951-1CM-12DSE	AZ952-1CM-12DSE
15	25.6	1093	11.30	AZ951-1CM-15DSE	AZ952-1CM-15DSE
18	30.8	1575	13.50	AZ951-1CM-18DSE	AZ952-1CM-18DSE
24	41.0	2800	18.00	AZ951-1CM-24DSE	AZ952-1CM-24DSE



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STANDARD RELAYS — Heavy Duty Type				ORDER NUMBER	
COIL SPECIFICATIONS					
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance ±10%	Must Operate VDC		
3	3.3	20	2.25	AZ951-1CH-3DE	AZ952-1CH-3DE
5	6.7	56	3.75	AZ951-1CH-5DE	AZ952-1CH-5DE
6	8.0	80	4.50	AZ951-1CH-6DE	AZ952-1CH-6DE
12	16.0	320	9.00	AZ951-1CH-12DE	AZ952-1CH-12DE
24	32.0	1280	18.00	AZ951-1CH-24DE	AZ952-1CH-24DE

## MECHANICAL DATA

		<p><b>AZ951 PC BOARD LAYOUT</b></p> <p>VIEWED TOWARD TERMINALS</p>
<p><b>AZ951 WIRING DIAGRAM</b></p> <p>VIEWED TOWARD TERMINALS</p>	<p><b>AZ952 WIRING DIAGRAM</b></p> <p>VIEWED TOWARD TERMINALS</p>	<p><b>AZ952 PC BOARD LAYOUT</b></p> <p>VIEWED TOWARD TERMINALS</p>

Dimensions in inches with metric equivalents in parentheses. Tolerance: ±0.010"



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