Autonics

Solid State Relay **SRS1-B SERIES**

N U

(€ c**91**1µs







Thank you very much for selecting Autonics products. For your safety, please read the following before using.

Caution for your safety

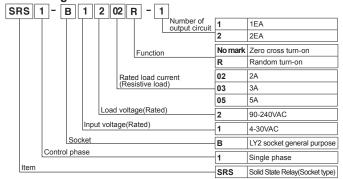
- × Please keep these instructions and review them before using this unit
- X Please observe the cautions that follow:
- **↑Warning** Serious injury may result if instructions are not followed.
- ▲Caution Product may be damaged, or injury may result if instructions are not followed.
- X The following is an explanation of the symbols used in the operation manual.
- ↑ Caution: Injury or danger may occur under special conditions.

- 1. In case of using this unit with machinery(Ex: nuclear power control, medical equipment, ship, vehicle, train, airplane, combustion apparatus, safety device, crime/disaster prevention equipment, etc) which may cause damages to human life or property, it is required to install fail-safe device. It may cause a fire, human injury or damage to property.
- 2. Install the unit on a panel.
- It may give an electric shock.
- 3. Do not connect, inspect or repair when power is on. It may give an electric shock
- 4. Do not disassemble the case. Please contact us if it is required.
- It may cause an electric shock or a fire

⚠ Caution

- 1. This unit shall not be used outdoors.
- It might shorten the life cycle of the product or give an electric shock.
- 2. Please observe the rated specifications.
- It might shorten the life cycle of the product and cause a fire.
- 3. In cleaning unit, do not use water or an oil-based solvent and use dry towels.
- It may cause an electric shock or a fire.
- 4. Do not use this unit in place where there are flammable or explosive gas, humidity, direct rays, radiant heat, vibration and impact etc.
- It may cause a fire or an explosion
- 5. Do not inflow dust or wire dregs into the unit.
- It may cause a fire or a malfunction.
- 6. Do not touch SSR output terminals right after power switch OFF.
- It may cause an electric shock due to an electric charge in snubber circuit
- XThe above specifications are subject to change and some models may be discontinued without notice.

Ordering information



Model	Input voltage	Rated load current	Load voltage	Zero cross turn-on/ Random turn-on
SRS1-B1202-2	4-30VDC	2A(configures to 2-circuit)	90-240VAC	Zero cross turn-on
SRS1-B1202R-2				Random turn-on
SRS1-B1203-1		3A		Zero cross turn-on
SRS1-B1203R-1				Random turn-on
SRS1-B1205-1		5A		Zero cross turn-on
SRS1-B1205R-1				Random turn-on

Specifications

⊚Input

Rated input voltage range		4-30VDC		
Allowable input voltage range		4-32VDC		
Max. input current		13mA(Random turn-on)		
Pick-up voltage		Min. 4VDC		
Drop-out voltage		Max. 1VDC		
Turn-on	Zero cross turn-on	0.5 cycle of load source + 1ms		
time	Random turn-on	Max. 1ms		
Turn-off time		0.5 cycle of load source + 1ms		

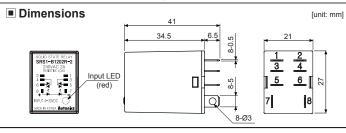
Output

Model	SRS1-B1202(R)-2	SRS1-B1203(R)-1	SRS1-B1205(R)-1	
Rated load voltage range	90-240VACrms(50/60Hz)			
Allowable load voltage range	90-240VACrms(50/60I	Hz)		
Rated load current Ta=25°C Resistive load(AC-51)	2Arms	3Arms	5Arms	
Min. load current	0.15Arms			
Max. 1 cycle surge current (60Hz)	126A		250A	
Max. non-repetitive surge current (I ² t, t=8.3ms)	65A ² S		220A ² S	
Peak voltage (Non-repetitive)	600V			
Leakage current (Ta=25°C)	Max. 2mArms			
Output on voltage drop [Vpk] (Max. load current)	Max. 1.6V			
Static off-state dv/dt	500V/μs			

General Specifications

Dielectric strength(Vrms)		2,500VAC 50/60Hz 1min.(Input-Output, Input/Output-Case)		
Insulation esistance		Min. 100MΩ(at 500VDC Megger)		
Input LE	D	Red		
Environ ment	Ambient temperature	-20 to 80°C, Storage: -30 to 100°C (Rated load current capacity is different base on the surrounding temperature. Refer to ■SSR Characteristic curve.)		
	Ambient humidity	45 to 85%RH, Storage: 45 to 85%RH		
Protection	on	According to protection of the general LY2 socket		
Approval		(€ :\$41,000		
Weight ^{*1}		Approx. 30g(approx. 400g)		

X1: This weight is for 1EA except the packing box. The weight of parenthesis is for 10EA as packing unit. *Condition for use in Environment is no freezing or condensation.

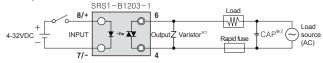


Connections



XUSE LY2 TYPE POWER RELAY soket general purpose.

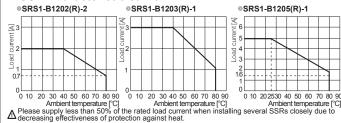
Example of connection



%1: Varistor(470V, 0.6W)

X2: When connecting capacitor as above, it is appropriate for EMC. CAP: 1uF/250VAC

SSR Characteristic curve



Caution for using

- 1. Ventilate air for smooth convection current. If not, overheat may cause product failure or malfunction.
- 2. For mounting multiple SSR, please keep certain installation intervals for heat prevention.
- 3. Make sure do not touch the unit body while power is supplied or right after load
- power is turned OFF. If not, it may cause a burn.
- 4. Connect the proper cable for the rated load current with output terminal.
- 5. Use rapid fuse of which I2t is under 1/2 of SSR I2t.
- 6. In case that load's current is lower than SSR min. load current, connect dummy resistance to the load in parallel so as to make load's current higher than SSR min. load current.
- 7. When selecting phase control with random turn-on model, install the noise filter between load and load's source.
- 8. Make sure that the screw on output terminal is tightly fastened. Using the unit with loose bolt may cause product failure or malfunction.
- 9. Do not touch the load's terminal even if output is OFF. It may cause an electric shock.
- 10. Avoid following environments to install
- ①Where temperature/humidity is beyond the specification
- ②Where dew condensation occurs due to temperature change
- ③Where inflammable or corrosive gas exists (4) Where direct rays of light exist
- (5) Where severe shock, vibration or dust exists
- Where near facilities generating strong magnetic forces or electric noise
- 11. Installation environment
- 1 It shall be used indoor
- ③Pollution Degree 2

②Altitude Max. 2,000m (4) Installation Category I

XIt may cause malfunction if above instructions are not followed.

Major products



- Door sensors SSR/Power controllers Door side sensors ■ Counters
- Area sensors Timers Proximity sensors Panel meters ■ Pressure sensors ■ Tachometer/Pulse(Rate)meters
- Rotary encoders ■ Display units ■ Connectors/Sockets ■ Sensor controllers
- Switching mode power supplies
- Control switches/Lamps/Buzzers
- I/O Terminal Blocks & Cables
- Stepper motors/drivers/motion controllers
- Graphic/Logic panels
- Field network devices
- Laser marking system(Fiber, CO₂, Nd:YAG)
- Laser welding/soldering system

Autonics Corporation http://www.autonics.com

Satisfiable Partner For Factory Automation

■ HEAD QUARTERS:

18, Bansong-ro 513beon-gil, Haeundae-gu, Busan, Korea OVERSEAS SALES:

#402-404. Bucheon Techno Park, 655. Pyeonacheon-ro. Wonmi-gu, Bucheon, Gyeonggi-do, Korea TEL: 82-32-610-2730 / FAX: 82-32-329-0728

E-mail: sales@autonics.com

EP-KE-02-037B