AZ9403

10 AMP MINIATURE POWER RELAY

FEATURES

- Class F Insulation Standard
- 10 Amp switching capability
- 4 kV dielectric strength
- Epoxy sealed version available
- UL, CUR file E44211
- VDE certificate 40049971

CONTACTS

Arrangement	SPST (1 Form A) SPDT (1 Form C)
Ratings	Resistive load: Max. switched power: 150 W or 2770 VA Max. switched current: 10 A (N.O.), 3 A (N.C.) Max. switched voltage: 150 VDC* or 400 VAC * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
Rated Load **UL**	Normally open contact (N.O.) 10 A at 125 VAC, General Use, 80k cycles 70°C 10 A at 120 VAC, resistive, 80k cycles 70°C 5 A at 277 VAC, General Use, 100k cycles 70°C 5 A at 30 VDC, resistive, 100k cycles 70°C 4 A at 120 VAC, resistive,100k cycles 105°C 1 A at 120 VAC, tungsten, 6k cycles 105°C 2.5 FLA / 15 LRA at 120 VAC, 6k cycles 105°C Normally closed contact (N.C.) 3 A at 277 VAC general use, 100k cycles 70°C 3 A at 30 VDC resistive, 100k cycles 70°C
VDE	Normally open contact (N.O.) 5A (cosϕ1), 277VAC 100k cycles 70°C 5A (cosϕ1), 277VAC 50k cycles 70°C sensitive Coil Normally closed contact (N.C.) 3A (cosϕ1), 277 VAC general use, 100k cycles 70°C
Material	silver tin oxide
Resistance	< 100 milliohms initially (at 6 V, 1 A, voltage drop method)

COIL

Power **At Pickup Voltage (typical)**	255mW (standard coil) 115mW (sensitive coil)
Max. Continuous Dissipation	845mW at 20°C (68°F) ambient (standard) 500mW at 20°C (68°F) ambient (sensitive)
Temperature Rise	40°C (72°F) at nominal coil voltage (standard coil) 20°C (36°F) at nominal coil voltage (sensitive coil)
Temperature	Max. 155°C (311°F) Class F

GENERAL DATA

Life Expectancy **Mechanical** **Electrical**	Minimum operations 1 x 10^7 1 x 10^5 at 10 A 277 VAC Res.
Operate Time (max.)	8 ms at nominal coil voltage
Release Time (max.)	5 ms at nominal coil voltage (with no coil suppression)
Dielectric Strength (at sea level for 1 min.)	4000 Vrms coil to contact 1000 Vrms between open contacts
Insulation Resistance	1 x 10^9 ohms minimum at 500 VDC
Dropout	Greater than 5% of nominal coil voltage
Ambient Temperature **Operating** **Storage**	At nominal coil voltage -40°C (-40°F) to 90°C (194°F) Class B -40°C (-40°F) to 110°C (230°F) Class F -40°C (-40°F) to 130°C (266°F) Class B -40°C (-40°F) to 155°C (311°F) Class F
Vibration	0.062" (1.5 mm) DA at 10–55 Hz
Shock **Functional** **Destructive**	 98m/s^2 980m/s^2
Enclosure	P.B.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	7 grams
Packing unit in pcs	100 per tray / 1000 per carton box

NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than “Must Operate” value.
3. Specifications subject to change without notice.

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RELAY ORDERING DATA

STANDARD COIL

COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm ± 10	Form A (SPST)	Form C (SPDT)
3	2.3	3.9	20	AZ9403-1A-3D	AZ9403-1C-3D
5	3.8	6.5	55	AZ9403-1A-5D	AZ9403-1C-5D
6	4.5	7.8	80	AZ9403-1A-6D	AZ9403-1C-6D
9	6.8	11.7	180	AZ9403-1A-9D	AZ9403-1C-9D
12	9.0	15.6	320	AZ9403-1A-12D	AZ9403-1C-12D
18	13.5	23.4	720	AZ9403-1A-18D	AZ9403-1C-18D
24	18.0	31.2	1,280	AZ9403-1A-24D	AZ9403-1C-24D
48	36.0	62.4	5,120	AZ9403-1A-48D	AZ9403-1C-48D

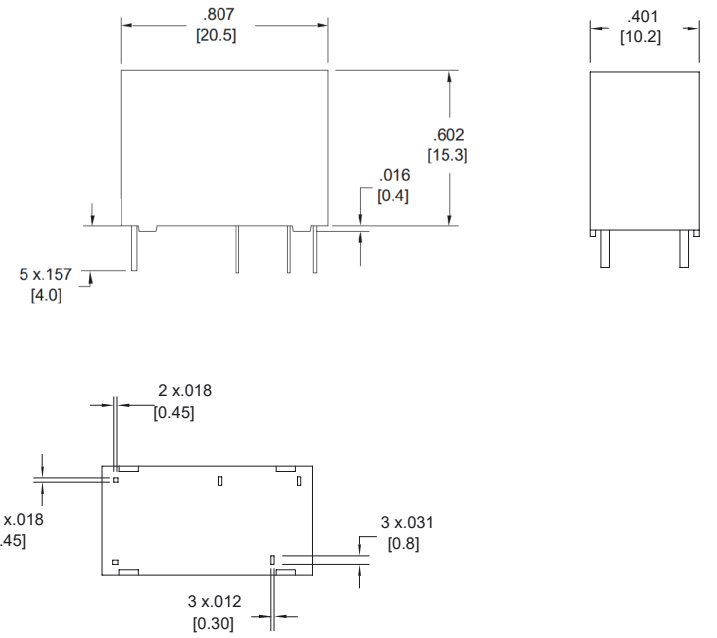
* Add suffix “E” at the end of order number for sealed version. VDE Rating for 5, 9, 12 , 24 VDC coil only.

SENSITIVE COIL

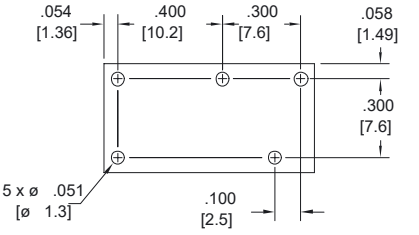
COIL SPECIFICATIONS				ORDER NUMBER*
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm ± 10%	Form A (SPST)
3	2.3	4.5	45	AZ9403-1A-3DS
5	3.8	7.5	125	AZ9403-1A-5DS
6	4.5	9.1	180	AZ9403-1A-6DS
9	6.8	13.5	400	AZ9403-1A-9DS
12	9.0	18.0	720	AZ9403-1A-12DS
18	13.5	27.0	1,600	AZ9403-1A-18DS
24	18.0	36.0	2,800	AZ9403-1A-24DS

* Add suffix “E” at the end of order number for sealed version. VDE Rating for 5, 9, 12 , 24 VDC coil only.

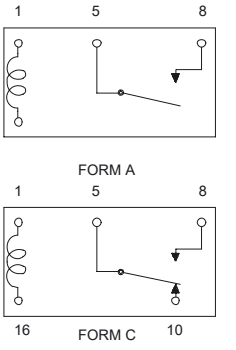
MECHANICAL DATA



PC BOARD LAYOUT



WIRING DIAGRAM



VIEWED TOWARD TERMINALS

Dimensions in inches with metric equivalents in parentheses.The outline dimension tolerance range is ±0.2mm (≤1mm) , ±0.3mm (1-5mm), ±0.4mm (>5mm)

This specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.