

# AZSR165

## 65 AMP POWER RELAY

### FEATURES

- Up to 80 Amp switching capability
- Wide contact gap of  $\geq 3.0$  mm
- Clearance and creepage of  $\geq 10$  mm
- 4 kV dielectric strength, 10 kV surge withstand voltage
- UL Class F insulation (155°C)
- UL / CUR E365652
- TÜV B0887930008



### CONTACTS

<b>Arrangement</b>	SPST-N.O. (1 Form A)
<b>Ratings (max.)</b> switched power switched current carrying current switched voltage	(resistive load) 43200 VA 80 A 65 A 690 VAC
<b>Rated Loads</b> <b>UL/TÜV</b>	80 A at 540 VAC, resistive, 85°C, 1k cycles 10 A make - 65 A carry - 10 A break at 690 VAC, resistive, 85°C, 100k cycles 20 A make - 65 A carry - 20 A break at 690 VAC, resistive, 85°C, 30k cycles
<b>Contact material</b>	AgNi
<b>Contact gap</b>	$\geq 3.0$ mm
<b>Initial resistance</b>	$\leq 10$ m $\Omega$ (10 A - 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 max. continuous at pickup voltage holding power	 2.2 W 2.6 W 1.25 W 360 mW
<b>Temperature Rise</b>	70 K (126°F) at nominal coil voltage
<b>Max. temperature</b>	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. Provide sufficient PCB cross section on load terminals.  
Recommended cross section according to IEC 61810-1:2015: 25 mm<sup>2</sup>
4. Specifications subject to change without notice.

### GENERAL DATA

<b>Life Expectancy</b> mechanical electrical	(minimum operations) $1 \times 10^6$ $3 \times 10^5$ at 10 A make/break - 65 A carry, 690 VAC, resistive $1 \times 10^3$ at 80 A, 540 VAC, resistive
<b>Operate Time</b> <b>Release Time</b>	40 ms (max.) at nominal coil voltage 10 ms (max.) at nominal coil voltage, without coil suppression
<b>Dielectric Strength</b>	(at sea level for 1 min.) 4000 V <sub>RMS</sub> coil to contact 2000 V <sub>RMS</sub> between open contacts
<b>Surge Voltage</b> coil to contact	10 kV (at 1.2 x 50 $\mu$ s)
<b>Insulation Resistance</b>	1000 M $\Omega$ (min.) at 20°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> <b>Shock resistance</b>	1.5 mm (0.062") DA at 10-55 Hz 10 g
<b>Enclosure</b> <b>Terminals</b>	P.B.T. polyester Tinned copper alloy, P. C.
<b>Soldering</b> max. temperature max. time	270 °C (518°F) 5 seconds
<b>Cleaning</b> max. solvent temp. max. immersion time	80°C (176°F) 30 seconds
<b>Dimensions</b> length width height	38.0 mm (1.496") 33.0 mm (1.300") 41.5 mm (1.634")
<b>Weight</b>	76 grams (approx.)
<b>Packing unit in pcs</b> <b>Compliance</b>	10 per plastic tube / 150 per carton box UL 508, IEC 61810-1, RoHS, REACH

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

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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	16.2
9	6.75	3.6	9.9	36.8
12	9.0	4.8	13.2	65.0
24	18.0	9.6	26.4	262

## ORDERING DATA

AZSR165-1A-DL

Nominal coil voltage  
see coil voltage specifications table

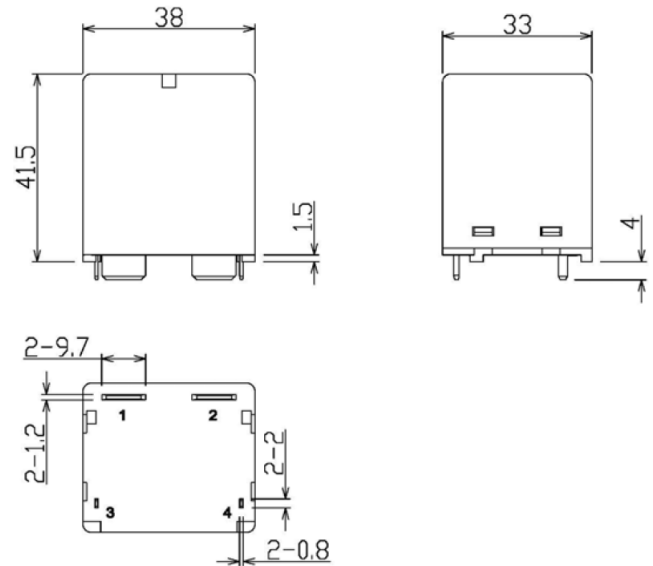
### Example ordering data

AZSR165-1A-12DL Contact material: silver nickel, 12 VDC nom. coil voltage

AZSR165-1A-9DL Contact material: silver nickel, 9 VDC nom. coil voltage

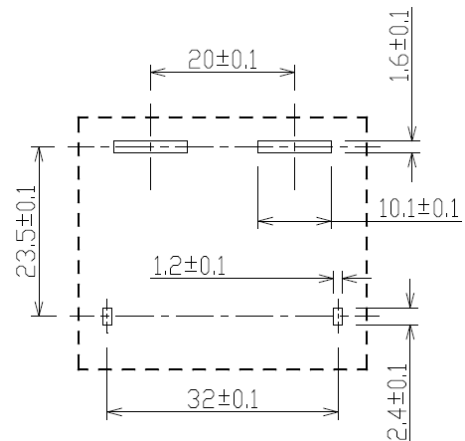
## MECHANICAL DATA

Dimensions in mm. Tolerance:  $\pm 0.5$  mm unless otherwise stated



## PC BOARD LAYOUT

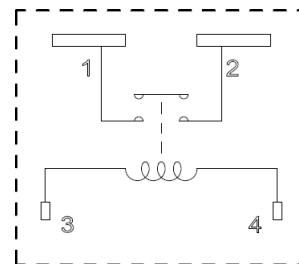
Dimensions in mm. Tolerance:  $\pm 0.1$  mm unless otherwise stated  
Viewed towards terminals.



## WIRING DIAGRAMS

Viewed towards terminals.

Note: Provide sufficient PCB cross section on load terminals. Recommended cross section according to IEC 61810-1: 25 mm<sup>2</sup>.



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