## AZ696

# 10 AMP SUBMINIATURE POWER RELAY

#### **FEATURES**

- High sensitivity, 110 mW pickup
- Dielectric strength 4000 Vrms
- Isolation spacing greater than 8 mm
- Proof tracking index (PTI/CTI) 250
- 10 Amp switching capability
- Epoxy sealed version available
- Reinforced insulation, EN 60730-1 (VDE 0631, part 1)
   EN 60335-1 (VDE 0700, part 1)
- UL, CUR file E43203
- VDE file 40012571

#### **CONTACTS**

Arrangement	SPST (1 Form C) SPST (1 Form A and 1 Form B)					
Ratings	Resistive load:					
, and	Max. switched power: 300 W or 2500 VA Max. switched current: 10 A Max. switched voltage: 240 VDC* or 440 VAC  * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.					
Detect Lead	r idade contact the factory.					
Rated Load UL	10 A at 30 VDC, resistive 10 A at 250 VAC, general use 1/4 HP at 250 VAC 1/2 HP at 250 VAC B300					
VDE	1 Form A / 1 Form B (unsealed) 10 A at 250VAC, resistive, 85°C, 50k cycles [2] 8 A at 250VAC, resistive, 40°C, 100k cycles [1] 5 A at 250VAC, cos phi 0.9, 70°C, 50k cycles [1]					
	1 Form C (unsealed) 10 A at 250VAC, resistive, 85°C, 50k cycles [2] 8 A at 250VAC, resistive, 40°C, 50k cycles [1] 4 A at 250VAC, cos phi 0.9, 70°C, 50k cycles [1]					
	1 Form A / 1 Form B / 1 Form C (sealed) 10 A at 250VAC, resistive, 85°C, 10k cycles [2]					
Material	Silver cadmium oxide [1]*, silver tin oxide [2]					
	*Note: Silver cadmium oxide will be discontinued on 31.12.2017.					
Resistance	< 30 milliohms initially (at 6 V, 1 A, voltage drop method)					

#### **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.
- 4. It's recommended to remove vent nipple on sealed versions to expand life expectancy when switching higher loads.



#### GENERAL DATA I

Life Expectancy Mechanical Electrical  Noperate Time (typical)  Release Time (typical)  Dielectric Strength (at sea level for 1 min.)  Insulation Resistance  Insulation (according to DIN VDE 0110, IEC 60664-1)  Dropout  Ambient Temperature Operating  Minimum operations 1 x 107 1 x 105 at 8 A 250 VAC Res.  10 ms at nominal coil voltage (with no coil suppression)  4000 Vrms coil to contact 1000 Vrms between open contacts  1000 megohms min. at 20°C, 500 VDC, 50% RH  C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  At nominal coil voltage -40°C (-40°F) to 85°C (185°F)  Vibration  O.062" (1.5 mm) DA at 10–55 Hz  Shock  20 g
Release Time (typical)  Dielectric Strength (at sea level for 1 min.)  Insulation Resistance  Insulation (according to DIN VDE 0110, IEC 60664-1)  Dropout  Ambient Temperature Operating  Tomation  Release Time (typical)  5 ms at nominal coil voltage (with no coil suppression)  4000 Vrms coil to contact 1000 megohms min. at 20°C, 500 VDC, 50% RH  C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  At nominal coil voltage -40°C (-40°F) to 85°C (185°F)  Vibration  C350 Vervoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  C350 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  C350 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  C350 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  C350 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  C350 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  C350 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  C40664-1)  Dropout  C40664-1)  Dropout  C40664-1)  Dropout  C500 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  C40664-1)  Dropout  C40664-1)  Dropout  C40664-1)  Dropout  C40664-1)  Dropout  C40664-10  Dropout
(with no coil suppression)  Dielectric Strength (at sea level for 1 min.)  Insulation Resistance Insulation (according to DIN VDE 0110, IEC 60664-1)  Dropout  Ambient Temperature Operating  (with no coil suppression)  4000 Vrms coil to contact 1000 wegohms min. at 20°C, 500 VDC, 50% RH  C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  Greater than 10% of nominal coil voltage -40°C (-40°F) to 85°C (185°F)  Vibration  O.062" (1.5 mm) DA at 10–55 Hz
(at sea level for 1 min.)  Insulation Resistance  Insulation (according to DIN VDE 0110, IEC 60664-1)  Dropout  Ambient Temperature Operating  Vibration  (at sea level for 1 min.)  1000 Vrms between open contacts  1000 megohms min. at 20°C, 500 VDC, 50% RH  C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  At nominal coil voltage -40°C (-40°F) to 85°C (185°F)  Vibration  1000 Vrms between open contacts  1000 megohms min. at 20°C, 500 VDC, 50% RH  C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC  Dropout  At nominal coil voltage -40°C (-40°F) to 85°C (185°F)
Resistance   50% RH
(according to DIN VDE 0110, Pollution degree: 3 Nominal voltage: 250 VAC  Dropout Greater than 10% of nominal coil voltage  Ambient Temperature Operating At nominal coil voltage -40°C (-40°F) to 85°C (185°F)  Vibration 0.062" (1.5 mm) DA at 10–55 Hz
Ambient Temperature Operating  At nominal coil voltage -40°C (-40°F) to 85°C (185°F)  Vibration  O.062" (1.5 mm) DA at 10–55 Hz
Operating         -40°C (-40°F) to 85°C (185°F)           Vibration         0.062" (1.5 mm) DA at 10–55 Hz
0.002 (1.0 1) 2.7 (3. 1.0 00 1.2
Shock 20 g
Enclosure P.B.T. polyester, UL94 V-0
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 11 grams
Packing unit in pcs 50 per plastic tray / 1500 per carton box

#### COIL

Power				
At Pickup Voltage (typical)	110 mW 140 mW (48 VDC coil)			
Max. Continuous Dissipation	1.5 W at 20°C (68°F) ambient			
Temperature Rise	20°C (36°F) at nominal coil voltage			
Temperature	Max. 110°C (230°F)			

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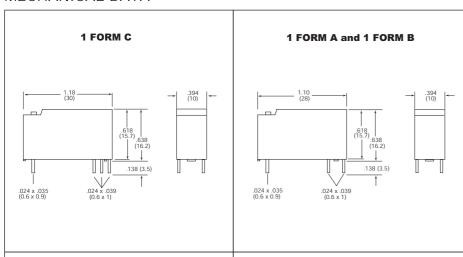
#### **RELAY ORDERING DATA**

COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm ± 10%	1 Form A (SPST-NO)	1 Form C (SPDT)
5	3.5	12.0	110	AZ696-1A-5D	AZ696-1C-5D
6	4.2	14.5	160	AZ696-1A-6D	AZ696-1C-6D
9	6.3	22.0	360	AZ696-1A-9D	AZ696-1C-9D
12	8.4	29.5	660	AZ696-1A-12D	AZ696-1C-12D
18	12.6	44.0	1,500	AZ696-1A-18D	AZ696-1C-18D
24	16.8	54.0	2,200	AZ696-1A-24D	AZ696-1C-24D
48	33.6	102.0	8,000	AZ696-1A-48D	AZ696-1C-48D

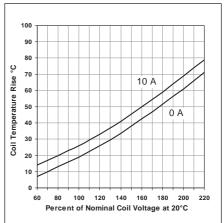
<sup>\*</sup> Substitute "1B" in place of "1A" for 1 Form B contact. Add suffix "E" to "1A" or "1B" or "1C" for silver tin oxide contacts. Add suffix "E" at the end of order number for sealed version.

Note: Silver cadmium oxide will be discontinued on 31.12.2017.

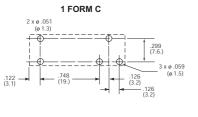
#### MECHANICAL DATA



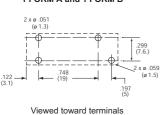
## Coil Temperature Rise



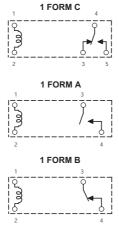
#### PC BOARD LAYOUT



#### 1 FORM A and 1 FORM B

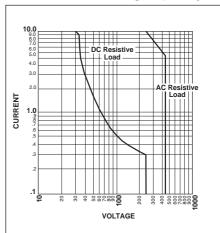


#### **WIRING DIAGRAMS**



#### Viewed toward terminals

Maximum Switching Capacity



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

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