AZ2100

40A MINIATURE POWER RELAY



FEATURES

- Versatility of both PC and “Trace-Saver” quick-connect terminals on contacts
- 40 Amp switching capability
- 1 Form A, B and C contacts available
- DC coils to 120 VDC
- Life expectancy to 10 million operations
- Class B insulation for high temperature applications
- Class F (155°C) version available
- Available with an epoxy seal for automatic wave soldering and immersion cleaning
- 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

Arrangement	SPDT (1 Form C) SPST (1 Form A and 1 Form B)
Ratings	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 **UL Rating:** See chart for UL contact ratings. AZ2100 Series meets UL 508 Group A spacing and UL 873 refrigeration and safety control requirements. AZ2101 Series meets UL 508 Group B spacing requirements. **VDE Rating:** AZ2100-1A - 25 A at 250 VAC, 10K cycles, resistive AZ2100-1C - 20 A at 250 VAC, 10k cycles, resistive
Material	Silver cadmium oxide
Resistance	< 20 milliohms initially (at rated current, voltage drop method)

COIL

Power	
At Pickup Voltage (typical)	500 mW
Max. Continuous Dissipation	2.2 W at 20°C (68°F) ambient 1.8 W at 40°C (104°F) ambient
Temperature Rise	38°C (68°F) at nominal coil voltage
Temperature	Max. 130°C (266°F) Class B Max. 155°C (311°F) Class F

GENERAL DATA

Life Expectancy **Mechanical** **Electrical**	Minimum operations 1 x 10^7 1 x 10^5 at 30 A 120 VAC Res. (N.O.)
Operate Time (max.)	Max. 12 ms Typical: 8 ms
Release Time (max.)	Max. 5 ms Typical: 3.5 ms
Dielectric Strength **(at sea level for 1 min.)**	2500 Vrms contact to coil 1500 Vrms between open contacts
Insulation Resistance	100 megohms min. at 500 VDC, 20°C, 50% RH
Dropout	Greater than 10% of nominal coil voltage
Ambient Temperature **Operating** **Storage**	 -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
Vibration	0.062" DA at 10–55 Hz
Shock	20 g
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy, P.C. with quick-con nect tabs, .250" wide, on top Note: Allow suitable slack on leads when wiring, do not subject the terminals to excessive force.
Max. Solder Temp.	270°C (518°F)
Max. Solder Time	5 seconds
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Weight	43 grams

NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than “Must Operate” value.
3. Unsealed relays should not be dip cleaned.
4. Other coil resistances and sensitivities available upon request.
5. Specifications subject to change without notice.

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7/23/09

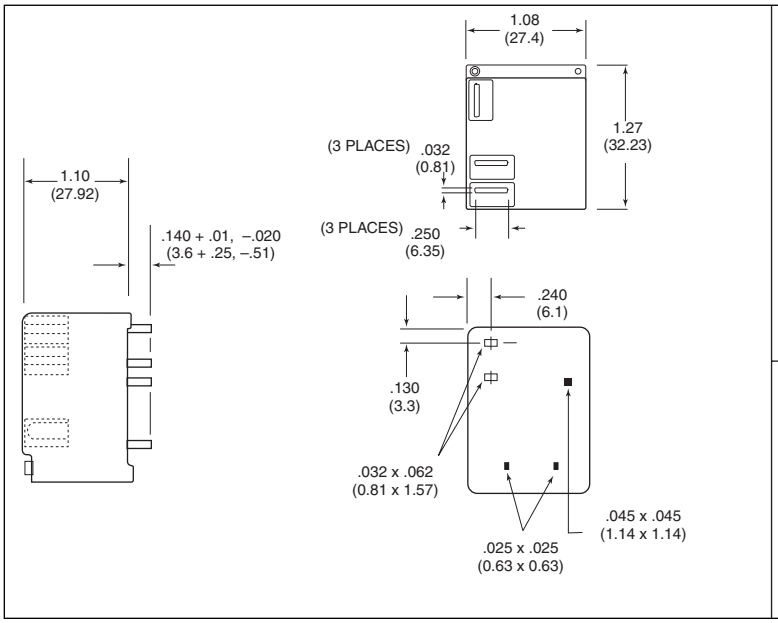
AZ2100

RELAY ORDERING DATA: 1/8" Clearance, 1/4" Creepage

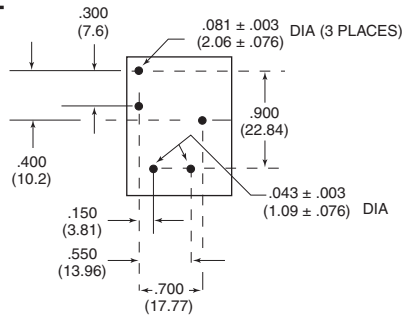
STANDARD RELAYS: 1 Form A (SPST N.O.)					
COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance ±10%	Must Operate VDC	Unsealed	Sealed
5	7.3	27	3.75	AZ2100–1A–5D	AZ2100–1A–5DE
6	8.9	40	4.5	AZ2100–1A–6D	AZ2100–1A–6DE
9	13.9	97	6.75	AZ2100–1A–9D	AZ2100–1A–9DE
12	17.5	155	9.0	AZ2100–1A–12D	AZ2100–1A–12DE
15	22.5	256	11.25	AZ2100–1A–15D	AZ2100–1A–15DE
18	27.4	380	13.5	AZ2100–1A–18D	AZ2100–1A–18DE
24	36.1	660	18.0	AZ2100–1A–24D	AZ2100–1A–24DE
48	68.4	2,560	36.0	AZ2100–1A–48D	AZ2100–1A–48DE
70	104.4	5,500	52.5	AZ2100–1A–70D	AZ2100–1A–70DE
110	163.2	13,450	82.5	AZ2100–1A–110D	AZ2100–1A–110DE
STANDARD RELAYS: 1 Form C (SPDT)					
COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance ±10%	Must Operate VDC	Unsealed	Sealed
5	7.3	27	3.75	AZ2100–1C–5D	AZ2100–1C–5DE
6	8.9	40	4.5	AZ2100–1C–6D	AZ2100–1C–6DE
9	13.9	97	6.75	AZ2100–1C–9D	AZ2100–1C–9DE
12	17.5	155	9.0	AZ2100–1C–12D	AZ2100–1C–12DE
15	22.5	256	11.25	AZ2100–1C–15D	AZ2100–1C–15DE
18	27.4	380	13.5	AZ2100–1C–18D	AZ2100–1C–18DE
24	36.1	660	18.0	AZ2100–1C–24D	AZ2100–1C–24DE
48	68.4	2,560	36.0	AZ2100–1C–48D	AZ2100–1C–48DE
70	104.4	5,500	52.5	AZ2100–1C–70D	AZ2100–1C–70DE
110	163.2	13,450	82.5	AZ2100–1C–110D	AZ2100–1C–110DE

***Substitute "1B" in place of "1A" or "1C" to indicate 1 Form B. To indicate Class F version, add suffix "F".**
Other coil resistances and sensitivities available upon request. Please contact the factory.

MECHANICAL DATA

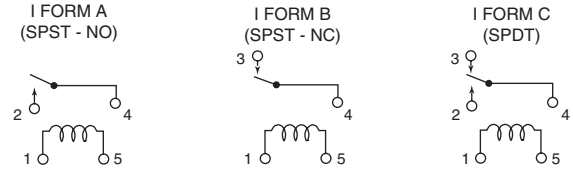


PC BOARD LAYOUT



Viewed toward terminals

WIRING DIAGRAM



Viewed toward terminals

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

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RELAY ORDERING DATA: 1/16” Clearance, 1/8” Creepage

STANDARD RELAYS: 1 Form A (SPST N.O.)

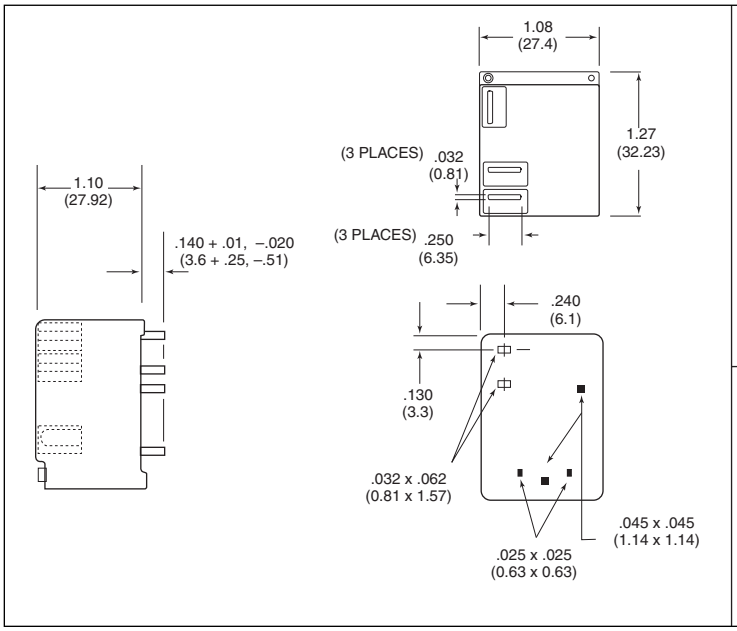
COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance ±10%	Must Operate VDC	Unsealed	Sealed
5	7.3	27	3.75	AZ2101–1A–5D	AZ2101–1A–5DE
6	8.9	40	4.5	AZ2101–1A–6D	AZ2101–1A–6DE
9	13.9	97	6.75	AZ2101–1A–9D	AZ2101–1A–9DE
12	17.5	155	9.0	AZ2101–1A–12D	AZ2101–1A–12DE
15	22.5	256	11.25	AZ2101–1A–15D	AZ2101–1A–15DE
18	27.4	380	13.5	AZ2101–1A–18D	AZ2101–1A–18DE
24	36.1	660	18.0	AZ2101–1A–24D	AZ2101–1A–24DE
48	68.4	2,560	36.0	AZ2101–1A–48D	AZ2101–1A–48DE
70	104.4	5,500	52.5	AZ2101–1A–70D	AZ2101–1A–70DE
110	163.2	13,450	82.5	AZ2101–1A–110D	AZ2101–1A–110DE

STANDARD RELAYS: 1 Form C (SPDT)

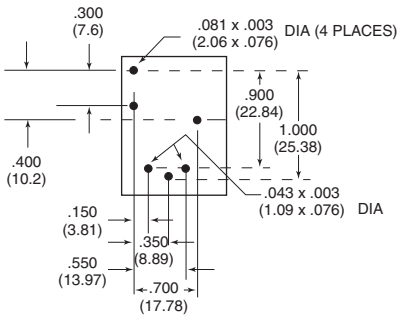
COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance ±10%	Must Operate VDC	Unsealed	Sealed
5	7.3	27	3.75	AZ2101–1C–5D	AZ2101–1C–5DE
6	8.9	40	4.5	AZ2101–1C–6D	AZ2101–1C–6DE
9	13.9	97	6.75	AZ2101–1C–9D	AZ2101–1C–9DE
12	17.5	155	9.0	AZ2101–1C–12D	AZ2101–1C–12DE
15	22.5	256	11.25	AZ2101–1C–15D	AZ2101–1C–15DE
18	27.4	380	13.5	AZ2101–1C–18D	AZ2101–1C–18DE
24	36.1	660	18.0	AZ2101–1C–24D	AZ2101–1C–24DE
48	68.4	2,560	36.0	AZ2101–1C–48D	AZ2101–1C–48DE
70	104.4	5,500	52.5	AZ2101–1C–70D	AZ2101–1C–70DE
110	163.2	13,450	82.5	AZ2101–1C–110D	AZ2101–1C–110DE

***Substitute “1B” in place of “1A” or “1C” to indicate 1 Form B. To indicate Class F version, add suffix “F”.**
Other coil resistances and sensitivities available upon request. Please contact the factory.

MECHANICAL DATA

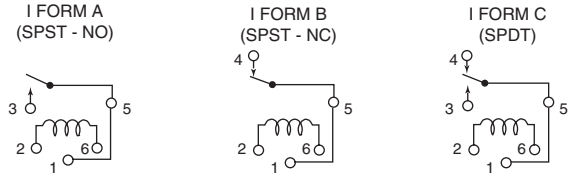


PC BOARD LAYOUT



Viewed toward terminals

WIRING DIAGRAM



Viewed toward terminals

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

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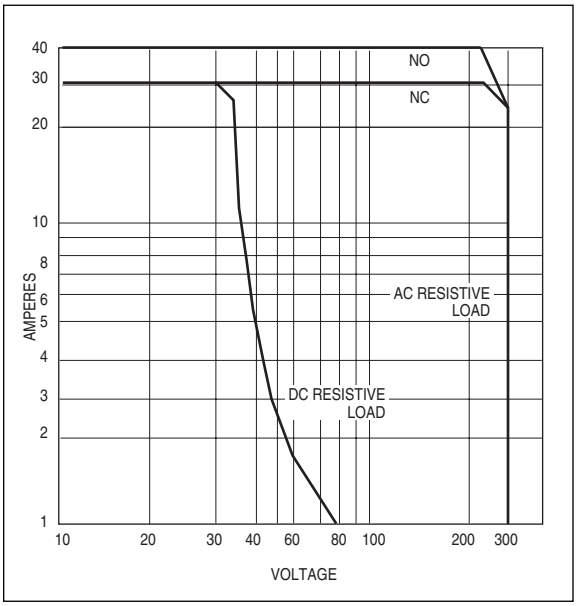
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UL/CUR File E44211 Approved Contact Ratings

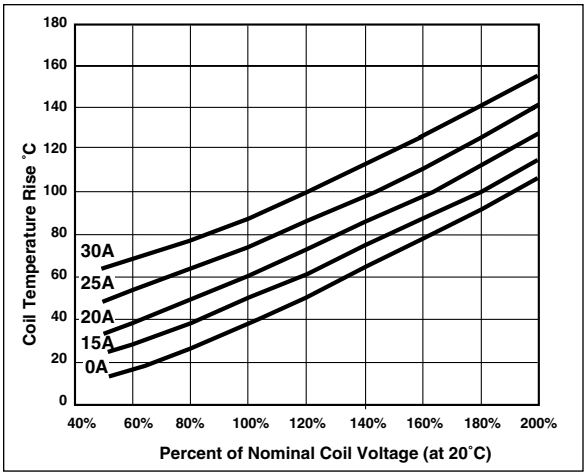
Load Type	Cycles	Volts	Form A (NO)	Form B (NC)	Form C NO	Form C NC
General Purpose	100,000	125 or 240 VAC	30 A	15 A	30 A	15 A
(Inductive)	30,000	277 VAC	30 A	30 A	30 A	30 A
Resistive	100,000	125 or 240 VAC	30 A	15 A	30 A	15 A
	100,000	30 VDC	20 A	10 A	20 A	10 A
	100,000	277 VAC	20 A	—	—	—
	100,000 *	240 VAC	15 A	—	—	—
	6,000	250 VAC	40 A	—	40 A	—
Ballast	6,000	125, 240 or 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	30,000 **	120 VAC	82.8 LRA 13.8 FLA	— —	82.8 LRA 13.8 FLA	— —
	30,000	125 VAC	96 LRA 30 FLA	33 LRA 10 FLA	60 LRA 20 FLA	33 LRA 10 FLA
	30,000 **	125 VAC	60 LRA 20 FLA	30 LRA 12 FLA	60 LRA 20 FLA	30 LRA 12 FLA
(LRA-Locked Rotor)	100,000	125 VAC	82.8 LRA 27 FLA	— —	82.8 LRA 27 FLA	— —
(FLA-Full Load)	30,000	240 VAC	80 LRA 30 FLA	33 LRA 10 FLA	60 LRA 20 FLA	33 LRA 10 FLA
	30,000 **	240 VAC	41.4 LRA 6.9 FLA	— —	41.4 LRA 6.9 FLA	— —
	100,000	277 VAC	60 LRA 20 FLA	— —	60 LRA 20 FLA	— —
Tungsten	6,000	125 VAC	15A	—	15A	3A
	6,000	240 VAC	5A	—	5A	3A
	6,000	120 VAC	—	3A	—	—
	6,000	240 VAC	—	3A	—	—
TV–5	25,000	120 VAC	TV–5	—	TV–5	TV–3
TV–3	25,000	120 VAC	—	TV–3	—	TV–3

* Ambient temperature 96°C (208°F) max. sealed and 105°C (221°F) unsealed.
** Ambient temperature 85°C (185°F) max. sealed and unsealed.
*** Ambient temperature 65°C (149°F) max. sealed and unsealed.

Maximum Switching Capacity



Coil Temperature Rise



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AZ2151-1C-18D BV382S09032 BV382S18032 AZ2280-1C-24AF AZ429-V05-1HUS AZ850-4.5
AZ9375-1A-12DEF AZ940-1AB-24DS AZ2151-1A-6DEF AZ763-1C-12DE AZ822-2C-48DSE
AZ9321-1C-24DEF XMC0-753.ED AZ6991-1CE-24DEA AZ732-560-4 AZ2100-1C-5DE AZ943-1CH-9DE
XMC0-903.FD AZ2100-1C-12DEF AZ832P2-2C-12DE AZ983-1A-12DER AZ2150-1A-15DEF
AZ8222-2C-12DSSE BV202S06005 BV202S24005