OP1090-V01

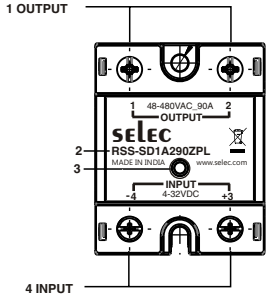
RSS-SD1A290ZPL / RSS-SD1A2125ZPL

Operating Instructions



58.50 X 46.75

PRODUCT DESCRIPTION



1 - Load output connection screw (M6) terminals
2 - Indication area for product label or markings
3 - Control input voltage LED indicator
4 - Control input connection screw (M4) terminals

SPECIFICATION

INPUT

- Control Input Voltage : 4-32VDC
- Nominal input impedance : 2k Ohms
- Must operate voltage : 4VDC (Max)
- Must release voltage : 1VDC (Min)
- Maximum turn-on time : ½ cycle + 1ms
- Maximum turn-off time : ½ cycle + 1ms
- Zero crossing turn-on : Available
- Reverse voltage protection : Available

OUTPUT

- RMS on-state current(I_T) : 90A / 125A
- Load voltage range : 48-480VAC
- Minimum load current : 200mA
- Off-state leakage current : 20mA max(at 480VAC)
- On-state voltage drop : 1.6V(RMS)max
- Operating frequency range : 47 - 63Hz
- Minimum power factor : 0.5
- Non-repetitive peak On-state Current(I_{TSM})
  For I_T = 90A 1500A
  For I_T = 125A : 2000A
- Rate of rise of Off-state Voltage($\frac{dV}{dt}$) : 1000 V/µs

General specification

- Dielectric strength : 4000VAC,50/60Hz for 1min
- Ambient temperature : Operating : - 30 °C to 80 °C
  Storage : - 30 °C to 100 °C
- Ambient humidity : 93% non-condensing
- Pollution degree : II
- Installation category : III
- Dimensions(lxwxh)mm : 58.50 x 46.75 x 41
- Mounting type : Panel
- Product Weight : Approx 145 g

Heat sink must be used when SSR has to switch a load current above 7A

ORDER CODE INFORMATION

Product	Max Load Current	Max Load Voltage	Certification
RSS-SD1A290ZPL	90A	48-480VAC	–
RSS-SD1A2125ZPL	125A	48-480VAC	–

Product	Repetitive peak Off-state Voltage	Application
RSS-SD1A290ZPL	1600V	Inductive load, Resistive load and heater control.
RSS-SD1A2125ZPL		

WARNING

⚠ WARNING :

- Minor human hazard by electric shock and burns occasionally occur.
- Heat sink must be connected to earth in the end product.

CAUTION

⚠ CAUTION :

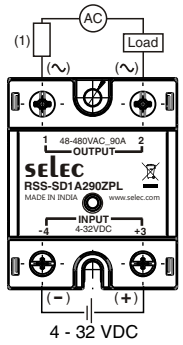
- Do not touch the SSR or the heat sink either while the power supply is ON or immediately after the power is turned OFF. The SSR and the heat sink may be hot.
- Do not touch the SSR main circuit terminals immediately after the power is turned Off.The internal snubber circuit is charged.
- SSR may occasionally rupture in case of short circuit. To protect against short-circuit accident, install a protective device, such as a quick-burning fuse or a circuit breaker.

⚠ SAFETY PRECAUTIONS

Mounting

- Mount SSR in the orientation such that the heat sink fins are always positioned in vertical orientation in order to ensure proper heat ventilation & do not obstruct air flow to the SSR heat sink. Air convection for SSR is necessary.
- If a material with high thermal resistance is used for heat sink,heat generated by SSR may occasionally cause fire or burning.
- When installing SSR directly into a control panel such that the panel can be used as a heat sink, use a panel material with low thermal resistance such as Aluminium / Steel.
- Tighten the SSR screws securely. Loose terminals generate abnormal heat which may result in fire.

WIRING



4 - 32 VDC

FUSE INFORMATION

Product	(1) Suitable Fuse
RSS-SD1A290ZPL	100A Class J
RSS-SD1A2125ZPL	150A Class J

WIRING GUIDELINES

- Ensure the use of proper cable sizes. Abnormal heating of wire may cause burning.
- Do not use wire with broken sheaths. It may cause electric shock.
- Use cable with crimp terminals of appropriate size for terminations.
- Heat generated by incorrect terminations may result in fire.
  Loose terminals generate abnormal heat which may result in fire.
- Tighten screws to the specified torque. Re-tighten after 48 hours to minimize wire cold flow. Re-torque every 3 to 6 months.
- When tightening terminal screws ensure no non-conductive foreign matter is caught in screw.
- Be sure to conduct wiring with power supply turned off. Touching the terminals when they are charged may occasionally result in minor electric shock.

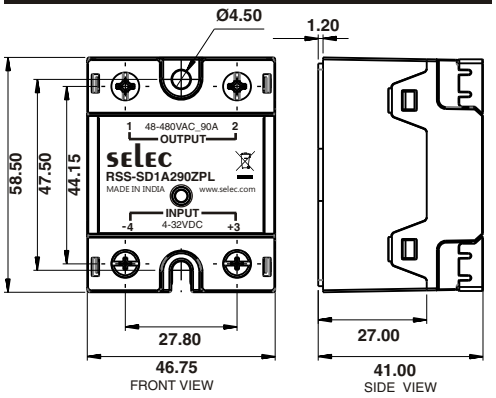
TIGHTENING TORQUE

SCREW SIZE	TIGHTENING TORQUE
M4 screws(Control Input)	1.2N-m
M6 screws (Load Output)	2.5N-m

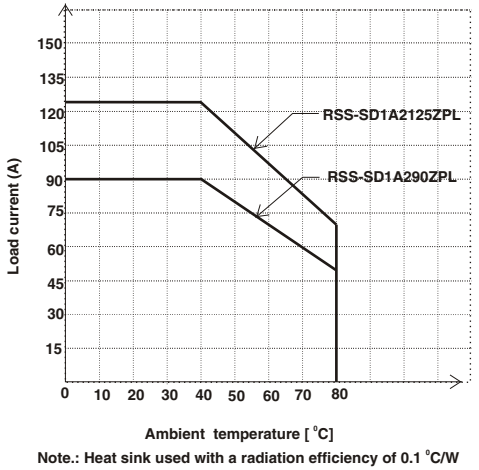
USAGE

- Always use SSR within its rated specifications,otherwise malfunction, damage or fire may result.
- Select a load within the rated range.Inappropriate load may cause misoperation , trouble or burning.
- Select the power supply within the rated frequency range. Inappropriate power frequency may cause misoperation , trouble or burning.
- Use of SSR in domestic environments may cause radio interference,in this case the user may be required to employ additional mitigation methods.

DIMENSION(mm)



DERATING CURVE



Note.: Heat sink used with a radiation efficiency of 0.1 °C/W

(Specifications are subject to change, since development is a continuous process.)

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