

VSA Series Single Phase Solid State Relays



Features

Electromagnetic valve, light controlling of stage, electric motor revolution and connter revolution ,heater, medical care equipment, elevator, etc.

- 5A @24-280VAC
- RIAC output for economical type loads
- Zero voltage turn-on outputs
- DC control
- High reliability plastic process

Ordering Options





VSA Series

Load Current 05: 5Amp Control Voltage

D

Output Voltage A28: 24-280VAC

A28

Z

Switching Type Z:Zero Cross Turn-on

Single Phase Solid State Relay

Intput Specifications

Description	VSA05DA28Z
Control current Range (mA)	≤7
Minimum Turn-on Voltage (V)	1.13
Must Turn-off Voltage (V)	1.0
Type Input Current (mA)	5
Maximum Input Current (mA)	7
Maximum Turn-on Time (ms)	1/2Cycle
Maximum Turn-off Time (ms)	1/2Cycle

Output Specifications

Description	VSA05DA28Z
Operating Voltage (47-440Hz) (VRSM)	24-280VAC
Transient Overvoltage (VPK)	800
Maximum off-state Leakage Current @Rated Voltage (mA)	1
Minimum Off-state dv/dt @ Maximum Rated Voltage(V/µs)	500
Maximum Load Current (A)	20
Minimum Load Current (mA)	150
Maximum 1 Cycle Surge Current (50/60Hz) (A)	200
Maximum On-state Voltage Drop@Rated Current (VRMS)	1.5
Maximum 1/2 Cycle I ² t For Fusing (50/60Hz)(A ² sec)	200
Minimum Power Factor (At Maximum Load)	0.5



ZGZX SOLID STATE RELAYS

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General Specifications

Description	Value
Dielectric Strength, Input to Output (50/60Hz) (V)	2000 VDC (1min)
Minimum Insulation Resistance (@500VDC)	1000ΜΩ
Maximum Capacitance, Input/Output	10pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125 °C
Weight (typical)	3.8g
MTBF(Mean Time Between Failures) at 40°C Ambient Temperature	11,641,553 hours (1,328 years)
MTBF(Mean Time Between Failures) at 60°C Ambient Temperature	7,210,376 hours (823 years)
LED Input Status Indicator	No
Humidity per IEC60068-2-78	93% non-condensing

Connection Diagram



Equivalent Circuit Block





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Dimensions



Thermal Derate Information



Instructions and Precautions

1. The heat produced by power dissipation of relay should be radiated by case, if the heat dissipation condition around relay is bad, the output load current will be reduced by half. If continue to use, it is necessary to install matching radiator, the temperature of baseplate of radiator should no more than 80 $^{\circ}$ C when working. If the ambient temperature is too high, it is necessary to use air patenting to accelerate air flow to ensure better heat dissipation effect.

2. To ensure the solid state relay closely contacts with radiator during installing process to get better heat dissipation effect, please parallel place thermal conductive film between solid state relay and radiator and fix it with screw; please equably daub appropriate amount of thermal grease on the baseplate of solid state relay when installing, if the product is equipped with thermal grease, and fix it with screw.

3. Fix the screws by using less than 4NM moment of force, and fix output and input at the same time, please do not fix one end after dealing with another end.

4. To prevent breakdown of solid state relay caused by overload short circuit, overcurrent or voltage overload working, installing quick-fuse specified for relay is recommended. For inductive load, it is necessary to install voltage-dependent resistor, and RC absorbing circuit at solid output, if the direct current solid state relay is inductive load, fly-wheel diode is necessary.

5. No protecting circuit of input circuit, it is easy to damage when circuit is reverse connected; Please ensure wire connecting is right when using.

6. The storage of solid state relay should anti-moisture, anti-wet, protected from rain, fall and severe collision. It should be stored in ambient, which is well-ventilated, dry and non-corrosive gases, and the humidity should less than 80%.

7. Please do not use the parameter exceeding this datasheet



Max

0.957

0.204

0.156

0.404

0.104

0.142

0.301

0.605

0.205

N 992

0.017

0.087

0.033

0.130