

AZ761

12 A SPDT MINIATURE POWER RELAY

FEATURES

- Dielectric strength 5000 Vrms
- Epoxy sealed version available
- Isolation spacing greater than 10 mm
- Reinforced insulation, EN 60730-1 (VDE 0631, part 1), EN 60335-1 (VDE 0700, part 1)
- Class F insulation (155°C) available
- UL, CUR file E44211
- VDE certificate 40006031



CONTACTS

Arrangement	SPDT (1 Form C) SPST (1 Form A, 1 Form B)
Ratings	Resistive load: Max. switched power: 360 W or 3324 VA Max. switched current: 12 A Max. switched voltage: 125 VDC* or 440 VAC * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
Material	Silver cadmium oxide [1], silver tin oxide [2], silver nickel [3]. Gold plating available
Resistance	< 50 miliohms initially

COIL

Power At Pickup Voltage (typical)	196 mW standard DC coil 141 mW sensitive DC coil .422 VA AC coil
Max. Continuous Dissipation	1.7 W at 20°C (68°F) ambient 1.7 VA at 20°C (68°F) ambient
Temperature Rise (at nominal coil voltage)	26°C (47°F) standard coil 17°C (31°F) sensitive coil
Temperature	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

Life Expectancy Mechanical Electrical	Minimum operations 1 x 10 ⁷ 1 x 10 ⁵ at 12 A 250 VAC Res.
Operate Time (typical)	7 ms at nominal coil voltage
Release Time (typical)	3 ms at nominal coil voltage (with no coil suppression)
Dielectric Strength (at sea level for 1 min.)	5000 Vrms coil to contact 1000 Vrms between open contacts
Insulation Resistance	1000 megohms 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
Dropout	Greater than 10% of nominal coil voltage
Ambient Temperature Operating	At nominal coil voltage -40°C (-40°F) to 85°C (185°F) standard -40°C (-40°F) to 105°C (221°F) sensitive -40°C (-40°F) to 70°C (158°F) AC coils
Vibration	0.062" (1.5 mm) DA at 10–55 Hz
Shock	10 g
Enclosure	P.B.T. polyester
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	14 grams
Packing unit in pcs	50 per plastic tray / 500 per carton box

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CONTACTS

Rated Load UL, CUR	Standard coil 12 A at 277 VAC, Resistive, 50k cycles, 85°C [1] 12 A at 277 VAC, Resistive, 100 k cycles, 85°C [2][3] 1/2 HP at 250 VAC, 85°C [1] 1/4 HP at 125 VAC, 85°C [1] B300, 85°C [2] R300, 85°C [2]
	Sensitive coil 10 A at 250 VAC Resistive, 100k cycles, 85°C [1]

Rated Load VDE	1 Form A - DC coil 12 A at 250 VAC, 50k cycles, 85°C [3] 12 A at 250 VAC, 20k cycles, 85°C [2] 12 A at 250 VAC, 30k cycles, 70°C [1] 10 A at 250 VAC, 100k cycles, 70°C [1]
	1 Form A - DC coil sensitive 10 A at 250 VAC, 100k cycles, 85°C [1] 10 A at 250 VAC, 20k cycles, 85°C [2] 6 A at 400 VAC, 100k cycles, 85°C [1]
	1 Form A - AC coil 12 A at 250 VAC, 50k cycles, 70°C [3][2]
	1 Form C - DC coil 12 A at 250 VAC, 50k cycles, 85°C [3] 12 A at 250 VAC, 20k cycles, 85°C [2] 12 A at 250 VAC, 30k cycles, 70°C [1]
	1 Form C - DC coil sensitive 10 A at 250 VAC, 70k cycles, 85°C [1] 10 A at 250 VAC, 20k cycles, 85°C [2] 6 A at 400 VAC, 70k cycles, 85°C [1]
	1 Form C - AC coil 12 A at 250 VAC, 30k cycles, 70°C [3][2]

RELAY ORDERING DATA

DC COIL SPECIFICATIONS – STANDARD COIL				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	1 Form A	1 Form C
5	3.5	10.2	62	AZ761-1A-5D	AZ761-1C-5D
6	4.2	12.3	90	AZ761-1A-6D	AZ761-1C-6D
9	6.3	18.3	200	AZ761-1A-9D	AZ761-1C-9D
12	8.4	24.7	360	AZ761-1A-12D	AZ761-1C-12D
18	12.6	37.0	810	AZ761-1A-18D	AZ761-1C-18D
24	16.8	49.4	1,440	AZ761-1A-24D	AZ761-1C-24D
48	33.6	98.0	5,760	AZ761-1A-48D	AZ761-1C-48D
60	42.0	112.9	7,500	AZ761-1A-60D	AZ761-1C-60D
110	77.0	206.9	25,200	AZ761-1A-110D	AZ761-1C-110D

* "1A" or "1C" denote silver cadmium oxide contacts. 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 "B" to "1A" or "1B" or "1C" for silver nickel contacts.

Add suffix "E" at the end of order number for sealed version.

Add suffix "A" at the end of order number for gold plated contacts.

Add suffix "K" at the end of order number for 5 mm pin spacing version.

Add suffix "F" at the end of order number for Class F version.

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RELAY ORDERING DATA

DC COIL SPECIFICATIONS – SENSITIVE COIL				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	1 Form A	1 Form C
5	3.8	13.0	100	AZ761-1A-5DS	AZ761-1C-5DS
6	4.5	15.6	144	AZ761-1A-6DS	AZ761-1C-6DS
12	9.0	31.3	576	AZ761-1A-12DS	AZ761-1C-12DS
18	13.5	46.9	1,296	AZ761-1A-18DS	AZ761-1C-18DS
24	18.0	62.6	2,304	AZ761-1A-24DS	AZ761-1C-24DS
48	36.0	125.2	9,216	AZ761-1A-48DS	AZ761-1C-48DS
60	45.0	147.8	12,867	AZ761-1A-60DS	AZ761-1C-60DS

* "1A" or "1C" denote silver cadmium oxide contacts. 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 "B" to "1A" or "1B" or "1C" for silver nickel contacts. (Not VDE approved!)

Add suffix "E" at the end of order number for sealed version.

Add suffix "A" at the end of order number for gold plated contacts.

Add suffix "K" at the end of order number for 5 mm pin spacing version.

Add suffix "F" at the end of order number for Class F version.

AC COIL SPECIFICATIONS - STANDARD COIL					ORDER NUMBER*	
Nominal Coil VAC	Must Operate VAC	Max. Continuous VAC	Nominal Current mA $\pm 10\%$	Coil Resistance Ohm $\pm 15\%$	1 Form A	1 Form C
24	18.0	31.2	31.6	350	AZ761-1A-24AF	AZ761-1C-24AF
115	86.3	149.5	6.6	8,100	AZ761-1A-115AF	AZ761-1C-115AF
230	172.5	299.0	3.2	32,500	AZ761-1A-230AF	AZ761-1C-230AF

* "1A" or "1C" denote silver cadmium oxide contacts.

Add suffix "E" to "1A" or "1C" for silver tin oxide contacts.

Add suffix "B" to "1A" or "1C" for silver nickel contacts.

Add suffix "E" before "F" (AC coils) at the end of order number for sealed version.

Add suffix "A" before "F" (AC coils) at the end of order number for gold plated contacts.

MECHANICAL DATA

Top view dimensions: 1.155 Max. [29.3], .63 Max. [16.0], .142 [3.6], .012 [0.3], .512 Max. [13.0].

Terminal view dimensions: 2 x .020 [0.5], 3 x .020 [0.5], 3 x .031 [0.8].

PC BOARD LAYOUT

3.5mm spacing Form C

Dimensions: 5 x ϕ .051 [ϕ 1.3], .138 [3.5], .138 [3.5], .299 [7.6], .101 [2.56], .794 [20.16], .260 [6.6].

5.0mm spacing Form C

Dimensions: 5 x ϕ .051 [ϕ 1.3], .198 [5.04], .198 [5.04], .299 [7.6], .101 [2.56], .794 [20.16], .260 [6.6].

* Not used on 1 Form A relay
** Not used on 1 Form B relay

Viewed toward terminals

WIRING DIAGRAMS

1 Form A

1 Form B

1 Form C

Viewed toward terminals

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

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