

AZ951/AZ952

SUBMINIATURE POWER RELAY

FEATURES

- Subminiature size for high density packaging
- Low cost relay, SPDT contact arrangement
- 2 different pinnings available
- 1 Amp, 3 Amp and 5 Amp versions available
- Standard and sensitive coils up to 24 VDC available
- Sensitive coils with low pickup power of 116 mW
- Epoxy sealed
- Life expectancy of up to 10 million operations
- UL, CUR file E43203



CONTACTS

Arrangement	SPDT (1 Form C)
Ratings (max.)	(resistive load)
Light duty version	
switched power	30 W or 125 VA
switched current	1 A
switched voltage	60 VDC* or 220VAC
Medium duty version	
switched power	90 W or 375 VA
switched current	3 A
switched voltage	60 VDC* or 220VAC
Heavy duty version	
switched power	150 W or 625 VA
switched current	5 A
switched voltage	60 VDC* or 220VAC
* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.	
UL Rated Loads	
Light duty version	1 A at 125 VAC 1 A at 30 VDC
Medium duty version	3 A at 125 VAC 3 A at 30 VDC 270 VA, 125 VAC, Pilot Duty, 30k cycles (N.O.), 6k cycles (N.C.)
Heavy duty version	5 A at 125 VAC 5 A at 30 VDC
Contact materials	
Light duty version	Silver (Ag + Au), gold plated
Medium duty version	Silver (Ag + Au), gold plated
Heavy duty version	Silver nickel (AgNi + Au), gold plated
Initial resistance	≤ 50 mΩ

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.

GENERAL DATA

Life Expectancy	(minimum operations)
mechanical	1×10^7
electrical	1×10^5 at 3 A 120 VAC resistive
Operate Time	5 ms (typ.) at nominal coil voltage
Release Time	1 ms (typ.) at nominal coil voltage, without coil suppression
Dielectric Strength	(at sea level for 1 min.) 1000 V _{RMS} coil to contact 500 V _{RMS} between open contacts
Insulation Resistance	1000 MΩ (min.) at 20°C, 500 VDC, 50% RH
Temperature Range	(at nominal coil voltage)
operating	
standard coil versions	-40°C (-40°F) to 85°C (185°F)
sensitive coil versions	-40°C (-40°F) to 85°C (185°F)
Vibration resistance	1.5 mm (0.062") DA at 10–55 Hz
Shock	10 g operating
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy, P. C.
Soldering	
Max. Temperature	270°C (518°F)
Max. Time	5 seconds
Cleaning	
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Dimensions	
length	15.75 mm (0.620")
width	10.75 mm (0.423")
height	11.81 mm (0.465")
Weight	3.5 grams (approx.)
Packing unit in pcs	25 per plastic tray / 2000 per carton box
Compliance	UL 508, RoHS

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COIL

Nominal coil DC voltages	see coil voltage specifications tables
Dropout	≥ 10% of nominal coil voltage
Power	(typ.)
nominal	
standard coil	450 mW
sensitive coil	200 mW
at pickup voltage	
standard coil	253 mW
sensitive coil	113 mW
Temperature Rise	(at nominal coil voltage)
standard coil	54 K (97°F)
sensitive coil	30 K (54°F)
Max. temperature	Class F insulation - 155°C (311°F)

COIL VOLTAGE SPECIFICATIONS

Standard Coil

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.25	3.3	20
5	3.75	5.5	56
6	4.5	6.6	80
12	9.0	13.2	320
18	13.5	19.8	720
24	18.0	26.4	1280

Sensitive Coil - Light and Medium duty versions only

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.25	3.3	45
5	3.75	5.5	125
6	4.5	6.6	180
9	6.75	9.9	405
12	9.0	13.2	720
18	13.5	19.8	1620
24	18.0	26.4	2880

ORDERING DATA

AZ95□-1C□-□□D□E

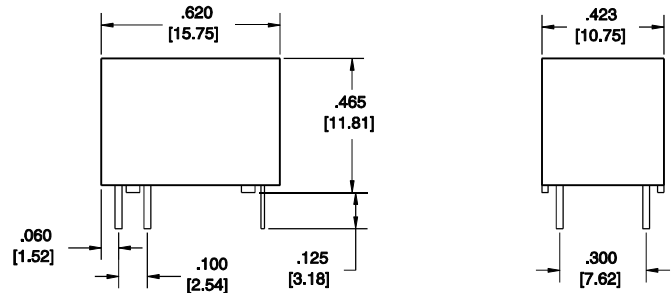
Coil option nil: standard coil S: sensitive coil (Light and Medium duty only)
Nominal coil voltage see coil voltage specifications tables
Contact load classification nil: Light duty M: Medium duty H: Heavy duty
Footprint option 1: AZ951 type 2: AZ952 type

Example ordering data

AZ951-1C-5DE	AZ951, Light duty, 5 VDC coil voltage, standard coil
AZ952-1CM-12DSE	AZ952, Medium duty, 12 VDC coil voltage, sensitive coil
AZ952-1CH-24DE	AZ952, Heavy duty, 24 VDC coil voltage, standard coil

MECHANICAL DATA

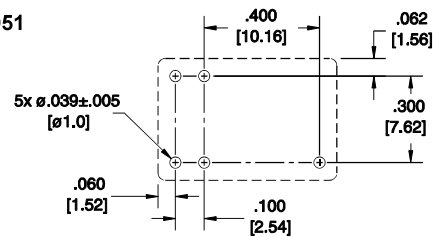
Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010"



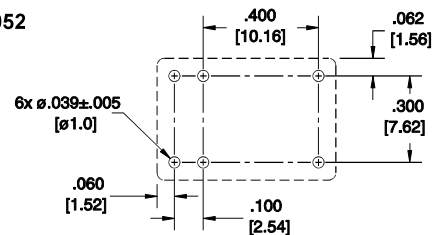
PC BOARD LAYOUT

Viewed towards terminals.

AZ951

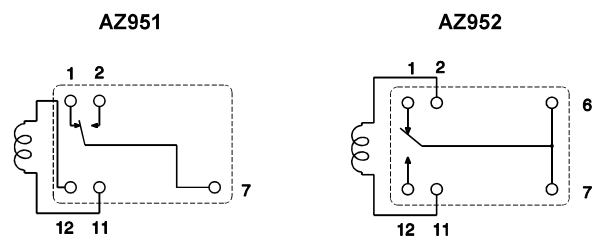


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WIRING DIAGRAMS

Viewed towards terminals.



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DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from the regional ZETTLER relay websites. The 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.

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