

# 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	(resistive load) 3000 W or 4800 VA
switched current	16 A
switched voltage	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

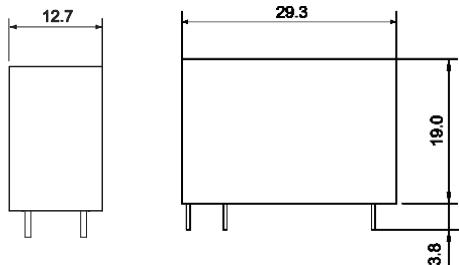
Life Expectancy	(minimum operations) mechanical 3 x 10 <sup>7</sup> electrical 3 x 10 <sup>4</sup> at rated loads
Operate Time	10 ms (max.) at nominal coil voltage
Release Time	5 ms (max.) at nominal coil voltage, without coil suppression
Dielectric Strength	(at sea level for 1 min.) 5000 VRMS coil to 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
Cleaning	270 °C (518°F) 5 seconds
Dimensions	max. solvent temp. max. immersion time
Weight	280°C (176°F) 30 seconds
Packing unit in pcs	29.3 mm (1.154") 12.7 mm (0.500") 19.0 mm (0.748")
Compliance	15 grams (approx.)
	25 per tray / 250 per carton box
	UL 508, IEC 61810-1, IEC60335-1 (GWT), RoHS, REACH

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## COIL VOLTAGE SPECIFICATIONS

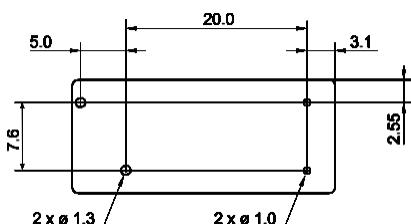
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm $\pm 10\%$	Order Number
5	3.75	7.5	62.5	AZDC110-1AE-5DF
6	4.5	9.0	90	AZDC110-1AE-6DF
9	6.75	13.5	203	AZDC110-1AE-9DF
12	9.0	18.0	360	AZDC110-1AE-12DF
18	13.5	27.0	810	AZDC110-1AE-18DF
24	18.0	36.0	1440	AZDC110-1AE-24DF

## MECHANICAL DATA



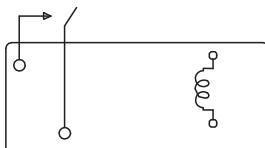
Dimensions in mm. Tolerance:  $\pm 0.1$  mm, Outline tolerance:  $\pm 0.5$  mm

## PC BOARD LAYOUT



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

## WIRING DIAGRAMS



Viewed towards terminals

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5/03/18

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This specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.