AZ7709

SPST SUBMINIATURE POWER RELAY

FEATURES

- 4 kV dielectric strength
- Proof tracking index (PTI/CTI) 250
- 5 A switching capability (high capacity version: 10 A)
- Epoxy sealed version available
- UL Class F insulation (155°C) available
- UL, CUR file E365652
- TÜV B 088793 0007

CONTACTS

Arrangement	SPST (1 Form A)
Ratings (max.)	(resistive load)
switched power	150 W or 1250 VA
switched current	5 A
switched voltage	30 VDC* or 250 VAC
High cap. version	
switched power	300 W or 2500 VA
switched current	10 A
switched voltage	30 VDC* or 250 VAC

* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.

Rated Loads

UL, CUR

Standard coil
5 A at 250 VAC, resistive, 85°C, 100k cycles [1][2]
5 A at 30 VDC, resistive, 85°C, 100k cycles [1][2]
1/6 HP at 125/250 VAC, 85°C, 100k cycles [1][2]

Sensitive coil
3 A at 250 VAC, resistive, 85°C, 100k cycles [1][2]
3 A at 30 VDC, resistive, 85°C, 100k cycles [1][2]

High cap. Version - Standard coil
10 A at 250 VAC, resistive, 85°C, 100k cycles [1][2]
10 A at 30 VDC, resistive, 85°C, 100k cycles [1][2]
1/6 HP at 125/250 VAC, 85°C, 100k cycles [1][2]
TV-5 at 120 VAC, 25k cycles [1]

High cap. Version - Sensitive coil
8 A at 250 VAC, resistive, 85°C, 100k cycles [1][2]
8 A at 30 VDC, resistive, 85°C, 100k cycles [1][2]

TÜV

Standard coil
5 A at 250 VAC, resistive, 100k cycles [1]

Sensitive coil
3 A at 250 VAC, resistive, 100k cycles [1]

High cap. Version - Standard coil
10 A at 250 VAC, resistive, 100k cycles [1]

High cap. Version - Sensitive coil
8 A at 250 VAC, resistive, 100k cycles [1]

Contact materials	Silver tin oxide [1] Silver tin oxide indium oxide [2] Gold plating available
Initial resistance	< 100 mΩ

GENERAL DATA

Life Expectancy	(minimum operations)
Mechanical	1 x 10^7
Electrical	1 x 10^5 at 5 A 250 VAC resistive
High cap. version	
Mechanical	1 x 10^7
Electrical	1 x 10^5 at 10 A 250 VAC resistive
Operate Time	8 ms (max.) at nominal coil voltage
Release Time	4 ms (max.) at nominal coil voltage, without coil suppression
Dielectric Strength	(at sea level for 1 min.) 4000 V_{RMS} coil to contact 1000 V_{RMS} between open contacts
Insulation Resistance	1000 MΩ (min.) at 20°C, 500 VDC, 50% RH
Insulation	(according to DIN VDE 0110, IEC 60664-1) C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC
Temperature Range	(at nominal coil voltage)
Operating	-40°C (-40°F) to 85°C (185°F)
Vibration resistance	1.65 mm (0.065") DA at 10–55 Hz
Shock	10 g operating, 100 g damage
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	18.9 mm (0.718")
width	10.7 mm (0.403")
height	15.7 mm (0.618")
Weight	6 grams (approx.)
Packing unit in pcs	100 per tray / 1000 per carton box
Compliance	UL 508, IEC 61810-1, RoHS, REACH

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COIL

Nominal coil DC voltages	see coil voltage specifications tables
Dropout	> 5% of nominal coil voltage
Nominal power	(approx.)
standard coil	450 mW
sensitive coil	200 mW
Power at pickup voltage	(typ.)
standard coil	220 mW
sensitive coil	113 mW
Max. continuous dissipation	760 mW at 20°C (68°F) ambient
Temperature Rise	(at nominal coil voltage)
standard coil	41 K (74°F)
sensitive coil	22 K (40°F)
Max. temperature	105°C (221°F) - Class A 155°C (311°F) - Class F

COIL VOLTAGE SPECIFICATIONS

Standard Coil

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.1	3.9	20
5	3.5	6.5	55
6	4.2	7.8	80
9	6.3	11.7	180
12	8.4	15.6	320
18	12.6	23.4	720
24	16.8	31.2	1280
48	33.6	62.4	5120

Sensitive Coil

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%
3	2.25	3.9	45
5	3.75	6.5	125
6	4.5	7.8	180
9	6.75	11.7	400
12	9.0	15.6	720
18	13.5	23.4	1620
24	18.0	31.2	2800

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.

ORDERING DATA

AZ7709□-1A□-□□D□□□□

Coil insulation system
nil: Class A (105°C)
F: Class F (155°C)

Plating option
nil: non plated
G: Gold plating

Sealing option
nil: non sealed
E: sealed

Coil option
nil: standard coil
S: sensitive coil

Nominal coil voltage
see coil voltage specifications tables

Contact material
B: silver tin oxide indium oxide
E: silver tin oxide

Switching capacity
nil: standard version
T: high capacity version

Example ordering data

AZ7709-1AE-12DF	Standard version, silver tin oxide contacts, 12 VDC nominal coil voltage, standard coil, non sealed, non gold plated, class F insulation system
AZ7709T-1AE-24DSEGF	High capacity version, silver tin oxide contacts, 24 VDC nominal coil voltage, sensitive coil, sealed, gold plated, class F insulation system

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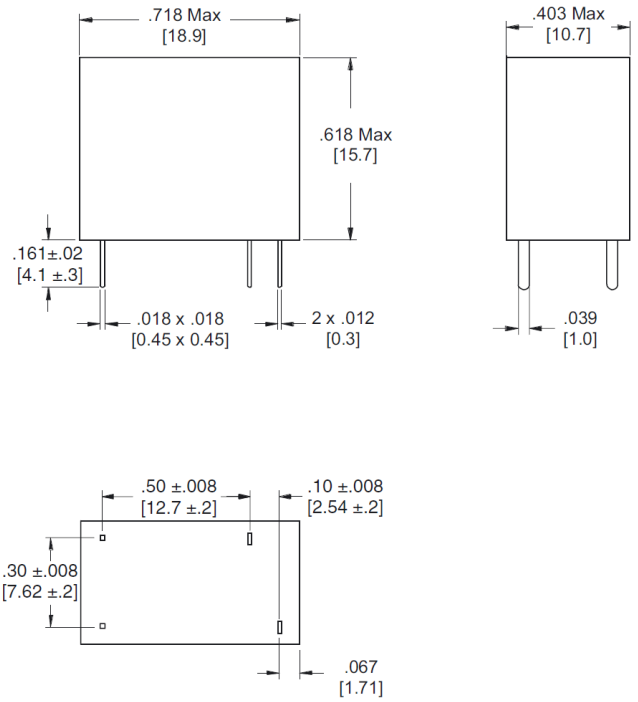
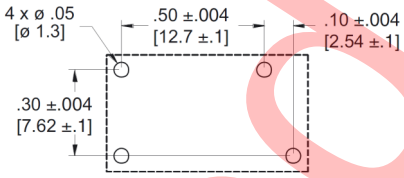
MECHANICAL DATA

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



PC BOARD LAYOUT

Viewed towards terminals



WIRING DIAGRAMS

Viewed towards terminals