AZSR131

35 AMP MINIATURE POWER RELAY

FEATURES

- 35 Amp switching capability
- 4.5 kV dielectric strength, 10 kV surge
- Wide contact gap (2.3 mm) version available
- UL Class F insulation system (155°C) standard
- EN 60335-1 (GWT) approved version available
- TÜV: B 17 04 88793 005
- UL / CUR file: E365652

CONTACTS

Arrangement	SPST-N.O. (1 Form A)
Ratings (max.)	(resistive load)
switched power	9695 VA
switched current	35 A
continuous current	35 A
switched voltage	277 VAC
Rated Loads	
UL	26 A at 277 VAC, resistive, 85°C, 50k cycles 35 A at 277 VAC, resistive, 85°C, 30k cycles
TÜV	22 A at 277 VAC, resistive, 70°C, 100k cycles 26 A at 277 VAC, resistive, 85°C, 50k cycles 33 A at 277 VAC, cos phi 0.8, 85°C, 50k cycles 35 A at 277 VAC, cos phi 0.8, 85°C, 30k cycles
Contact material	$AgSnO_2$ (silver tin oxide)
Contact gap	
standard version	1.8 mm
option (200) version	2.3 mm
Initial resistance	< 100 mΩ (1 A / 6 V - voltage drop method)

COIL

Nominal coil DC voltages	5, 9, 12, 18, 24, 48
Dropout voltage	> 5% of nominal coil voltage
Holding voltage	> 35% of nominal coil voltage
Coil power	
nominal	1.4 W
max. continuous	2 W
at pickup voltage	790 mW
Temperature Rise	70 K (126°F) at nom. coil voltage, 35 A/85°C
Max. temperature	155°C (311°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	
standard version	3×10^5 (1.8 mm contact gap version)
option (200) version	1×10^5 (2.3 mm contact gap version)
electrical	3×10^4 at 35 A, 277 VAC, resistive 3×10^4 at 35 A, 277 VAC, cos phi 0.8
Operate Time	20 ms (max.) at nominal coil voltage
Release Time	10 ms (max.) at nominal coil voltage, without coil suppression
Dielectric Strength	(at sea level for 1 min.)
	4500 V_{RMS} coil to contact
standard version	2500 V_{RMS} between open contacts
option (200) version	3500 V_{RMS} between open contacts
Surge voltage	
coil to contact	10 kV (at 1.2 x 50 µs)
Isolation spacing	
clearance	≥ 6.4 mm
creepage	≥ 7.5 mm
Insulation Resistance	1000 MΩ (min.) at 20°C, 500 VDC, 50% RH
Temperature Range	(at nominal coil voltage)
operating	-40°C (-40°F) to 85°C (185°F)
Vibration resistance	0.062" (1.5 mm) DA at 10–55 Hz
Shock resistance	20 g
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy, P. C.
Soldering	
max. Temperature	270 °C
max. Time	5 s
Cleaning	
max. Solvent Temp.	80°C (176°F)
max. Immersion Time	30 seconds
Dimensions	
length	30.4 mm (1.20”)
width	15.9 mm (0.63”)
height	25.15 mm (0.99”)
Weight	25 grams
Compliance	UL 508, IEC 61810-1, IEC 60335-1 (GWT)
	RoHS, REACH
Packing unit in pcs	50 per tray / 500 per carton box

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COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC Contact gap 1.8 mm	Must Operate VDC Contact gap 2.3 mm	Min. Holding VDC	Max. Cont. VDC	Resistance Ohm ± 10%
5	3.5	3.75	1.75	6	18
9	6.3	6.75	3.15	10.8	58
12	8.4	9.0	4.2	14.4	103
18	12.6	13.5	6.3	21.6	230
24	16.8	18.0	8.4	28.8	410
48	33.6	36.0	16.8	57.6	1650

ORDERING DATA

AZSR131-1AE-□□D□□□□

Options
nil: standard version
(200): 2.3 mm contact gap version

Material option
nil: standard version
GW: EN 60335-1 (GWT) approved

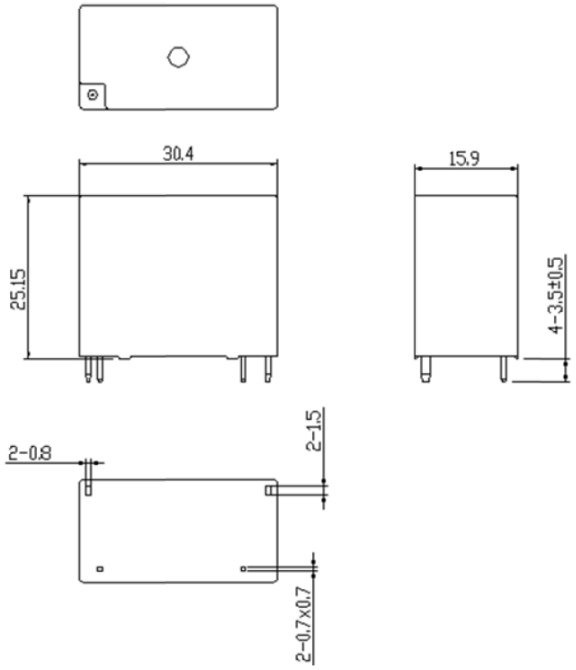
Nominal coil voltage
see coil voltage specifications table

Example ordering data

AZSR131-1AE-9D	9 VDC nominal coil voltage, non EN 60335-1 approved, 1.8 mm contact gap
AZSR131-1AE-24DGW	24 VDC nominal coil voltage, EN 60335-1 (GWT) approved, 1.8 mm contact gap
AZSR131-1AE-9D(200)	9 VDC nominal coil voltage, non EN 60335-1 approved, 2.3 mm contact gap

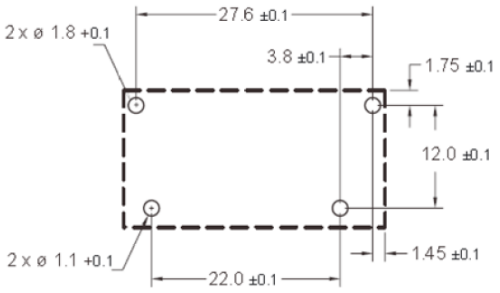
MECHANICAL DATA

Dimensions in mm. Tolerance: ±0.3 mm unless otherwise stated.



PC BOARD LAYOUT

Viewed towards terminals



WIRING DIAGRAMS

Viewed towards terminals