

# AZEV116 / AZEV132

## 16 AMP / 32 AMP POWER RELAY

### FEATURES

- AZEV116 with 16 Amp nominal switching capability
- AZEV132 with 32 Amp nominal switching capability
- Isolated N.C. signal contact for welding monitoring
- Withstands up to 1500 Amp short circuit current
- Wide contact gap of  $\geq 2.25$  mm
- Dielectric strength 4 kV<sub>RMS</sub>
- UL / CUR E365652
- TÜV B0887930014
- CQC 19002216104



Illustration similar



### CONTACTS

<b>Arrangement</b>	
load contact	SPST-N.O. (1 Form A)
signal contact	SPST-N.C. (1 Form B) coupled to load contact

#### Ratings (max.) (resistive load)

<b>AZEV116</b>	
switched power	6400 VA
switched current	20 A
switched voltage	400 VAC

<b>AZEV132</b>	
switched power	12800 VA
switched current	40 A
switched voltage	400 VAC

signal contact	10 mA at 12 VDC
----------------	-----------------

#### Rated Loads

##### UL/CUR

AZSR116 load contact	16 A at 277 VAC, resistive, 85°C, 50k cycles 20 A at 277 VAC, resistive, 85°C, 30k cycles
AZSR132 load contact	32 A at 277 VAC, resistive, 85°C, 50k cycles 40 A at 277 VAC, resistive, 45°C, 6k cycles
signal contact	10 mA at 12 VDC, 85°C, 50k cycles

##### TÜV

AZSR116 load contact	16 A at 400 VAC, resistive, 85°C, 50k cycles 20 A at 277 VAC, resistive, 85°C, 30k cycles
AZSR132 load contact	32 A at 400 VAC, resistive, 85°C, 50k cycles 40 A at 277 VAC, resistive, 45°C, 6k cycles
signal contact	10 mA at 12 VDC, 85°C, 50k cycles

#### Contact material

load contact	AgSnO <sub>2</sub> (silver tin oxide)
signal contact	AgNi+Au (silver nickel, gold plated)

#### Contact gap

load contact	$\geq 2.25$ mm
--------------	----------------

#### Contact resistance

(load contact)	
initial	$\leq 50$ m $\Omega$
typical	$< 3$ m $\Omega$

### COIL

<b>Nominal coil DC voltages</b>	5, 9, 12, 24, 48
---------------------------------	------------------

<b>Dropout voltage</b>	$> 5\%$ of nominal coil voltage
------------------------	---------------------------------

<b>Holding voltage</b>	$> 35\%$ of nominal coil voltage
------------------------	----------------------------------

<b>Coil power</b>	(at 20 °C)
-------------------	------------

nominal	1.55 W
holding power	190 mW
at pickup voltage	875 mW

<b>Temperature Rise</b>	70 K (126°F) at nom. coil voltage, 85°C
-------------------------	---

<b>Max. temperature</b>	Class F insulation - 155°C (311°F)
-------------------------	------------------------------------

### GENERAL DATA

<b>Life Expectancy</b>	(minimum operations)
mechanical	$1 \times 10^5$
electrical	see UL/CUR/TÜV ratings

<b>Operate Time</b>	30 ms (max.) at nominal coil voltage
---------------------	--------------------------------------

<b>Release Time</b>	10 ms (max.) at nominal coil voltage, without coil suppression
---------------------	--

#### Dielectric Strength (at sea level for 1 min.)

coil to load contacts	4000 V <sub>RMS</sub>
signal to load contacts	4000 V <sub>RMS</sub>
open load contacts	2500 V <sub>RMS</sub>

#### Pulse current capability (based on requirements of IEC 62752)

AZEV116	$\geq 1.02$ kA; $\geq 2.5$ kA <sup>2</sup> s
AZEV132	$\geq 1.50$ kA; $\geq 6.0$ kA <sup>2</sup> s

<b>Insulation Resistance</b>	1000 M $\Omega$ (min.) at 20°C, 500 VDC, 50% RH
------------------------------	---

<b>Temperature Range</b>	(at nominal coil voltage)
operating	-40°C (-40°F) to 85°C (185°F)

<b>Vibration resistance</b>	0.062" (1.5 mm) DA at 10–55 Hz
-----------------------------	--------------------------------

#### Enclosure

protection category	P.B.T. polyester
material group	RT II, flux proof
flammability	IIIa
	UL94 V-0

#### Terminals

Tinned copper alloy, P. C.

#### Soldering

max. temperature	270 °C
max. time	5 s

#### Cleaning

max. solvent temp.	80°C (176°F)
max. immersion time	30 seconds

#### Dimensions

length	35.0 mm (1.38")
width	16.0 mm (0.63")
height	27.9 mm (1.10")

#### Weight

25 grams (approx.)

#### Compliance

UL 508, IEC 61810-1, RoHS, REACH

designed to meet requirements of IEC 62752

#### Packing unit in pcs

50 per plastic tray / 400 per carton box

**ZETTLER electronics GmbH**

- A ZETTLER GROUP Company

Junkersstr. 3, D-82178 Puchheim, Germany

phone: +49 89 800 97-0  
fax: +49 89 800 97-200

office@ZETTLERelectronics.com  
www.ZETTLERelectronics.com

page 1 of 2 2019-05-06

# AZEV116/AZEV132

## COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Min. Holding VDC	Max. Cont. VDC	Resistance Ohm $\pm$ 10%
5	3.75	1.75	6.0	16.15
9	6.75	3.15	10.8	52.3
12	9.0	4.2	14.4	93.0
24	18.0	8.4	28.8	372
48	36.0	16.8	57.6	1488

Note: All values at 20°C (68°F), upright position, terminals downward.

## ORDERING DATA

AZEV1  -1AE  -  D

**Nominal coil voltage**  
see coil voltage specifications table

**Signal contact**  
nil: without signal contact  
1BG: equipped with 1 Form B signal contact

**Basic series**  
16: 16 Amp nominal switching current  
32: 32 Amp nominal switching current

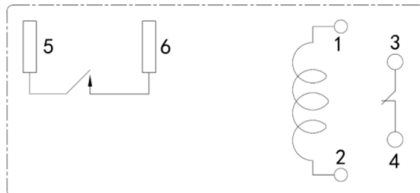
### Example ordering data

AZEV116-1AE-24D 16 Amp nom. current, without signal contact, 24 VDC coil

AZEV132-1AE1BG-12D 32 Amp nom. current, 1 Form B signal contact, 12 VDC coil

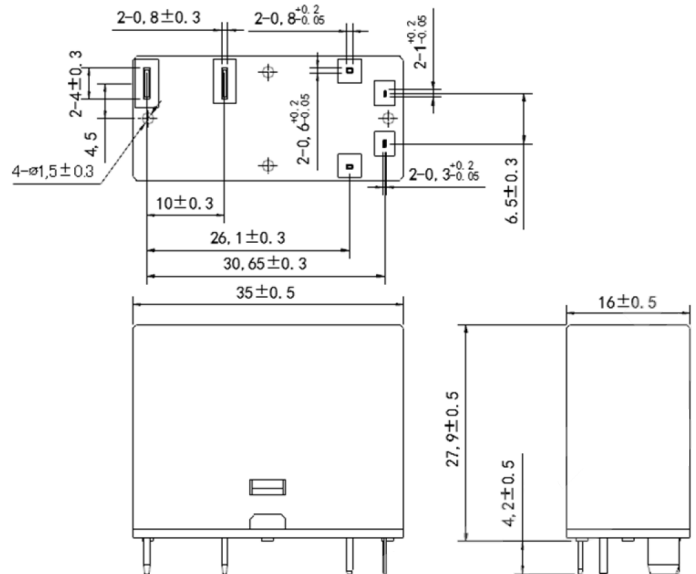
## WIRING DIAGRAMS

Viewed towards terminals



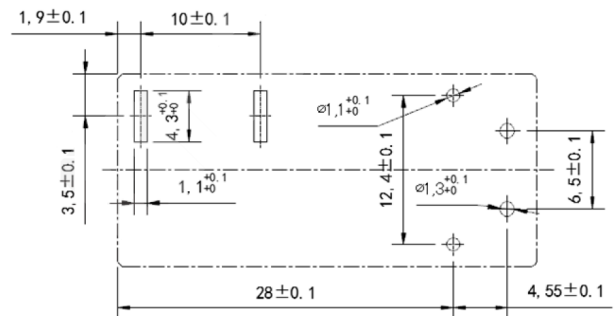
## MECHANICAL DATA

Dimensions in mm.



## PC BOARD LAYOUT

Viewed towards terminals. Dimensions in mm.



## NOTES

- All values at 20°C (68°F).
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on terminals.
- Specifications subject to change without notice.

## DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from [www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf](http://www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf)

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 electronics GmbH** - A ZETTLER GROUP Company

Junkersstr. 3, D-82178 Puchheim, Germany

phone: +49 89 800 97-0  
fax: +49 89 800 97-200

office@ZETTLERelectronics.com  
www.ZETTLERelectronics.com

page 2 of 2 2019-05-06