

AZSR180

80 A POWER RELAY

FEATURES

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



CONTACTS

Arrangement	SPST (1 Form A)
Ratings (max.)	(resistive load)
switched power	2400 W or 22160 VA
switched current	80 A (1k cycles)
continuous current	80 A
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.
Rated Loads	
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
Contact material	AgSnO ₂ (silver-tin-oxide)
Contact gap	> 2.05 mm
Initial resistance	< 50 mΩ

COIL

Nominal coil voltage	12.0 VDC	24.0 VDC
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%
Dropout	> 5% of nominal coil voltage	
Power at pickup voltage	270 mW (typ.)	
Holding power	< 100 mW	
Max. continuous dissipation	2.0 W at 20°C (68°F) ambient	
Temperature Rise	15 K (27°F) at nominal coil voltage	
Max. temperature	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. Provide sufficient PCB cross section as heat spreader on terminals. Recommended PCB cross section >16 mm².
4. Specifications subject to change without notice.

GENERAL DATA

Life Expectancy	(minimum operations)
mechanical	1 x 10 ⁶
electrical	1 x 10 ⁹ at 80 A 277 VAC resistive 3 x 10 ⁴ at 30 A 263 VAC AC-7a
Operate Time	40 ms (typ.) at nominal coil voltage
Release Time	5 ms (typ.) at nominal coil voltage, without coil suppression
Dielectric Strength	(at sea level for 1 min.) 5000 V _{RMS} coil to contact 2500 V _{RMS} between open contacts
Insulation Resistance	1000 MΩ (min.) at 20°C, 500 VDC 50% RH
Isolation spacing	> 10 mm
Insulation	C250 Overvoltage category: III Pollution degree: 3 Nominal voltage: 250 VAC (according to DIN VDE 0110, IEC 60664-1) Double insulation according to IEC 60730-1 (VDE 0631, part 1) Reinforced insulation according to IEC 60335-1 (VDE 0700, part 1)
Operating Temp. Range	-40°C (-40°F) to 85°C (185°F) ambient (at nominal coil voltage)
Vibration	1.5 mm (0.062") DA at 10–55 Hz
Shock	10 g
Enclosure	PA
Terminals	Tinned copper alloy, P. C.
Soldering	
max. temperature	270°C (518°F)
max. time	5 seconds
Dimensions	
length	40.0 mm (1.55")
width	25.0 mm (0.98")
height	49.2 mm (1.94")
Weight	105 grams
Compliance	IEC 61810-1, UL 508, RoHS, REACH
Packing unit in pcs	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)

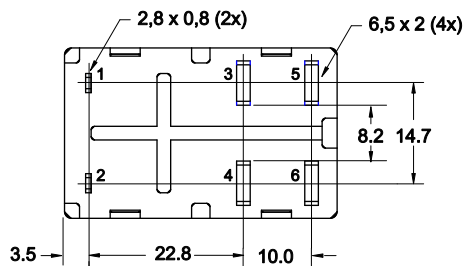
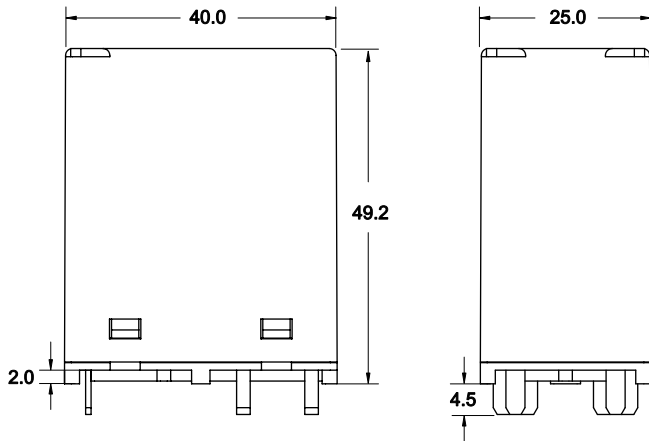
Orderable parts:

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

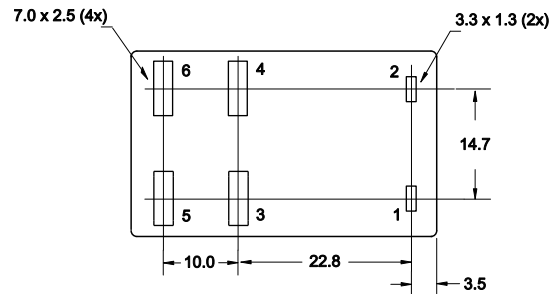
MECHANICAL DATA

Viewed towards terminals. Dimensions in mm. Tolerance: ± 0.25 mm



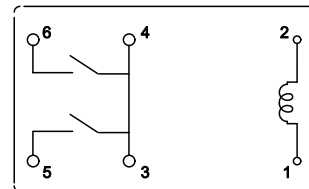
PC BOARD LAYOUT

Viewed towards terminals.



WIRING DIAGRAM

Viewed towards terminals.



Note:

To ensure proper operation of the relay, a connection on the PCB of pins 3 and 4 and also of pins 5 and 6 is necessary. Not doing so may result in malfunction of the relay.
Recommended PCB cross section >16 mm².