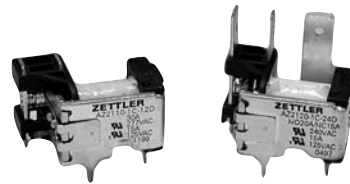


# AZ2110/AZ2120

## 40A MINIATURE POWER RELAY

### FEATURES

- 40 Amp switching capability
- 1 Form A, B and C contacts available
- DC coils to 120 VDC
- Low cost
- Life expectancy to 10 million operations
- High dielectric strength version available
- Class B insulation standard
- Class F (155°C) version available
- Versatility of both PC and "Trace Saver" quick-connect terminals on contacts offered on the AZ2120 version
- Proof Tracking Index (PTI/CTI) 175
- UL, CUR file E44211 including versions meeting UL 508 and UL 873 spacing and contact rating requirements; VDE 132710 ÜG (some models)



### CONTACTS

<b>Arrangement</b>	SPDT (1 Form C) SPST (1 Form A and 1 Form B)
<b>Ratings</b>	Resistive load: Max. switched power: 900 W or 10000 VA Max. switched current: 40 A (Form A) 30 A (Form B) Max. switched voltage: 30 VDC or 300 VAC <b>UL Rating:</b> See chart for UL contact ratings. AZ2150 Series meets UL 508 Group A spacing and UL 873 refrigeration and safety control requirements. AZ2151 Series meets UL 508 Group B spacing requirements. <b>VDE Rating:</b> AZ2110-1A - 25 A at 250 VAC, 10k cycles, tive AZ2110-1C - 20 A at 250 VAC, 10k cycles, tive
resis	
resis	
<b>Material</b>	Silver cadmium oxide
<b>Resistance</b>	20 milliohms initially (at rated current, voltage drop method)

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	500 mW
<b>Max. Continuous Dissipation</b>	2.2 W at 20°C (68°F) ambient 1.8 W at 40°C (104°F) ambient
<b>Temperature Rise</b>	38°C (68°F) at nominal coil voltage - AZ2110 33°C (59°F) at nominal coil voltage - AZ2120
<b>Temperature</b>	Max. 130°C (266°F) Class B Max. 155°C (311°F) Class 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 30 A 120 VAC Res. (N.O.)
<b>Operate Time (max.)</b>	Max. 12 ms Typical: 8 ms
<b>Release Time (max.)</b>	Max. 5 ms Typical: 3.5 ms
<b>Dielectric Strength (at sea level for 1min)</b>	2500 Vrms contact to coil 1500 Vrms between open contacts
<b>Insulation Resistance</b>	1000 megohms min. at 500 VDC, 20°C, 50% RH
<b>Dropout</b>	Greater than 10% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b>  <b>Storage</b>	At nominal coil voltage -55°C (-67°F) to 100°C (212°F) Class B -55°C (-67°F) to 125°C (257°F) Class F -55°C (-67°F) to 130°C (266°F) Class B -55°C (-67°F) to 155°C (311°F) Class F
<b>Vibration</b>	0.062" DA at 10–55 Hz
<b>Shock</b>	20 g
<b>Enclosure (optional)</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy, P.C. & quick connects, .250" wide, on top Note: Allow suitable slack on leads when wiring, and do not subject the terminals to excessive force.
<b>Max. Solder Temp.</b>	270°C (518°F)
<b>Max. Solder Time</b>	5 seconds
<b>Weight</b>	40 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. Please contact the factory.
4. Specifications subject to change without notice.



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11/30/05W

# AZ2110/AZ2120

STANDARD RELAYS: UL 508: 1/8" Clearance, 1/4" Creepage					
COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	Form A (SPST)	Form C (SPDT)
5	7.3	27	3.75	AZ2110-1A-5D	AZ2110-1C-5D
6	8.9	40	4.5	AZ2110-1A-6D	AZ2110-1C-6D
9	13.9	97	6.75	AZ2110-1A-9D	AZ2110-1C-9D
12	17.5	155	9.0	AZ2110-1A-12D	AZ2110-1C-12D
15	22.5	256	11.25	AZ2110-1A-15D	AZ2110-1C-15D
18	27.4	380	13.5	AZ2110-1A-18D	AZ2110-1C-18D
24	36.1	660	18.0	AZ2110-1A-24D	AZ2110-1C-24D
48	68.4	2,560	36.0	AZ2110-1A-48D	AZ2110-1C-48D
70	104.4	5,500	52.5	AZ2110-1A-70D	AZ2110-1C-70D
110	163.2	13,450	82.5	AZ2110-1A-110D	AZ2110-1C-110D

STANDARD RELAYS: 1/16" Clearance, 1/8" Creepage					
COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	Form A (SPST)	Form C (SPDT)
5	7.3	27	3.75	AZ2111-1A-5D	AZ2111-1C-5D
6	8.9	40	4.5	AZ2111-1A-6D	AZ2111-1C-6D
9	13.9	97	6.75	AZ2111-1A-9D	AZ2111-1C-9D
12	17.5	155	9.0	AZ2111-1A-12D	AZ2111-1C-12D
15	22.5	256	11.25	AZ2111-1A-15D	AZ2111-1C-15D
18	27.4	380	13.5	AZ2111-1A-18D	AZ2111-1C-18D
24	36.1	660	18.0	AZ2111-1A-24D	AZ2111-1C-24D
48	68.4	2,560	36.0	AZ2111-1A-48D	AZ2111-1C-48D
70	104.4	5,500	52.5	AZ2111-1A-70D	AZ2111-1C-70D
110	163.2	13,450	82.5	AZ2111-1A-110D	AZ2111-1C-110D

\* Substitute "1B" in place of the "1A" to indicate 1 Form B contact. To indicate Class F version, add suffix "F". For quick connect terminals on contacts substitute "2120" or "2121" in place of "2110" or "2111".

## UL/CUR File E44211 Approved Contact Ratings

Load Type	Cycles	Volts	Form A (NO)	Form B (NC)	Form C	
					NO	NC
General Purpose (Inductive)	100,000	125 or 240 VAC	30 A	15 A	30 A	15 A
	30,000	277 VAC	30 A	30 A	30 A	30 A
Resistive	100,000	125 or 240 VAC	30 A	15 A	30 A	15 A
	100,000	30 VDC	20 A	10 A	20 A	10 A
	100,000	277 VAC	20 A	—	—	—
	100,000	240 VAC	15 A	—	—	—
	6,000	250 VAC	40 A	—	40 A	—
Ballast	6,000	277 VAC	6 A	3 A	6 A	3 A
Pilot Duty	6,000	125 VAC	800 VA	290 VA	800 VA	290 VA
	30,000	125 VAC	800 VA	—	690 VA	—
	100,000	125 VAC	690 VA	—	470 VA	275 VA
	6,000	240 VAC	1152 VA	768 VA	1152 VA	768 VA
	100,000	277 VAC	764 VA	—	764 VA	—
Motor Load	6,000	125 VAC	1 HP	1/4 HP	1 HP	1/4 HP
	6,000	240 VAC	3 HP	1 HP	2 HP	1 HP
	30,000	125 VAC	1 HP	—	1 HP	—
	100,000	125 or 277 VAC	3/4 HP	—	3/4 HP	—
Definite Purpose (LRA-Locked Rotor)	30,000	125 VAC	96 LRA 30 FLA	33 LRA 10 FLA	60 LRA 20 FLA	33 LRA 10 FLA
	100,000	125 VAC	82.8 LRA 27 FLA	—	82.8 LRA 27 FLA	—
Definite Purpose (FLA-Full Load)	30,000	240 VAC	80 LRA 30 FLA	33 LRA 10 FLA	60 LRA 20 FLA	33 LRA 10 FLA
	100,000	277 VAC	60 LRA 20 FLA	—	60 LRA 20 FLA	—
Tungsten	6,000	125 VAC	15 A	—	15 A	3 A
	6,000	240 VAC	5 A	—	5 A	3 A
	6,000	120 VAC	—	3 A	—	—
	6,000	240 VAC	—	3 A	—	—
TV-5	25,000	120 VAC	TV-5	—	TV-5	TV-3
TV-3	25,000	120 VAC	—	TV-3	—	TV-3

Note: See AZ2100 Data Sheet for more complete UL and CUR approved contact ratings.



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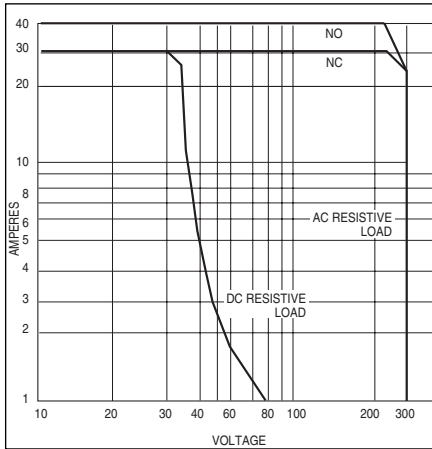
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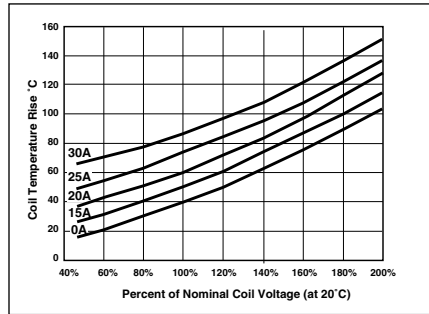
11/30/05W

# AZ2110/AZ2120

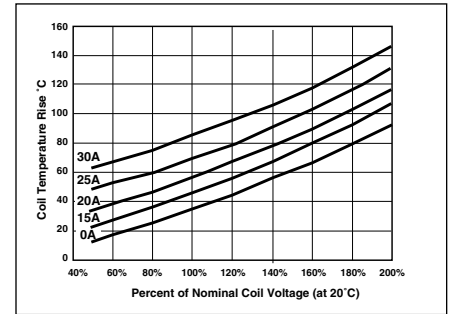
## Maximum Switching Capacity



## Coil Temperature Rise - AZ2110



## Coil Temperature Rise - AZ2120



## MECHANICAL DATA

**AZ2110 / AZ2111**

**AZ2120/ AZ2121**

**PC BOARD LAYOUT**

**AZ2110/2120 VERSION**  
Viewed toward terminals

1 FORM A (SPST-NO)  
1 FORM B (SPST-NC)  
1 FORM C (SPDT)

**AZ2111/2121 VERSION**

1 FORM A (SPST-NO)  
1 FORM B (SPST-NC)  
1 FORM C (SPDT)

Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010"



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