

AZSR190

100 AMP MINIATURE POWER RELAY

FEATURES:

- Dielectric strength 5000Vrms
- 100 Amp switching (version "T" 100Amp)
- Contact gap : 3.6 mm available
- Clearance / creepage > 10mm
- UL : E365652
- TUV : B170988793008



CONTACTS

Arrangement	SPST (1 Form A)	
Ratings	Resistive load: Max. switched power: 48000VA Max. switched current: 100A Max. switched voltage: 800VAC	
Rated Load	55A at 690 VAC, Res., 20k cycles, 85°C, [1] 55A at 690 VAC, Res., 30k cycles, 85°C, [2] 55A at 800 VAC, Res., 1k cycles, 85°C, [1][2] 80A at 277VAC Res., 10k cycles, 85°C, [2] 100A at 480 VAC, Res., 1k cycles, 85°C [1] (T version only) 100A at 690 VAC, Res., 1k cycles, 85°C, [2] (T version only)	
UL/TUV		
UL (only)		55A at 480 VAC, Res., 50k cycles, 85°C, [1]
TUV (only)		55A at 480 VAC, Res., 30k cycles, 85°C [1] 30A at 480 VAC, Res., 50k cycles, 85°C [1] 90A at 480 VAC, Res., 1k cycles, 85°C [1]
Material	Silver Nickel [1], Silver Tin Oxide [2]	
Resistance	< 100mΩ initially (at 6V, 1A, voltage drop method) < 10 mΩ initially (at 10A, voltage drop method)	

GENERAL DATA

Life Expectancy Mechanical Electrical	Minimum operations 1,000,000 cycles Min. 55A at 480 50,000 cycles
Operate Time(typical)	40 ms Max. at nominal coil voltage
Release Time(typical)	10 ms Max. at nominal coil voltage (with no coil suppression)
Dielectric Strength (at sea level for 1min.)	5000 Vrms(coil to contacts) 2000 Vrms(between open contacts)
Surge Voltage	10KV @1.2/50μs (coil to contacts)
Insulation Resistance	1,000MΩ min. at 20°C 500VDC 50% RH
Holding voltage	Greater than 40% of nominal coil voltage
Dropout	Greater than 10% of nominal coil voltage
Ambient Temperature Operating Storage	At rated coil voltage -40°C(-40F)to 85°C(185°F) -40°C(-40F)to 105°C(221°F)
Vibration	1.5mm DA at 10-55 Hz
Shock	10g
Enclosure	P.B.T, Polyester
Terminals	Tinned copper alloy, P.C.
Max. Solder Temp.	270°C(518°F)
Max. solder time	5 seconds
Weight	85g

COIL

Power At pickup Voltage Max. Continuous Dissipation Temperature Rise	1080 mW (typical) 2.32 W at 20°C(68°F) ambient 70°C Max. at Rated voltage,85°C
Temperature	Max. 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.Specifications subject to change without notice.

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RELAY ORDERING DATA

COIL SPECIFICATIONS					ORDER NUMBER
Nominal Coil VDC	Must Operate VDC	Min. holding VDC	Max. Continuous VDC	Coil Resistance $\Omega \pm 10\%$	
6	4.5	2.4	6.6	18.8	AZSR190-1A-6D
9	6.75	3.6	9.9	42.2	AZSR190-1A-9D
12	9	4.8	13.2	75	AZSR190-1A-12D
24	18	9.6	26.4	300	AZSR190-1A-24D

*Add suffix "T" to AZSR190 for high current version. Add suffix "L" for short version (see mechanical data). For Silver Tin Oxide contacts relplace "1A" with "1AE".

MECHANICAL DATA

Top view: 38mm width, 33mm height.

Side view: 4±0.5mm height.

Terminal view: 2-9.7mm, 2-1.2mm, 2-2mm, 2-0.8mm dimensions.

Nominal version: L=43, D=3
Short version: L=41.5, D=1.5

PC BOARD LAYOUT

Dimensions: 20±0.1mm, 1.6±0.1mm, 10.1±0.1mm, 23.5±0.1mm, 1.2±0.1mm, 32±0.1mm, 2.4±0.1mm.

Viewed toward terminals

WIRING DIAGRAM

Viewed toward terminals

Tolerance: $\pm 0.5\text{mm}$

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This 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.