

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-N.O. (1 Form A) DPST (2 Form A)
Ratings (max.) AZSR235	(resistive load)
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
Coil power	
nominal	480 mW
at pickup voltage	270 mW
holding power	< 84 mW
max. continuous dissipation	2 W
Temperature Rise	15 K (27°F) at nominal coil voltage
Max. temperature	155°C (311°F) - class F

GENERAL DATA

Life Expectancy	(minimum operations) 1 x 10 ⁶ AZSR235: 5 x 10 ⁴ at 35 A 250 VAC resistive AZSR250: 5 x 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 type RT II, flux proof
material group	II
flammability	UL94 V-0
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 (approx.)
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

page 1 of 2 2019-03-08

AZSR235 / AZSR250

COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Min. Holding VDC		Max. Cont. VDC	Resistance Ohm \pm 10%
		1 Form A SPSP	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 - E - D

Nominal coil voltage
see coil voltage specifications table

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

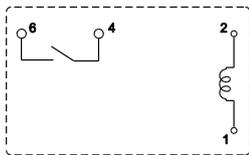
AZSR235-2AE-12D 35 Amp switching, 2 Form A (DPST), 12VDC nominal coil voltage

AZSR250-2AE-24D 50 Amp switching, 2 Form A (DPST), 24VDC nominal coil voltage

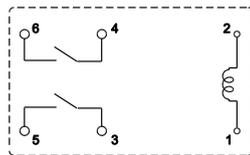
AZSR250-1AE-12D 50 Amp switching, 1 Form A (SPST), 12VDC nominal coil voltage

WIRING DIAGRAM

Viewed towards terminals.



1-Form-A (SPST)



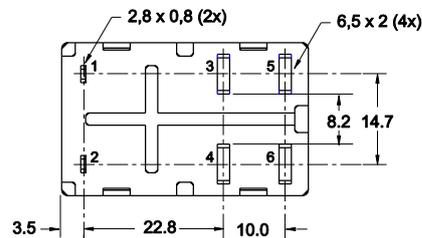
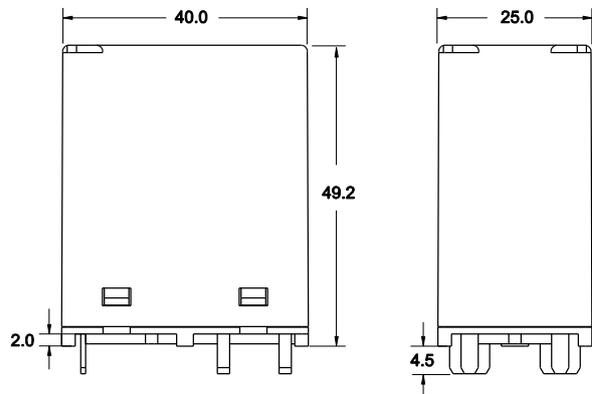
2-Form-A (DPST)

NOTES

- Specifications subject to change without notice.
- All values at 20°C (68°F).
- Relay may pull in with less than "Must Operate" value.
- Provide sufficient PCB cross section as heat spreader on load terminals.
- Coil suppression circuits such as diodes, etc. in parallel to the coil will lengthen the release time.

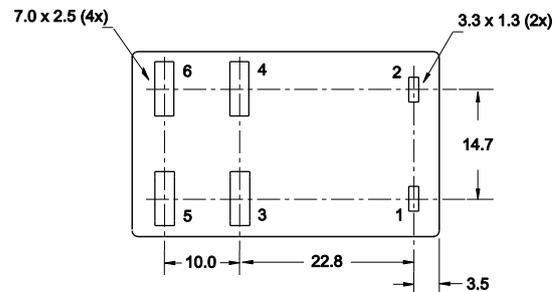
MECHANICAL DATA

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



DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf

The specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.

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

page 2 of 2 2019-03-08