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	1×10^6
electrical	1×10^3 at 80 A 277 VAC resistive 3×10^4 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

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AZSR180

ORDERING DATA

AZSR180-1AE-□□D

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Coil
D: DC coil

Nominal coil voltage
12: 12V
24: 24V

Contact material
E: Silver-tin-oxide

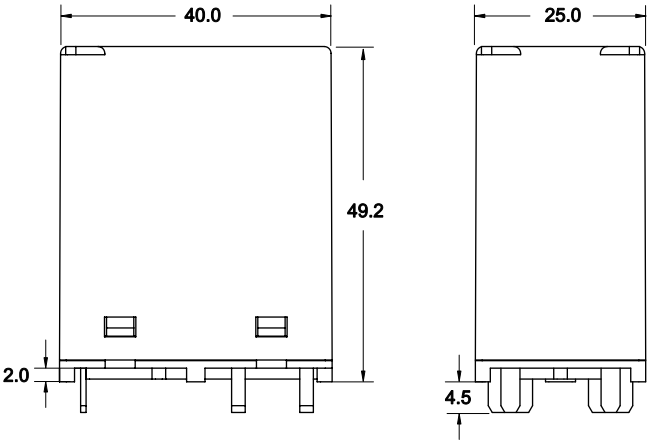
Contact arrangement
1A: 1-FORM-A (SPST)

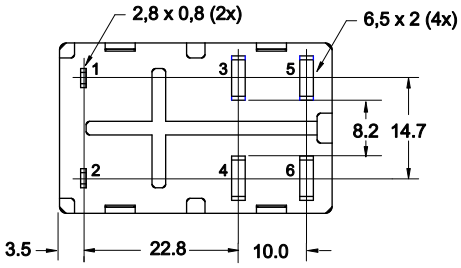
Orderable parts:

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

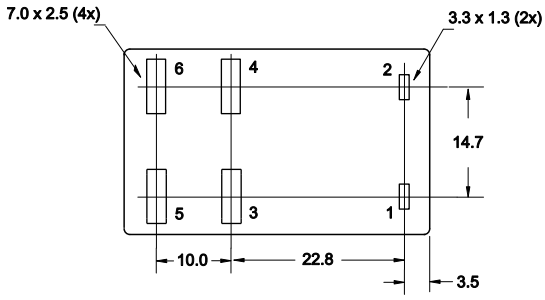
Viewed towards terminals. Dimensions in mm. Tolerance: ± 0.25 mm





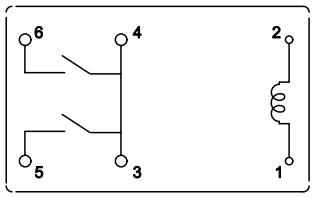
PC BOARD LAYOUT

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.