

# AZDC110

## DC HIGH VOLTAGE POWER RELAY

### FEATURES

- 10A 300VDC / 16A 180VDC switching capability
- Magnetic arc blow-out design
- 5 kV dielectric strength, 10 kV surge withstand voltage
- Ambient temperature up to 105°C (221°F)
- UL Class F insulation (155°C) standard
- Compact size, low seated height of 19 mm
- UL / CUR E44211
- TÜV R 50386704



### CONTACTS

Arrangement	S PST -N.O. (1 Form A)
Ratings (max.) switched power switched current switched voltage	(resistive load) 3000 W or 4800 VA 16 A 420 VDC or 300 VAC
Rated Loads UL/CUR	16 A at 180 VDC, gen.use/res, 105°C, 30k cycles 10 A at 300 VDC, gen.use/res, 105°C, 30k cycles 5 A at 420 VDC, gen.use/res, 105°C, 30k cycles 16 A at 300 VAC, gen.use/res, 105°C, 30k cycles
TÜV	16 A at 180 VDC, resistive, 30k cycles 10 A at 300 VDC, resistive, 30k cycles 5 A at 420 VDC, resistive, 30k cycles 16 A at 300 VAC, cos phi = 0.75 - 0.8, 30k cycles
Contact material	AgSnO <sub>2</sub> (silver tin oxide)
Initial resistance	≤ 100 mΩ (1 A / 6 V - voltage drop method)

### COIL

Nominal coil DC voltages	see coil voltage specifications table
Dropout voltage	≥ 5% of nominal coil voltage
Coil power nominal at pickup voltage max. cont. dissipation	400 mW 225 mW (typ.) 1.7 W at 20°C (68°F)
Temperature Rise	26 K (47°F) at nominal coil voltage
Max. temperature	Class F insulation - 155°C (311°F)

### NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. This relay is equipped with a permanent magnet. This has to be taken into account during handling and assembly of the component.
4. Specifications subject to change without notice.

### GENERAL DATA

Life Expectancy mechanical electrical	(minimum operations) 3 x 10 <sup>7</sup> 3 x 10 <sup>4</sup> at rated loads
Operate Time	10 ms (max.) at nominal coil voltage
Release Time	5 ms (max.) at nominal coil voltage, without coil suppression
Dielectric Strength	(at sea level for 1 min.) 5000 VRMS coil to contact 1000 VRMS between open contacts
Surge voltage coil to contact	10 kV (at 1.2 x 50 μs)
Insulation Resistance	1000 MΩ (min.) at 20°C, 500 VDC, 50% RH
Temperature Range operating	(at nominal coil voltage) -40°C (-40°F) to 105°C (221°F)
Vibration resistance	0.062" (1.5 mm) DA at 10-55 Hz
Shock resistance	10 g
Enclosure	RTII - flux proof (vented) P.B.T. polyester, UL94 V-0
Terminals	Tinned copper alloy, P. C.
Soldering max. temperature max. time	270 °C (518°F) 5 seconds
Cleaning max. solvent temp. max. immersion time	80°C (176°F) 30 seconds
Dimensions length width height	29.3 mm (1.154") 12.7 mm (0.500") 19.0 mm (0.748")
Weight	15 grams (approx.)
Packing unit in pcs	25 per tray / 250 per carton box
Compliance	UL 508, IEC 61810-1, IEC60335-1 (GWT), RoHS, REACH

**AMERICAN ZETTLER, INC.**

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COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm $\pm 10\%$	Order Number
5	3.75	7.5	62.5	AZDC110-1AE-5DF
6	4.5	9.0	90	AZDC110-1AE-6DF
9	6.75	13.5	203	AZDC110-1AE-9DF
12	9.0	18.0	360	AZDC110-1AE-12DF
18	13.5	27.0	810	AZDC110-1AE-18DF
24	18.0	36.0	1440	AZDC110-1AE-24DF

### MECHANICAL DATA

Dimensions in mm. Tolerance:  $\pm 0.1$  mm, Outline tolerance:  $\pm 0.5$  mm

### PC BOARD LAYOUT

Dimensions in mm. Tolerance:  $\pm 0.1$  mm Viewed towards terminals.

### WIRING DIAGRAMS

Viewed towards terminals