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 2 (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) 3×10^7 3×10^4 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

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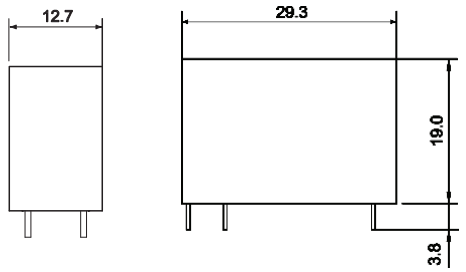
COIL VOLTAGE SPECIFICATIONS

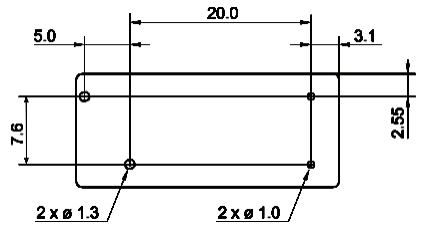
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Resistance Ohm ± 10%	Order Number
5	3.75	7.5	62.5	AZDC110-1AE-5DF
6	4.5	9.0	90	AZDC110-1AE-6DF
9	6.75	13.5	203	AZDC110-1AE-9DF
12	9.0	18.0	360	AZDC110-1AE-12DF
18	13.5	27.0	810	AZDC110-1AE-18DF
24	18.0	36.0	1440	AZDC110-1AE-24DF

MECHANICAL DATA



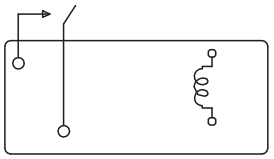
Dimensions in mm. Tolerance: ± 0.1 mm, Outline tolerance: ± 0.5 mm

PC BOARD LAYOUT



Dimensions in mm. Tolerance: ± 0.1 mm Viewed towards terminals.

WIRING DIAGR AMS



Viewed towards terminals