

AZ6991

SENSITIVE SUBMINIATURE RELAY

FEATURES

- Small footprint, extremely small width of only 5 mm
- 8 A switching capability
- High sensitivity with 95 mW pickup power
- Dielectric strength of 4000 VRMS between coil and contacts Isolation
- spacing greater than 8 mm
- Horizontal and vertical versions available
- Epoxy sealed version available
- Reinforced insulation, EN 60730-1, EN 60335-1
- UL, CUR file E43203
- VDE certificate 40020561



CONTACTS

Arrangement	SPST (1 Form A) SPDT (1 Form C)
Ratings	Resistive load: Max. switched power: 180W or 2216VA Max. switched current: 8A Max. switched voltage: 125VDC* or 400VAC Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
Rated Load UL/CUR	1 Form A 8 A at 277 VAC, resistive, 85°C, 10k cycles [1][2] 6 A at 277 VAC, resistive, 85°C, 60k cycles [1][2] 6 A at 277 VAC, general use, 85°C, 30k cycles [1] 6 A at 277 VAC, general use, 85°C, 20k cycles [2] B300, R300 pilot duty, 85°C [1][2] C300, R300 pilot duty, 28°C, 30k cycles [1][2] 6 A at 30 VDC, 85°C, 6k cycles [1][2] 1 Form C 8 A at 277 VAC, res., 85°C, 10k cycles (N.O.) [1][2] 6 A at 277 VAC, res., 85°C, 30k cycles (N.O.) [1][2] 6 A at 277 VAC, res., 85°C, 10k cycles (N.C.) [1][2] 6 A at 277 VAC, gen.use, 85°C, 30k cycles (N.O.) [1] 6 A at 277 VAC, gen.use, 85°C, 20k cycles (N.O.) [2] 6 A at 277 VAC, gen.use, 85°C, 20k cyc. (N.C.) [1][2] C300, R300 pilot duty, 28°C, 30k cycles (N.O.) [1][2] 6 A at 30 VDC, 85°C, 6k cycles [1][2] B300, R300 pilot duty, 85°C [1][2]
VDE	1 Form A 6 A at 250 VAC, 85°C, 50k cycles [1][2] 6 A at 30 VDC, 85°C, 60k cycles [1][2] 1 Form C 6 A at 250 VAC, 85°C, 10k cycles [1][2] 6 A at 30 VDC, 85°C, 60k cycles [1][2]
Material	Silver nickel [1], Silver Tin [2] Optional gold plating
Resistance	<100 milliohms initially (at 1A, 6VDC)

COIL

Power At Pickup Voltage (typical)	95mW
Max. Continuous Dissipation	1.0W at 20°C (68°F) ambient
Temperature Rise	20°C (36°F) at nominal coil voltage
Temperature	Max. 105°C (221°F)

GENERAL DATA

Life Expectancy Mechanical Electrical	Minimum operations 10 million operations 3 X 10 ⁵ at 5A, 50VAC Res.
Operate Time (typical)	8ms at nominal coil voltage
Release Time (typical)	4ms at nominal coil voltage (with no coil suppression)
Dielectric Strength (at sea level for 1 min.)	1000Vrms between open contacts 4000Vrms contact to coil
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 -40°C (-40°F) to 85°C (158°F) -40°C (-40°F) to 105°C (221°F)
Vibration	0.062" DA 10–55 Hz
Shock	5 g
Enclosure	P.B.T. polyester 94V-0
Terminals	Tinned copper alloy, P.C.
Max. Solder Temp.	260°C (500°F)
Max. Solder Time	5 seconds
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Weight (approx.)	5 grams

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.

AMERICAN ZETTLER, INC.

8/30/18

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RELAY ORDERING DATA

COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance	Unsealed	Sealed
5	3.75	11.5	147 ± 10%	AZ6991-1A-5D	AZ6991-1A-5DE
6	4.50	13.8	212 ± 10%	AZ6991-1A-6D	AZ6991-1A-6DE
9	6.75	20.7	476 ± 10%	AZ6991-1A-9D	AZ6991-1A-9DE
12	9.00	27.6	848 ± 10%	AZ6991-1A-12D	AZ6991-1A-12DE
18	13.5	41.4	1906 ± 15%	AZ6991-1A-18D	AZ6991-1A-18DE
24	18.0	55.2	3390 ± 15%	AZ6991-1A-24D	AZ6991-1A-24DE
48	36.0	97.7	10600 ± 15%	AZ6991-1A-48D	AZ6991-1A-48DE
60	45.0	122.2	16600 ± 15%	AZ6991-1A-60D	AZ6991-1A-60DE

*Substitute "-1C" for "-1A" to indicate 1 Form C contacts. Add "E" after 1A or 1C for Silver Tin contacts. Add suffix "A" for gold plated contacts. Add suffix "H" for horizontal version.

MECHANICAL DATA

Vertical Mount

Horizontal Mount

PC BOARD LAYOUT

Vertical Mount Horizontal Mount

Note: Mounting hole diameters and center to center dimensions are the same for both vertical and horizontal mounting version

WIRING DIAGRAM

Form A

Vertical Mount

Form A

Horizontal Mount

Form C

Vertical Mount

Form C

Horizontal Mount

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