

AZ762

16 A SPDT MINIATURE POWER RELAY

FEATURES

- Dielectric strength 5000 Vrms
- High Inrush version (80 A) available
- AC and DC coils
- Isolation spacing greater than 10 mm
- Reinforced insulation, EN 60730-1 (VDE 0631, part 1), EN 60335-1 (VDE 0700, part 1)
- UL, CUR file E44211
- VDE certificate 40006031



CONTACTS

Arrangement	SPDT (1 Form C) SPST (1 Form A)
Ratings	Resistive load: Max. switched power: 480 W or 5540 VA Max. switched current: 16 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 milliohms initially

GENERAL DATA

Life Expectancy Mechanical Electrical	Minimum operations 1 x 10 ⁷ 1 x 10 ⁵ at 16 A 250 VAC Res.
Operate Time (typical)	7 ms at nominal coil voltage DC coils 10 ms at nominal coil voltage AC coils
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 DC coils AC coils	Greater than 10% of nominal coil voltage Greater than 15% of nominal coil voltage
Ambient Temperature Operating	At nominal coil voltage -40°C (-40°F) to 85°C (185°F) DC coils -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

COIL

Power At Pickup Voltage (typical) Max. Continuous Dissipation Temperature Rise (at nominal coil voltage)	200 mW standard DC coil 140 mW sensitive DC coil .422 VA (AC coil) 1.7 W at 20°C (68°F) ambient 1.7 VA at 20°C (68°F) ambient 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.

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CONTACTS

Rated Load UL, CUR
1 Form A / 1 Form C 16 A at 277 VAC, Resistive, 100k cycles, 85°C [3] 16 A at 277 VAC, Resistive, 75k cycles, 85°C [2] 16 A at 277 VAC, Resistive, 50k cycles, 85°C [1] 12 A at 277 VAC, Resistive, 100k cycles, 40°C, (N.O.) [1] 9.2 A at 120 VAC, General use, 100k cycles, 60°C [2] 9 A at 250 VAC, Resistive, 100 k cycles, 105°C [1] 8.2 A at 120 VAC, Resistive, 100k cycles, 60°C [2] 4 A at 347 VAC, General use, 6k cycles, 85°C, (N.C.) [1] 5 FLA / 30 LRA at 250 VAC, 30k cycles, 65°C [2] 5 FLA / 30 LRA at 250 VAC, 30k cycles, 65°C [3] * 1 HP at 250 VAC, 85°C [1] 1 HP at 277 VAC, 40°C, (N.O.) [1] 1/2 HP at 250 VAC, 85°C [2] 1/2 HP at 125 VAC, 85°C [1] 1/3 HP at 125 VAC, 85°C [2] TV-5, 125 VAC, 85°C [1] B300, 85°C [2] R300, 85°C [2]
* approved for Class F version only
1 Form A - DC coil (without gold plating) 20 A at 277 VAC, Resistive, 40°C [2] 10 FLA / 60 LRA at 250 VAC, 40°C [2] 5 FLA / 30 LRA at 250 VAC, 30k cycles, 85°C [2] 1 HP at 250 VAC, 30k cycles, 40°C [2] 1/2 HP at 125 VAC, 30k cycles, 40°C [2] TV-5, 120 VAC, 40°C [2]
1 Form A - DC coil - high inrush version "I" 16 A at 250 VAC, General use, 75k cycles, 40°C [2]

Rated Load VDE
1 Form A - DC coil 16 A at 250 VAC, 50k cycles, 85°C [3] 16 A at 250 VAC, 20k cycles, 85°C [2] 16 A at 250 VAC, 30k cycles, 70°C [1] 12.5 A at 400 VAC, 30k cycles, 85°C [3] 10 A at 250 VAC, 100k cycles, 70°C [1] 9 A at 250 VAC, cos phi 0.4, 120k cycles, 70°C [1][2][3] 6 A at 400 VAC, 100k cycles, 85°C [3]
1 Form A - DC coil - high inrush version "I" 16 A at 250 VAC, 30k cycles, 85°C [2] 16 A at 400 VAC, 10k cycles, 85°C [2]
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 16 A at 250 VAC, 50k cycles, 70°C [3]
1 Form C - DC coil 16 A at 250 VAC, 20k cycles, 85°C [2] 16 A at 250 VAC, 30k cycles, 70°C [1] 12 A at 250 VAC, 50k cycles, 85°C [3] 16 A at 250 VAC, 10k cycles, 85°C [3] * 9 A at 250 VAC, cos phi 0.4, 120k cycles, 70°C [1][2][3] *
* change-over contact tested as make contact
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 16 A at 250 VAC, 20k cycles, 70°C [3]

RELAY ORDERING DATA

DC COIL SPECIFICATIONS – STANDARD COIL				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm ± 10%	1 Form A	1 Form C
5	3.5	10.2	62	AZ762-1A-5D	AZ762-1C-5D
6	4.2	12.3	90	AZ762-1A-6D	AZ762-1C-6D
9	6.3	18.3	200	AZ762-1A-9D	AZ762-1C-9D
12	8.4	24.7	360	AZ762-1A-12D	AZ762-1C-12D
18	12.6	37.0	810	AZ762-1A-18D	AZ762-1C-18D
24	16.8	49.4	1,440	AZ762-1A-24D	AZ762-1C-24D
48	33.6	98.0	5,760	AZ762-1A-48D	AZ762-1C-48D
60	42.0	112.9	7,500	AZ762-1A-60D	AZ762-1C-60D
110	77.0	206.9	25,200	AZ762-1A-110D	AZ762-1C-110D

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

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 "I" at the end of part number for high inrush version 80 A (contact form "1AE" only, no gold plating).

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	AZ762-1A-5DS	AZ762-1C-5DS
6	4.5	15.6	144	AZ762-1A-6DS	AZ762-1C-6DS
12	9.0	31.3	576	AZ762-1A-12DS	AZ762-1C-12DS
18	13.5	46.9	1,296	AZ762-1A-18DS	AZ762-1C-18DS
24	18.0	62.6	2,304	AZ762-1A-24DS	AZ762-1C-24DS
48	36.0	125.2	9,216	AZ762-1A-48DS	AZ762-1C-48DS
60	45.0	147.8	12,867	AZ762-1A-60DS	AZ762-1C-60DS

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 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 "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	AZ762-1A-24AF	AZ762-1C-24AF
115	86.3	149.5	6.6	8,100	AZ762-1A-115AF	AZ762-1C-115AF
230	172.5	299.0	3.2	32,500	AZ762-1A-230AF	AZ762-1C-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

PC BOARD LAYOUT

* Not used on 1 Form A relay
Viewed toward terminals

WIRING DIAGRAMS

1 Form A

1 Form C

Dimensions in millimeters. Tolerance: ± 0.25 mm

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