

# AZEV180H

## 80 AMP POWER RELAY

### FEATURES

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



### CONTACTS

<b>Arrangement</b>	SPST-N.O. (1 Form A)
<b>Ratings (max.)</b> standard version switched power switched current switched voltage	(resistive load)  19200VA 80 A 240 VAC
<b>Rated Loads</b> <b>UL/CUR</b>	80A at 240 VAC, resistive, 85°C, 10k cycles
<b>Contact material</b>	AgSnO <sub>2</sub> In <sub>2</sub> O <sub>3</sub> (silver tin oxide)
<b>Contact gap</b>	$\geq 3.6$ mm
<b>Contact resistance</b> Initial  typical	(load contact) $\leq 100$ m $\Omega$ (at 6V, 1A, voltage drop method )  < 3 m $\Omega$ (at 6V, 1A, voltage drop method )

### COIL

<b>Nominal coil DC voltages</b>	6, 9, 12, 24,
<b>Dropout voltage</b>	$\geq 5\%$ of nominal coil voltage
<b>Holding voltage</b>	$\geq 40\%$ of nominal coil voltage
<b>Coil power</b> nominal holding power at pickup voltage	(at 23 °C) 3 W 510 mW 1.8 W
<b>Temperature Rise</b>	70 K making at nom. coil voltage, and holding at 50%~70% of nom. coil voltage, 85°C
<b>Max. temperature</b>	Class F insulation - 155°C (311°F)

### GENERAL DATA

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

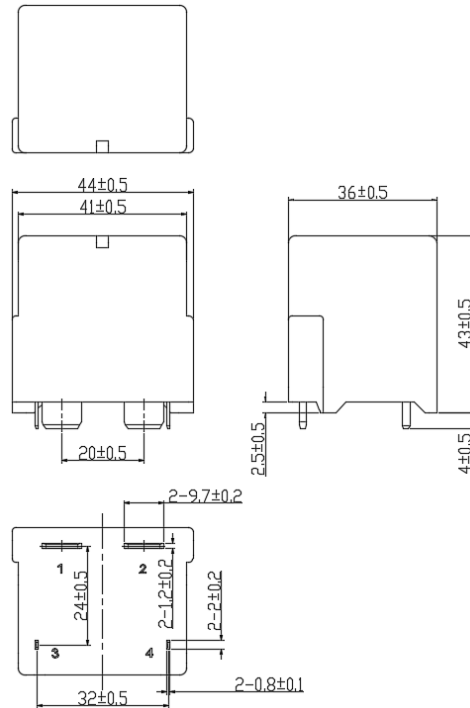
E: silver tin oxide

### Example ordering data

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

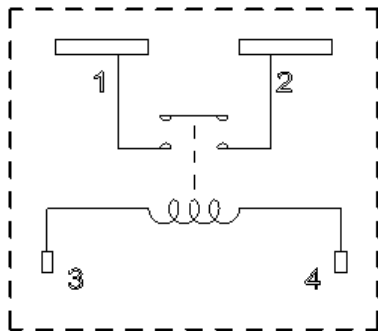
## MECHANICAL DATA

Dimensions in mm. Tolerance:  $\pm$ 0.5mm



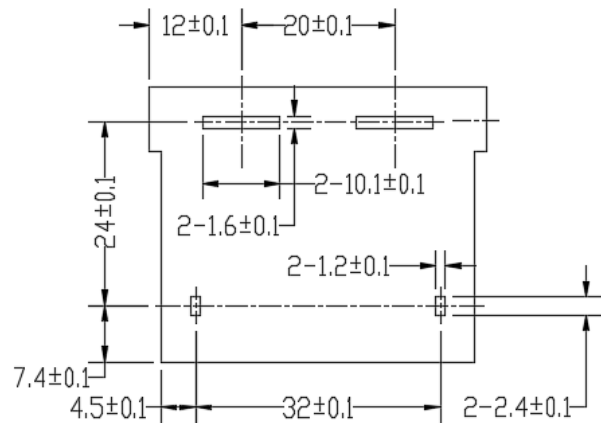
## WIRING DIAGRAMS

Viewed towards terminals.



## PC BOARD LAYOUT

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



## NOTES

- Specifications subject to change without notice.
- All values at 20°C (68°F) unless otherwise stated.
- Relay may pull in with less than "Must Operate" value.
- Recommended wire cross section according to IEC 61810-1 at 80A: 25mm<sup>2</sup>
- 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.

## ZETTLER GROUP

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