AZEV180H

80 AMP POWER RELAY

FEATURES

- Up to 80 Amp switching capability
- Wide contact gap of ≥ 3.6 mm
- Clearance and creepage of ≥ 10 mm
- 5 kV dielectric strength, 10 kV surge withstand voltage
- UL Class F insulation (155°C)
- UL：E365652

CONTACTS

Arrangement	SPST-N.O. (1 Form A)
Ratings (max.) standard version switched power switched current switched voltage	(resistive load) 19200VA 80 A 240 VAC
Rated Loads **UL/CUR**	80A at 240 VAC, resistive, 85°C, 10k cycles
Contact material	$AgSnO_2In_2O_3$ (silver tin oxide)
Contact gap	≥ 3.6 mm
Contact resistance Initial typical	(load contact) ≤ 100 mΩ (at 6V, 1A, voltage drop method) < 3 mΩ (at 6V, 1A, voltage drop method)

COIL

Nominal coil DC voltages	6, 9, 12, 24,
Dropout voltage	≥ 5% of nominal coil voltage
Holding voltage	≥ 40% of nominal coil voltage
Coil power nominal holding power at pickup voltage	(at 23 °C) 3 W 510 mW 1.8 W
Temperature Rise	70 K (126°F) at nom. coil voltage, 85°C
Max. temperature	Class F insulation - 155°C (311°F)

GENERAL DATA

Life Expectancy mechanical electrical	(minimum operations) 1 x 10^5 see UL/CUR ratings
Operate Time	40 ms (max.) at nominal coil voltage
Release Time	10 ms (max.) at nominal coil voltage, without coil suppression
Dielectric Strength coil to load contacts open load contacts	(at sea level for 1 min.) 5000 V_{RMS} 2500 V_{RMS}
Surge Voltage coil to contacts	10kV (at 1.2 x 50µs)
Insulation Resistance	1000 MΩ (min.) at 23°C, 500 VDC, 50% RH
Creepage coil to contact	≥ 10.0 mm
Clearance coil to contact	≥ 10.0 mm
Temperature Range operating	(at nominal coil voltage) -40°C (-40°F) to 85°C (185°F)
Vibration resistance	0.062" (1.5 mm) DA at 10–55 Hz
Shock	10 g
Enclosure protection category material group flammability	 RT II, flux proof IIIa UL94 V-0
Terminals	Tinned copper alloy, P. C.
Soldering max. temperature max. time	 270 °C (518°F) 5 seconds
Dimensions length width height	 41.0 mm (1.61”) 36.0 mm (1.42”) 43.0 mm (1.69”)
Weight	95 grams (approx.)
Compliance	UL 508, IEC 61810-1, RoHS, REACH
Packing unit in pcs	10per plastic tube / 60 per carton box

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COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Min. Holding VDC	Max. Cont. VDC	Resistance Ohm ± 10%
6	4.5	2.4	6.6	12
9	6.75	3.6	9.9	26
12	9	4.8	13.2	46
24	18	9.6	26.4	186

Note: All values at 23°C (73°F), upright position, terminals downward.

ORDERING DATA

AZEV180H-1AE-□□D

Nominal coil voltage
See coil voltage specifications table

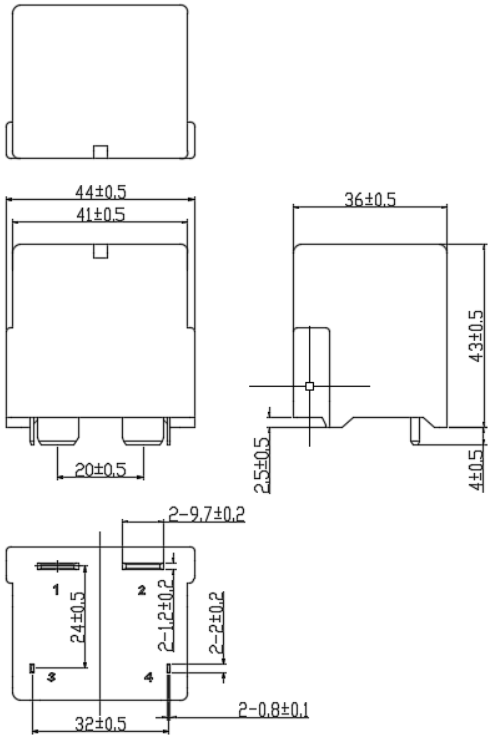
Contact material
E: silver tin oxide

Example ordering data

AZEV180H-1AE-12D — Contact material: silver tin oxide,12 VDC nominal coil voltage

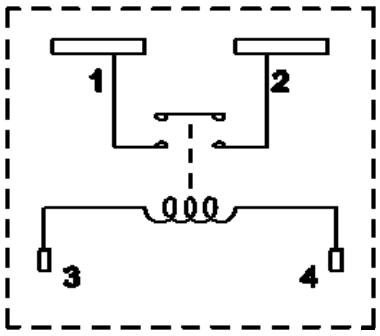
MECHANICAL DATA

Dimensions in mm. Tolerance: ±0.5mm



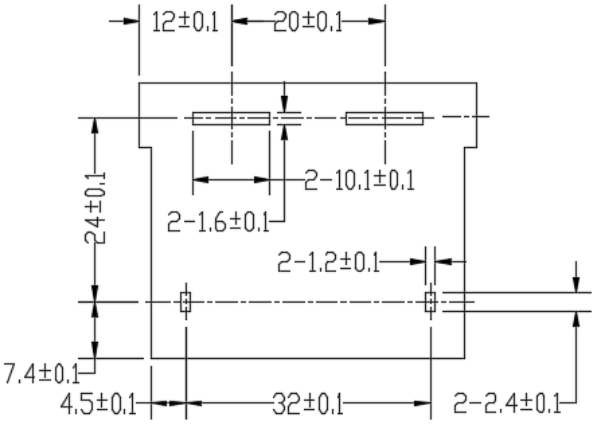
WIRING DIAGRAMS

Viewed towards terminals.



PC BOARD LAYOUT

Dimensions in mm. Tolerance: ±0.1mm unless otherwise stated
Viewed towards terminals.



NOTES

1. Specifications subject to change without notice.
2. All values at 20°C (68°F) unless otherwise stated.
3. Relay may pull in with less than “Must Operate” value.
4. Recommended wire cross section according to IEC 61810-1 at 80A: 25mm²
5. Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.

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DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from the regional ZETTLER relay websites. The 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.

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