

# AZSR180

## 80 A POWER RELAY

### FEATURES

- 80 Amp switching
- Wide contact gap > 2.05mm
- Holding power <100 mW
- Dielectric strength 5000 Vrms
- Isolation spacing greater than 10 mm
- Double insulation, EN 60730-1 (VDE 0631, part 1)
- Reinforced insulation, EN 60335-1 (VDE 0700, part 1)
- UL, CUR E44211
- VDE certificate 40044305

RoHS compliant !



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A)
<b>Ratings</b>	Resistive load:  Max. switched power: 2400 W or 22160 VA Max. switched current: 80 A (1000 cycles) Max. continuous current: 80 A Max. switched voltage: 150 VDC* or 440 VAC  * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Rated Load UL</b>	80 A at 277 VAC, resistive, 1k cycles
<b>VDE</b>	80 A at 277 VAC, resistive, 1k cycles, 85°C 30 A at 263 VAC, AC-7a, 30k cycles, 85°C
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 50 milliohms initially

### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>5</sup> 3 x 10 <sup>4</sup> at 30 A 250 VAC Res.
<b>Operate Time (typical)</b>	40 ms at nominal coil voltage
<b>Release Time (typical)</b>	5 ms at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength</b> <b>(at sea level for 1 min.)</b>	5000 Vrms coil to contact 2500 Vrms between open contacts
<b>Insulation Resistance</b>	1000 megohms min. at 20°C 500 VDC 50% RH
<b>Insulation</b> <b>(according to</b> <b>DIN VDE 0110,</b> <b>IEC 60664-1)</b>	C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC
<b>Dropout</b>	Greater than 5% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b>	At nominal coil voltage -40°C (-40°F) to 85°C (185°F)
<b>Vibration</b>	0.062" (1.5 mm) DA at 10–55 Hz
<b>Shock</b>	10 g
<b>Enclosure</b>	PA
<b>Terminals</b>	Tinned copper alloy, P.C.
<b>Max. Solder Temp.</b>	270°C (518°F)
<b>Max. Solder Time</b>	5 seconds
<b>Weight</b>	105 grams
<b>Packing unit in pcs</b>	10 per inner carton / 100 per carton box

### COIL

<b>Power At Pickup Voltage (typical)</b>	270 mW
<b>Max. Continuous Dissipation</b>	2.0 W at 20°C (68°F) ambient
<b>Temperature Rise</b>	15°C (27°F) at nominal coil voltage
<b>Temperature</b>	Max. 155°C (311°F) Class F

### NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Specifications subject to change without notice.
4. Recommended PCB cross section 16 mm<sup>2</sup>.

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This product specification to be used only together with the application notes which can be downloaded from <http://www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf>

2016-06-27

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## RELAY ORDERING DATA

COIL SPECIFICATIONS - SPST (1 FORM A)					
Nominal Coil VDC	Must Operate VDC	Min. Holding VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	ORDER NUMBER
12	9.00	4.0	24.0	300	AZSR180-1AE-12D
24	18.00	8.0	48.0	1200	AZSR180-1AE-24D

## MECHANICAL DATA

Front view dimensions: 40.0 (width), 49.2 (height), 2.0 (bottom offset).  
Side view dimensions: 25.0 (width), 4.5 (bottom offset).

PC BOARD LAYOUT dimensions: 7.0 x 2.5 (4x), 3.3 x 1.3 (2x), 14.7, 10.0, 22.8, 3.5.

WIRING DIAGRAM: Shows a switch with terminals 3, 4, 5, 6 and a coil with terminals 1, 2.

Viewed toward terminals

Viewed toward terminals

Viewed toward terminals

**PC BOARD LAYOUT**

Viewed toward terminals

**WIRING DIAGRAM**

Viewed toward terminals

It is absolute necessary to provide a connection between pin 3 and 4 (5 and 6) on the PCB to avoid a malfunction of the relay! Check also note 4 on first page, please.

Dimensions in mm. Tolerance:  $\pm .25$  mm

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