

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 pending
- TÜV R 50386704



Illustration similar



CONTACTS

Arrangement	SPST-N.O. (1 Form A)
Ratings (max.)	(resistive load)
switched power	3000 W or 4800 VA
switched current	16 A
switched voltage	420 VDC or 300 VAC
Rated Loads	
UL (pending)	16 A at 180 VDC, gen.use/resistive, 105°C, 30k cycles 10 A at 300 VDC, gen.use/resistive, 105°C, 30k cycles 5 A at 420 VDC, gen.use/resistive, 105°C, 30k cycles 16 A at 300 VAC, gen.use/resistive, 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	400 mW
at pickup voltage	225 mW (typ.)
max. cont. dissipation	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 ⁷
electrical	3 x 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 V _{RMS} coil to contact 1000 V _{RMS} 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	(at nominal coil voltage)
operating	-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	270 °C (518°F)
max. time	5 seconds
Cleaning	
max. solvent temp.	80°C (176°F)
max. immersion time	30 seconds
Dimensions	
length	29.3 mm (1.154")
width	12.7 mm (0.500")
height	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

COIL VOLTAGE SPECIFICATIONS

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

ORDERING DATA

AZDC110-1AE-DF

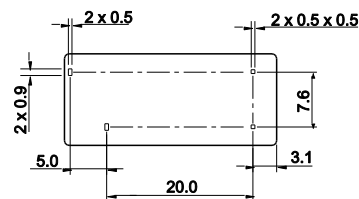
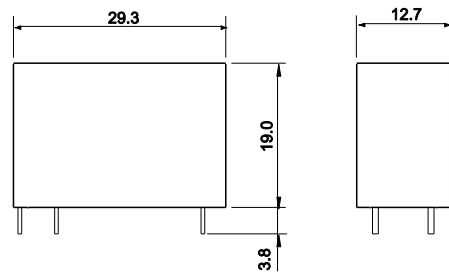
Nominal coil voltage
see coil voltage specifications table

Example ordering data

AZDC110-1AE-12DF 12 VDC nominal coil voltage

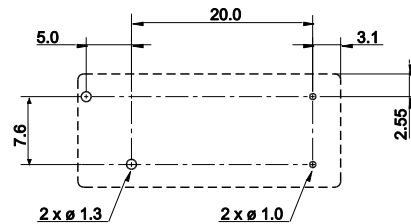
MECHANICAL DATA

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 DIAGRAMS

Viewed towards terminals.

