

# AZSR180

## 80 A POWER RELAY

### FEATURES

- 80 Amp switching
- Wide contact gap > 2.05 mm
- Holding power <100 mW
- Dielectric strength 5000 V<sub>RMS</sub>
- 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



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A)
<b>Ratings (max.)</b> (resistive load)	2400 W or 22160 VA
switched power	80 A (1k cycles)
switched current	80 A
continuous current	150 VDC* or 440 VAC
switched voltage:	
	* Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Rated Loads</b>	
UL	80 A at 277 VAC, resistive load, 1k cycles
VDE	80 A at 277 VAC, resistive load, 1k cycles, 85°C 30 A at 263 VAC, AC-7a, 30k cycles, 85°C
<b>Contact material</b>	AgSnO <sub>2</sub> (silver-tin-oxide)
<b>Contact gap</b>	> 2.05 mm
<b>Initial resistance</b>	< 50 mΩ

### COIL

<b>Nominal coil voltage</b>	<b>12.0 VDC</b>	<b>24.0 VDC</b>
Must operate voltage	9.0 VDC	18.0 VDC
Min. holding voltage	4.0 VDC	8.0 VDC
Max. continuous voltage	24.0 VDC	48.0 VDC
Coil resistance	300 Ω ± 10%	1200 Ω ± 10%
<b>Dropout</b>	> 5% of nominal coil voltage	
<b>Power at pickup voltage</b>	270 mW (typ.)	
<b>Holding power</b>	< 100 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	

### 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>.

### GENERAL DATA

<b>Life Expectancy</b>	(minimum operations)
Mechanical	1 x 10 <sup>5</sup>
Electrical	1 x 10 <sup>9</sup> at 80 A 277 VAC resistive 3 x 10 <sup>4</sup> at 30 A 263 VAC AC-7a
<b>Operate Time</b>	40 ms (typ.) at nominal coil voltage
<b>Release Time</b>	5 ms (typ.) at nominal coil voltage, without coil suppression
<b>Dielectric Strength</b>	5000 V <sub>RMS</sub> coil to contact 2500 V <sub>RMS</sub> between open contacts (at sea level for 1 min.)
<b>Insulation Resistance</b>	1000 MΩ (min.) at 20°C, 500 VDC 50% RH
<b>Isolation spacing</b>	> 10 mm
<b>Insulation</b>	C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC (according to DIN VDE 0110, IEC 60664-1) Double insulation according to EN 60730-1 (VDE 0631, part 1) Reinforced insulation according to EN 60335-1 (VDE 0700, part 1)
<b>Operating Temp. Range</b>	-40°C (-40°F) to 85°C (185°F) ambient (at nominal coil voltage)
<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>Soldering</b>	
Max. Temperature	270°C (518°F)
Max. Time	5 seconds
<b>Weight</b>	105 grams
<b>Packing unit in pcs</b>	10 per inner carton / 100 per carton box

# AZSR180

## ORDERING DATA

**AZSR180-1AE-□□D**

**Coil**  
D: DC coil

**Nominal coil voltage**  
12: 12V  
24: 24V

**Contact material**  
E: Silver-tin-oxide

**Contact arrangement**  
1A: 1-FORM-A (SPST)

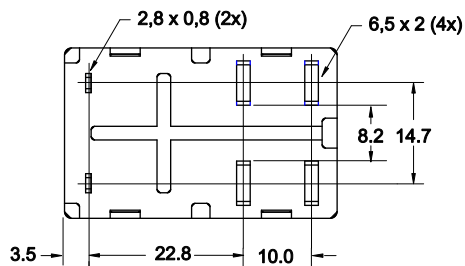
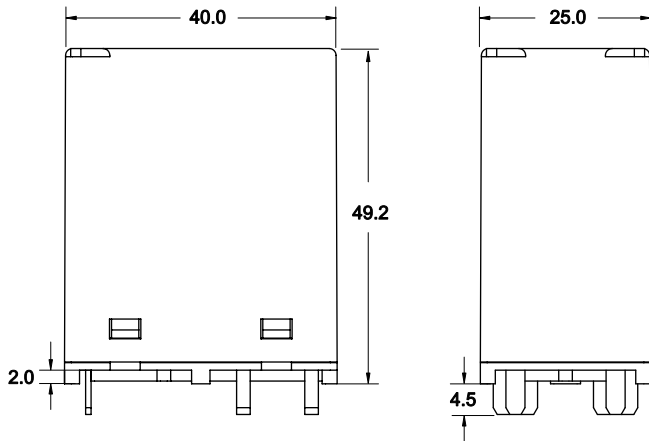
### Orderable parts:

**AZSR180-1AE-12D** Arrangement 1-FORM-A, contact material: silver-tin-oxide, coil voltage: 12VDC

**AZSR180-1AE-24D** Arrangement 1-FORM-A, contact material: silver-tin-oxide, coil voltage: 24VDC

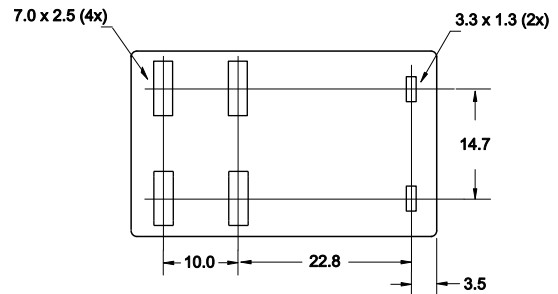
## MECHANICAL DATA

Viewed towards terminals. Dimensions in mm. Tolerance:  $\pm 0.25$  mm



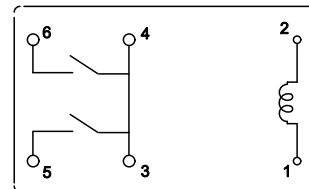
## PC BOARD LAYOUT

Viewed towards terminals



## WIRING DIAGRAM

Viewed towards terminals



### Note:

It is absolutely necessary to provide a connection between pin 3 and 4 (5 and 6) on the PCB to avoid malfunction of the relay.  
Recommended PCB cross section should be  $>16 \text{ mm}^2$  (note 4 on page 1)