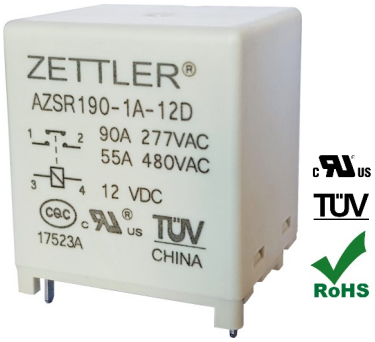
AZSR190

90/100 AMP POWER RELAY



FEATURES

- Up to 100 Amp switching capability
- Wide contact gap of ≥ 3.6 mm
- Clearance and creepage of ≥ 10 mm
- 5 kV dielectric strength, 10 kV surge withstand voltage
- UL Class F insulation (155°C)
- UL / CUR E365652
- TÜV B170988793008

CONTACTS

Arrangement	SPST-N.O. (1 Form A)
Ratings (max.)	(resistive load)
standard version	
switched power	44000 VA
switched current	90 A
high current version	
switched power	48000 VA
switched current	100 A
switched voltage	800 VAC
Rated Loads	
UL	55 A at 480 VAC, resistive, 85°C, 50k cycles 55 A at 690 VAC, resistive, 85°C, 20k cycles 55 A at 800 VAC, resistive, 85°C, 1k cycles 90 A at 480 VAC, resistive, 85°C, 1k cycles 100 A at 480 VAC, res., 85°C, 1k cycles (“T” version)
TÜV	30 A at 480 VAC, resistive, 85°C, 50k cycles 55 A at 480 VAC, resistive, 85°C, 30k cycles 55 A at 690 VAC, resistive, 85°C, 20k cycles 55 A at 800 VAC, resistive, 85°C, 1k cycles 90 A at 480 VAC, resistive, 85°C, 1k cycles 100 A at 480 VAC, res., 85°C, 1k cycles (“T” version)
Contact material	AgNi (silver nickel)
Contact gap	≥ 3.6 mm
Initial resistance	≤ 10 mΩ (10 A - voltage drop method)

COIL

Nominal coil DC voltages	6, 9, 12, 24
Dropout voltage	≥ 10% of nominal coil voltage
Holding voltage	≥ 40% of nominal coil voltage
Coil power	
nominal	1.9 W
max. continuous	2.3 W
at pickup voltage	1.1 W
holding power	310 mW
Temperature Rise	70 K (126°F) at nominal coil voltage
Max. temperature	Class F insulation - 155°C (311°F)

GENERAL DATA

Life Expectancy	(minimum operations)
mechanical	1×10^6
electrical	5×10^4 at 55 A, 480 VAC, resistive, 85°C 1×10^3 at 90 A, 480 VAC, resistive, 85°C
Operate Time	40 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.) 5000 V_{RMS} coil to contact 2500 V_{RMS} between open contacts
Surge Voltage	
coil to contact	10 kV (at 1.2 x 50 µs)
Insulation Resistance	1000 MΩ (min.) at 20°C, 500 VDC, 50% RH
Creepage	
coil to contact	≥ 10.0 mm
Clearance	
coil to contact	≥ 10.0 mm
Temperature Range	(at nominal coil voltage)
operating	-40°C (-40°F) to 85°C (185°F)
Vibration resistance	1.5 mm (0.062") DA at 10–55 Hz
Shock resistance	10 g
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy, P. C.
Soldering	
max. temperature	270 °C (518°F)
max. time	5 seconds
Cleaning	
max. solvent temp.	80°C (176°F)
max. immersion time	30 seconds
Dimensions	
length	38.0 mm (1,496”)
width	33.0 mm (1,300”)
height (standard version)	43.0 mm (1.693”)
height (low profile)	41.5 mm (1.634”)
Weight	85 grams (approx.)
Packing unit in pcs	10 per plastic tube / 150 per carton box
Compliance	UL 508, IEC 61810-1, RoHS, REACH

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COIL VOLTAGE SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Min. Holding VDC	Max. Cont. VDC	Resistance Ohm ± 10%
6	4.5	2.4	6.6	18.8
9	6.75	3.6	9.9	42.2
12	9.0	4.8	13.2	75.0
24	18.0	9.6	26.4	300

ORDERING DATA

AZSR190□-1A-□□D□

Height
nil: standard height (43.0 mm)
L: low profile version (41.5 mm)

Nominal coil voltage
see coil voltage specifications table

Switching capacity
nil: standard version
T: high current version

Example ordering data

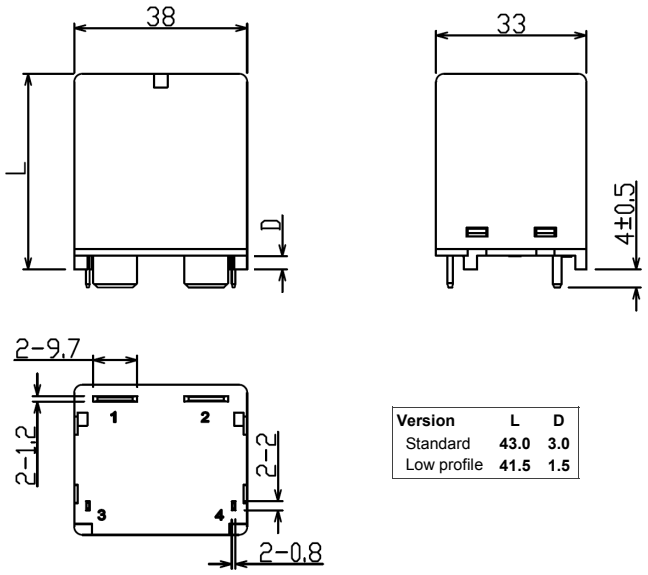
AZSR190-1A-12D	12 VDC nominal coil voltage, standard height
AZSR190T-1A-12D	High current version, 12 VDC nom. coil voltage
AZSR190-1A-9DL	9 VDC nominal coil voltage, low profile version

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 on load terminals. Recommended cross section according to IEC 61810-1:2015: 35 mm²
4. Specifications subject to change without notice.

MECHANICAL DATA

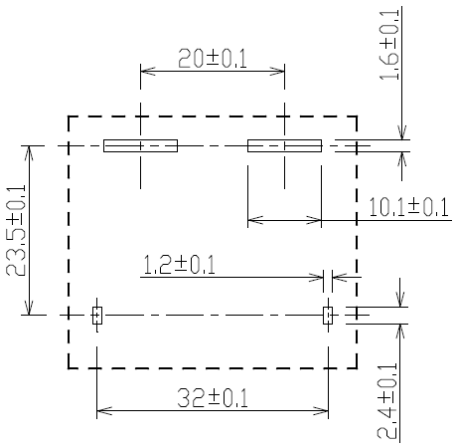
Dimensions in mm. Tolerance: ± 0.5 mm unless otherwise stated



Version	L	D
Standard	43.0	3.0
Low profile	41.5	1.5

PC BOARD LAYOUT

Dimensions in mm. Tolerance: ± 0.1 mm unless otherwise stated
Viewed towards terminals.



WIRING DIAGRAMS

Viewed towards terminals.

Note: Provide sufficient PCB cross section on load terminals. Recommended cross section according to IEC 61810-1: 35 mm².