AZSR235 / AZSR250

35 A / 50 A POWER RELAY



FEATURES

- 35 Amp switching (AZSR235)
- 50 Amp switching (AZSR250)
- Contact gap > 2.05 mm (AZSR235), > 1.85 mm (AZSR250)
- 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 40033251

CONTACTS

Arrangement	SPST (1 Form A) DPST (2 Form A)
Ratings (max.)	(resistive load)
AZSR235	
switched power	1050 W or 9695 VA
switched current	35 A
switched voltage	150 VDC* or 440 VAC
AZSR250	
switched power	1500 W or 13850 VA
switched current	50 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	AZSR235: 35 A at 277 VAC, resistive load AZSR250: 50 A at 277 VAC, resistive load
VDE	AZSR235: 35 A at 263 VAC, referring AC-7a, 85°C AZSR250: 50 A at 263 VAC, referring AC-7a, 85°C
Contact material	$AgSnO_2$ (silver-tin-oxide)
Contact gap	
AZSR235	> 2.05 mm
AZSR250	> 1.85 mm
Initial resistance	< 50 mΩ

COIL

Nominal coil DC voltages	see coil voltage specifications table
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.
4. Specifications subject to change without notice.

GENERAL DATA

Life Expectancy	(minimum operations)
mechanical	1×10^6
electrical	AZSR235: 5×10^4 at 35 A 250 VAC resistive AZSR250: 5×10^4 at 50 A 250 VAC resistive
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 contact sets 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

ZETTLER electronics GmbH - A ZETTLER GROUP Company

Junkersstr. 3, D-82178 Puchheim, Germany
phone: +49 89 800 97-0
fax: +49 89 800 97-200
office@ZETTLERelectronics.com
www.ZETTLERelectronics.com

AZSR235 / AZSR250

COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Minimum Holding VDC		Max. Continuous VDC	Resistance Ohm ± 10%
		1-FORM-A (SPST)	2-FORM-A (DPST)		
5	3.75	1.7	2.1	10.0	50
9	6.75	3.1	3.8	18.0	170
12	9.0	4.0	5.0	24.0	300
18	13.5	6.5	7.5	36.0	675
24	18.0	8.0	10.0	48.0	1200

ORDERING DATA

AZSR2□□-□□□-□□D

Coil
D: DC coil

Nominal coil voltage
see coil voltage specifications table

Contact material
E: Silver-tin-oxide

Contact arrangement
1A: 1-FORM-A (SPST)
2A: 2-FORM-A (DPST)

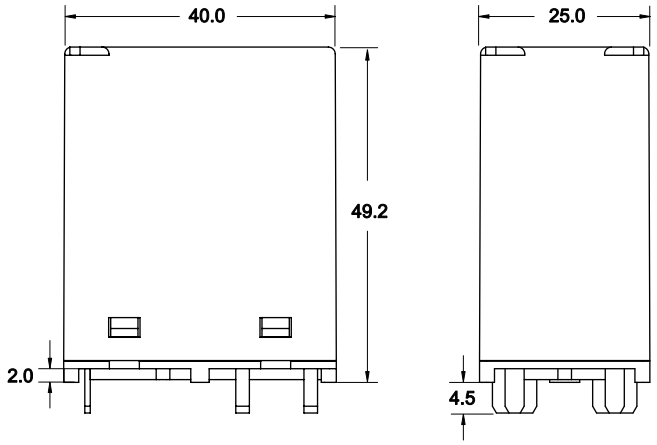
Type
35: 35 Amp switching version
50: 50 Amp switching version

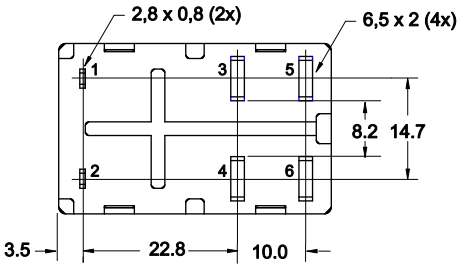
Example ordering data

AZSR235-2AE-12D	35 Amp switching, 2 Form A (DPST), contact material: silver-tin-oxide, 12VDC nominal coil voltage
AZSR250-2AE-24D	50 Amp switching, 2 Form A (DPST), contact material: silver-tin-oxide, 24VDC nominal coil voltage
AZSR250-1AE-12D	50 Amp switching, 1 Form A (SPST), contact material: silver-tin-oxide, 12VDC nominal coil voltage

MECHANICAL DATA

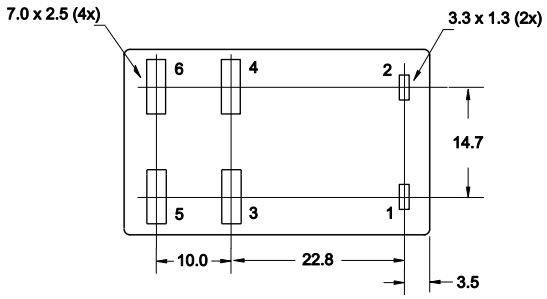
Viewed towards terminals. Dimensions in mm. Tolerance: ± 0.25 mm
Note: Terminals 3 and 5 are not used on 1-Form-A (SPST) versions.





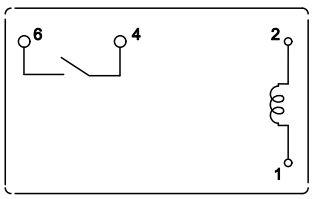
PC BOARD LAYOUT

Viewed towards terminals.
Note: Terminals 3 and 5 are not used on 1-Form-A (SPST) versions.

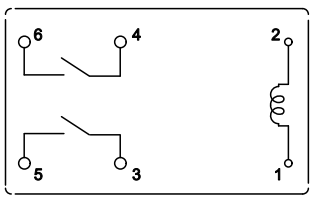


WIRING DIAGRAM

Viewed towards terminals.



1-Form-A (SPST)



2-Form-A (DPST)

ZETTLER electronics GmbH - A ZETTLER GROUP Company

Junkersstr. 3, D-82178 Puchheim, Germany
phone: +49 89 800 97-0
fax: +49 89 800 97-200
office@ZETTLERelectronics.com
www.ZETTLERelectronics.com

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