AZ8

MINIATURE
PC BOARD RELAY



FEATURES

- Subminiature size
- High sensitivity, 110 mW pickup
- Coils to 48 VDC
- Hermetically sealed version available
- Epoxy sealed for automatic wave soldering
- Contacts rated at 3, 6 or 10 Amps
- Withstands 6 kV IEEE Lightning Surge (special order)
- Class B insulation (130°C) standard
- Class F insulation (155°C) version available
- UL, CUR file E44211
- VDE approved versions available (Class A Insulation only)

CONTACTS

Arrangement	SPDT (1 Form C) SPST (1 Form A) 10 A version only
Ratings **Light Duty**	Resistive load: Max. switched power: 100 W or 600 VA Max. switched current: 3 A Max. switched voltage: 150 VDC or 300 VAC **UL Rating:** See chart on Page 3
Medium Duty	Max. switched power: 180 W or 1800 VA Max. switched current: 6 A Max. switched voltage: 150 VDC or 300 VAC **UL Rating:** See chart on Page 3
Heavy Duty	Max. switched power: 300 W or 2400 VA Max. switched current: 10 A Max. switched voltage: 150 VDC or 300 VAC **UL Rating:** See chart on Page 3
Material	Light duty: Silver Medium duty: Silver nickel Heavy duty: Silver cadmium oxide
Resistance	< 100 milliohms initially

COIL

Power **At Pickup Voltage (typical)**	Standard coil: 210 mW Sensitive coil: 140 mW Heavy duty: 228 mW (110 mW available)
Max. Continuous Dissipation	Class B: 2.0 W 20°C (68°F) ambient 1.6 W 40°C (104°F) ambient Class F: 2.5 W 20°C (68°F) ambient 2.1 W 40°C (104°F) ambient
Temperature Rise	At nominal coil voltage Standard coil: 38°C (68°F) Sensitive coil: 28°C (50°F)
Temperature	Max. 105°C (221°F) Class A Max. 130°C (266°F) Class B Max. 155°C (311°F) Class F

GENERAL DATA

Life Expectancy **Mechanical** **Electrical Light Duty** **Medium Duty** **Heavy Duty**	Minimum operations 100 million operations 3×10^5 at 3 A, 120 VAC 1.8×10^5 at 6 A, 120 VAC 1×10^5 at 10 A, 120 VAC
Operate Time (typical)	5 ms at nominal coil voltage
Release Time (typical)	2 ms at nominal coil voltage (with no coil suppression)
Dielectric Strength (at sea level for 1 min.)	750 Vrms contact to contact 2500 Vrms contact to coil except hermetically sealed version which is 1600 Vrms
Insulation Resistance	1000 megohms min. at 20°C, 500 VDC, 50% RH
Dropout	Greater than 5% of nominal coil voltage
Ambient Temperature **Operating** **Storage**	At nominal coil voltage -55°C (-67°F) to 90°C (194°F) Class B -55°C (-67°F) to 115°C (239°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, 10 g at 55–110 Hz
Shock	10 g
Enclosure	P.E.T. polyester
Terminals	Tinned copper alloy, P.C.
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	8 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. Unsealed relays should not be dip cleaned.
5. Specifications subject to change without notice.

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RELAY ORDERING DATA

COIL SPECIFICATIONS				ORDER NUMBER*			
STANDARD RELAYS: 1 Form C (SPDT)				LIGHT DUTY (3 Amp contact)		MEDIUM DUTY (6 Amp contact)	
Nominal Coil VDC	Max. VDC Continuous	Resistance ± 10%	Must Operate VDC	Unsealed	Epoxy Sealed	Unsealed	Epoxy Sealed
5	10.6	56	3.25	AZ8–1C–5D	AZ8–1C–5DE	AZ8–1CH–5D	AZ8–1CH–5DE
6	12.6	80	3.90	AZ8–1C–6D	AZ8–1C–6DE	AZ8–1CH–6D	AZ8–1CH–6DE
9	19.0	180	5.85	AZ8–1C–9D	AZ8–1C–9DE	AZ8–1CH–9D	AZ8–1CH–9DE
12	25.0	320	7.80	AZ8–1C–12D	AZ8–1C–12DE	AZ8–1CH–12D	AZ8–1CH–12DE
18	37.8	720	11.7	AZ8–1C–18D	AZ8–1C–18DE	AZ8–1CH–18D	AZ8–1CH–18DE
24	50.0	1,280	15.60	AZ8–1C–24D	AZ8–1C–24DE	AZ8–1CH–24D	AZ8–1CH–24DE
48	87.0	3,800	31.20	AZ8–1C–48D	AZ8–1C–48DE	AZ8–1CH–48D	AZ8–1CH–48DE
SENSITIVE RELAYS: 1 Form C (SPDT)				LIGHT DUTY (3 Amp contact)		MEDIUM DUTY (6 Amp contact)	
Nominal Coil VDC	Max. VDC Continuous	Resistance ± 10%	Must Operate VDC	Unsealed	Epoxy Sealed	Unsealed	Epoxy Sealed
5	12.6	80	3.25	AZ8–1C–5DS	AZ8–1C–5DSE	AZ8–1CH–5DS	AZ8–1CH–5DSE
6	14.8	110	3.90	AZ8–1C–6DS	AZ8–1C–6DSE	AZ8–1CH–6DS	AZ8–1CH–6DSE
9	22.4	250	5.85	AZ8–1C–9DS	AZ8–1C–9DSE	AZ8–1CH–9DS	AZ8–1CH–9DSE
12	30.0	440	7.80	AZ8–1C–12DS	AZ8–1C–12DSE	AZ8–1CH–12DS	AZ8–1CH–12DSE
24	60.0	1,780	15.60	AZ8–1C–24DS	AZ8–1C–24DSE	AZ8–1CH–24DS	AZ8–1CH–24DSE
48	120.0	7,120	31.20	AZ8–1C–48DS	AZ8–1C–48DSE	AZ8–1CH–48DS	AZ8–1CH–48DSE
STANDARD RELAYS: 1 Form C (SPDT)				HEAVY DUTY (10 Amp contact)			
Nominal Coil VDC	Max. VDC Continuous	Resistance ± 10%	Must Operate VDC	Unsealed		Epoxy Sealed	
5	10.6	56	4.0	AZ8–1CT–5D		AZ8–1CT–5DE	
6	12.6	80	4.8	AZ8–1CT–6D		AZ8–1CT–6DE	
9	19.0	180	7.2	AZ8–1CT–9D		AZ8–1CT–9DE	
12	25.0	320	9.6	AZ8–1CT–12D		AZ8–1CT–12DE	
24	50.0	1,280	19.2	AZ8–1CT–24D		AZ8–1CT–24DE	
48	87.0	3,800	38.4	AZ8–1CT–48D		AZ8–1CT–48DE	

*To indicate Class F version, add suffix "F". Other coil resistances and sensitivities available. Please contact the factory.
Substitute “1AT” in place of “1CT” to indicate 1 Form A. For Hermetically sealed version, substitute “H” for “E”.

RELAY ORDERING DATA - VDE APPROVED VERSIONS

COIL SPECIFICATIONS				ORDER NUMBER	
STANDARD RELAYS: 1 Form C (SPDT) – VDE				MEDIUM DUTY	
Nominal Coil VDC	Max. VDC Continuous	Resistance ± 10%	Must Operate VDC	Unsealed 6 Amp	Epoxy Sealed 5 Amp
5	10.6	56	3.25	AZ8–1CH–5DA	AZ8–1CH–5DEA
6	12.6	80	3.90	AZ8–1CH–6DA	AZ8–1CH–6DEA
9	19.0	180	5.85	AZ8–1CH–9DA	AZ8–1CH–9DEA
12	25.0	320	7.80	AZ8–1CH–12DA	AZ8–1CH–12DEA
24	50.0	1,280	15.60	AZ8–1CH–24DA	AZ8–1CH–24DEA
48	87.0	3,800	31.20	AZ8–1CH–48DA	AZ8–1CH–48DEA
SENSITIVE RELAYS: 1 Form C (SPDT) – VDE				MEDIUM DUTY	
Nominal Coil VDC	Max. VDC Continuous	Resistance ± 10%	Must Operate VDC	Unsealed 6 Amp	Epoxy Sealed 5 Amp
5	12.6	80	3.25	AZ8–1CH–5DSA	AZ8–1CH–5DSEA
6	14.8	110	3.90	AZ8–1CH–6DSA	AZ8–1CH–6DSEA
9	22.4	250	5.85	AZ8–1CH–9DSA	AZ8–1CH–9DSEA
12	30.0	440	7.80	AZ8–1CH–12DSA	AZ8–1CH–12DSEA
24	60.0	1,780	15.60	AZ8–1CH–24DSA	AZ8–1CH–24DSEA
48	120.0	7,120	31.20	AZ8–1CH–48DSA	AZ8–1CH–48DSEA

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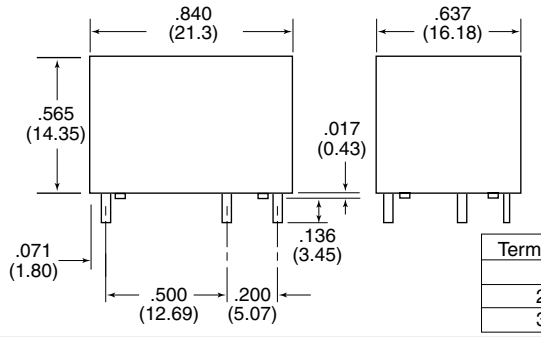
UL, CUR RATINGS

Light Duty	2 A at 28 VDC or 300 VAC 1/8 HP at 120 VAC 1/10 HP at 120/240 VAC (100,000 cyc) 1.2/0.6 A at 120/240 VAC, Pilot Duty 100,000 cyc 3.0/1.5 A at 120/240 VAC General Use 100,000 cyc
Medium Duty	6 A at 28 VDC or 300 VAC 1/8 HP at 120/240 VAC (100,000 cyc) 1.5/0.8 A at 120/240 VAC, Pilot Duty 100,000 cyc 3.8/1.9 A at 120/240 VAC General Use 100,000 cyc
Heavy Duty	SPST: 10 A at 24 VDC / 125 VAC Resistive 1/4 HP at 120 / 125 VAC 1/2 HP at 250 VAC 7 A at 277 VAC Resistive SPDT: 10 A at 250 VAC General Use 7 A at 277 VAC Resistive 6 A at 24 VDC Resistive 1/4 HP at 125 VAC

VDE RATINGS

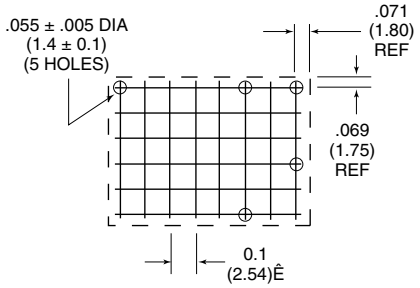
Sealed	5 A at 250 VAC resistive, 10,000 cycles
Unsealed	6 A at 250 VAC resistive, 50,000 cycles

MECHANICAL DATA



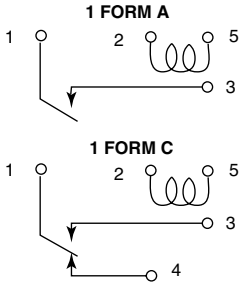
Terminal No.	Dimensions
1	.010 - .015 X .035 - .042
2, 5	.020 - .030 SQUARE
3, 4	.015 - .023 X .025 - .030

PC BOARD LAYOUT



Viewed toward terminals

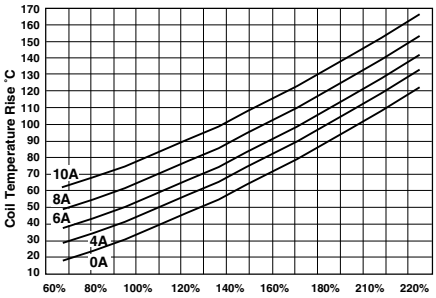
WIRING DIAGRAM



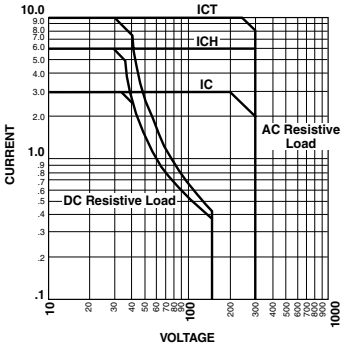
Viewed toward terminals

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

Coil Temperature Rise



Maximum Switching Capacity



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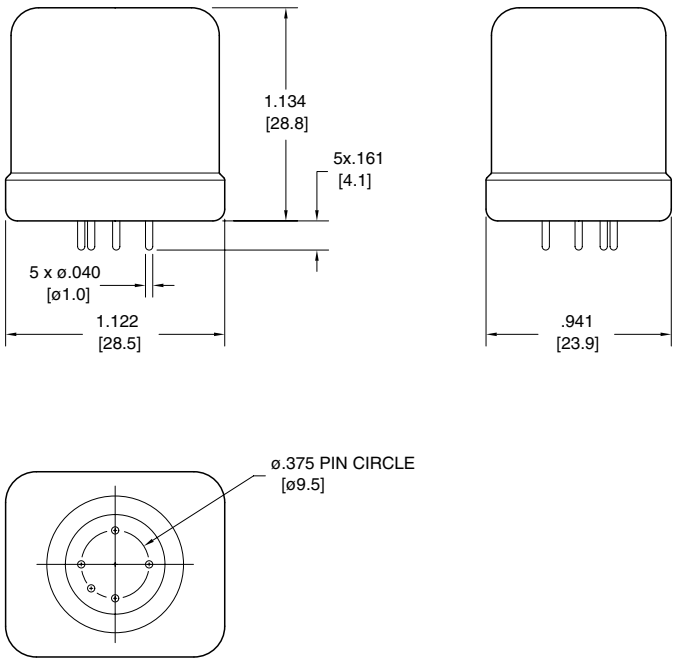
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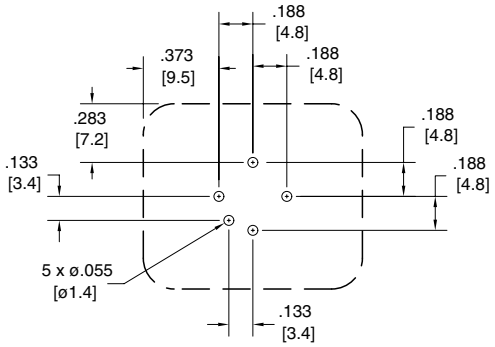
HERMETICALLY SEALED VERSION



MECHANICAL DATA

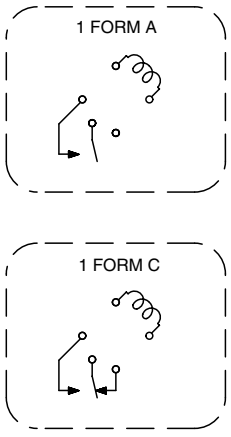


PC BOARD LAYOUT



VIEWED TOWARD TERMINALS

WIRING DIAGRAMS



VIEWED TOWARD TERMINALS

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