

# AZ770

## SPDT SUBMINIATURE POWER RELAY

### FEATURES

- 5 kV dielectric strength, 10 kV surge
- 8mm creepage and clearance
- Proof tracking index (PTI/CTI) 250
- 5 Amp switching (1 Form A: 20A inrush)
- Epoxy sealed version available
- Reinforced insulation, EN 60730-1 (VDE 0631, part 1),  
1 Form A: EN 60335-1 (VDE 0700, part 1)
- UL, CUR file E44211
- VDE file 40006815



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) SPDT (1 Form C)
<b>Ratings</b>	Resistive load: Max. switched power: 150 W or 1250 VA Max. switched current: 5 A Max. switched voltage: 150 VDC* or 380 VAC * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Rated Load UL, CUR</b>	Form A (N.O.) 5 A at 250 VAC, Res., 100k cycles 5 A at 30 VDC, Res., 100k cycles 1/8 HP, 125 / 250 VAC, 100k cycles 3 A at 250 VAC, cos phi 0.4, 100k cycles C300 Pilot Duty, 125 / 250 VAC, 100k cycles TV-2, 120 VAC  Form C 3 A at 250 VAC, Res., 100k cycles 3 A at 30 VDC, Res., 100k cycles
<b>VDE</b>	5 A at 250 VAC, Res., 100k cycles at 85°C
<b>Material</b>	Silver nickel, gold plating available
<b>Resistance</b>	< 100 milliohms initially

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	253 mW standard coil 113 mW sensitive coil
<b>Max. Continuous Dissipation</b>	1.25 W at 20°C (68°F) ambient
<b>Temperature Rise (at nominal voltage)</b>	41°C (74°F) standard coil 22°C (40°F) sensitive coil
<b>Temperature</b>	Max. 130°C (266°F)

### 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

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>6</sup> 1 x 10 <sup>5</sup> at 5 A 250 VAC Res.
<b>Operate Time (typical)</b>	8 ms at nominal coil voltage
<b>Release Time (typical)</b>	4 ms at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength</b> (at sea level for 1 min.)	5000 Vrms coil to contact 1000 Vrms between open contacts
<b>Surge Voltage</b> <b>Coil to contact</b>	10,000V (at 1.2x50 µs)
<b>Insulation Resistance</b>	1000 megohms min. at 20°C 500 VDC 50% RH
<b>Insulation (according to DIN VDE 0110, IEC 60664-1)</b>	C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC
<b>Dropout</b>	Greater than 5% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b> <b>Storage</b>	At nominal coil voltage -40°C (-40°F) to 85°C (185°F) -40°C (-40°F) to 105°C (221°F)
<b>Vibration</b>	0.062" (1.5 mm) DA at 10–50 Hz
<b>Shock</b>	10 g operating, 100 g damage
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy, P.C.
<b>Max. Solder Temp.</b>	270°C (518°F)
<b>Max. Solder Time</b>	5 seconds
<b>Max. Solvent Temp.</b>	80°C (176°F)
<b>Max. Immersion Time</b>	30 seconds
<b>Weight</b>	4.6 grams
<b>Packing unit in pcs</b>	100 per plastic tray / 1000 per carton box

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## RELAY ORDERING DATA

COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	Form A (SPST)	Form C (SPDT)
3	2.25	3.9	20	AZ770-1A-3D	AZ770-1C-3D
5	3.75	6.5	55	AZ770-1A-5D	AZ770-1C-5D
6	4.5	7.8	80	AZ770-1A-6D	AZ770-1C-6D
9	6.75	11.7	180	AZ770-1A-9D	AZ770-1C-9D
12	9.0	15.6	320	AZ770-1A-12D	AZ770-1C-12D
18	13.5	23.4	720	AZ770-1A-18D	AZ770-1C-18D
24	18.0	31.2	1,280	AZ770-1A-24D	AZ770-1C-24D
48	36.0	62.4	5,120 $\pm 15\%$	AZ770-1A-48D	AZ770-1C-48D

COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	Form A (SPST)	
3	2.25	5.1	45	AZ770-1A-3DS	
5	3.75	8.5	125	AZ770-1A-5DS	
6	4.5	10.2	180	AZ770-1A-6DS	
9	6.75	15.3	400	AZ770-1A-9DS	
12	9.0	20.4	720	AZ770-1A-12DS	
18	13.5	30.6	1,600	AZ770-1A-18DS	
24	18.0	40.8	2,800	AZ770-1A-24DS	
48	36.0	81.6	11,520 $\pm 15\%$	AZ770-1A-48DS	

\* Add suffix "E" for epoxy sealed version. Add suffix "K" for Type 2 footprint. Add suffix "G" for gold plated contacts.

## MECHANICAL DATA

**Type 1**

**Type 2**

**PC BOARD LAYOUT**

**Type 1**

**Type 2**

Viewed toward terminals

\*Not used on Form A version

**WIRING DIAGRAMS**

**Type 1**

**Type 2**

Viewed toward terminals

\*Not used on Form A version

Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm .010$ "

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