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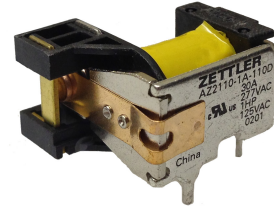
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# AZ2110/AZ2120

## 40A MINIATURE POWER RELAY

### FEATURES

- 40 Amp switching capability
- 1 Form A, B and C contacts available
- DC coils to 110VDC
- Low cost
- Life expectancy to 10 million operations
- 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 40023154 (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: 600W or 10,000VA Max. switched current: 40A (Form A) 15A (Form B) Max. switched voltage: 30VDC or 277VAC  <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: 25A for class F/20A for class B at 250VAC, 10k cycles, resistive AZ2110-1C: 20A at 250VAC, 10k cycles, resistive
<b>Material</b>	Silver cadmium oxide
<b>Resistance</b>	< 50 milliohms initially (at 1A, 24V voltage drop method)

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	500mW
<b>Max. Continuous Dissipation</b>	2.2W at 20°C (68°F) ambient 1.8W 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 30A, 120VAC Res. (N.O.)
<b>Operate Time (max.)</b>	(Max. 15ms) Typical: 8ms
<b>Release Time (max.)</b>	(Max. 10ms) Typical: 3.5ms
<b>Dielectric Strength (at sea level for 1min)</b>	2500Vrms contact to coil 1500Vrms between open contacts
<b>Insulation Resistance</b>	1000 megohms min. at 500VDC, 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 85°C (185°F)  -55°C (-67°F) to 105°C (221°F)
<b>Vibration</b>	0.062" DA at 10–55 Hz
<b>Shock</b>	10 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 (Approx.)</b>	25 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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2/05/16

# AZ2110/AZ2120

## RELAY ORDERING DATA

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 240VAC	30A	15A	30A	15A
	30,000	277VAC	30A	30A	30A	30A
Resistive	100,000	125 or 240VAC	30A	15A	30A	15A
	100,000	30VDC	20A	10A	20A	10A
	100,000	277VAC	20A	—	—	—
	100,000	240VAC	15A	—	—	—
	6,000	250VAC	40A	—	40A	—
Ballast	6,000	125, 240, 277VAC	6A	3A	6A	3A
	6,000	277VAC	20A	—	—	—
Pilot Duty	6,000	125VAC	800VA	290VA	800VA	290VA
	30,000	125VAC	800VA	—	690VA	—
	100,000	125VAC	690VA	—	470VA	275VA
	6,000	240VAC	1152VA	768VA	1152VA	768VA
	100,000	277VAC	764VA	—	764VA	—
Motor Load	6,000	125VAC	1HP	1/4HP	1HP	1/4HP
	6,000	240VAC	3HP	1HP	2HP	1HP
	30,000	125VAC	1HP	—	1HP	—
	100,000	125 or 277VAC	3/4HP	—	3/4HP	—
Definite Purpose (LRA-Locked Rotor)	30,000	125VAC	96LRA 30FLA	33LRA 10FLA	60LRA 20FLA	33LRA 10FLA
	100,000	125VAC	82.8LRA 27FLA	—	82.8LRA 27FLA	—
Definite Purpose (FLA-Full Load)	30,000	240VAC	80LRA 30FLA	33LRA 10FLA	60LRA 20FLA	33LRA 10FLA
	100,000	277VAC	60LRA 20FLA	—	60LRA 20FLA	—
Tungsten	6,000	125VAC	15A	—	15A	3A
	6,000	240VAC	5A	—	5A	3A
	6,000	120VAC	—	3A	—	—
	6,000	240VAC	—	3A	—	—
TV-5	25,000	120VAC	TV-5	—	TV-5	TV-3
TV-3	25,000	120VAC	—	TV-3	—	TV-3

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

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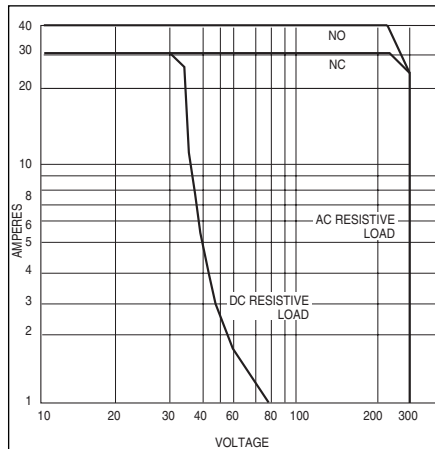
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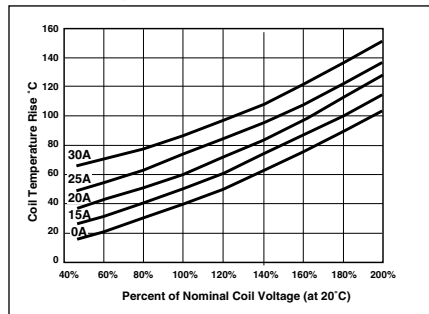
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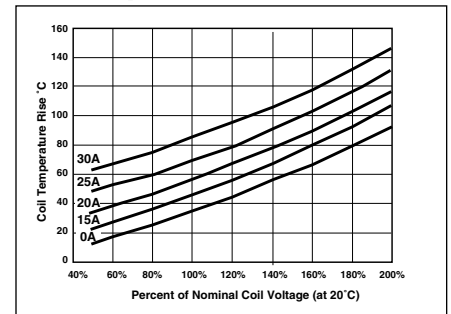
## Maximum Switching Capacity



## Coil Temperature Rise - AZ2110



## Coil Temperature Rise - AZ2120



## MECHANICAL DATA

### AZ2110/AZ2111

### AZ2120/AZ2121

### PC BOARD LAYOUT

### WIRING DIAGRAM

#### AZ2110/AZ2120 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:  $\pm .010$ "