

RHINO Installation Instructions for PSS12-100-S & PSS24-100-S Power Supply



READ INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE. KEEP FOR FUTURE REFERENCE.

1. Safety instructions

- To ensure sufficient convection cooling, always maintain a safety distance of ≥ 50 mm (1.97 inch) from all ventilated surfaces while the device is in operation.
- The device is not recommended to be placed on low thermal conductive surface. For example, plastics.
- The enclosure of the device can become very hot depending on the ambient temperature and load of the power supply. Do not touch the device while it is in operation or immediately after power is turned OFF. Risk of burning!
- Do not touch the terminals while power is being supplied. Risk of electric shock.
- Prevent any foreign metal, particles or conductors from entering the device through the openings during installation. It may cause: Electric shock; Safety Hazard; Fire; Product failure
- The power supply must be mounted by metal screws onto a grounded metal surface. It is highly recommended that the Earth terminal on the connector be connected to the grounded surface.

2. Device Descriptions (Fig. 1)

- (1) Input & Output terminal block connector
- (2) DC voltage adjustment potentiometer
- (3) DC OK control LED (Green)

3. Installation of the Device (Fig. 2)

- A. Mounting holes for power supply assembly onto the mounting surface.
The power supply shall be mounted on minimum 2 mounting holes using M3 screw minimum 5 mm (0.20 inch) length.
- B. This surface belongs to customer's end system or panel where the power supply is mounted.
- C. Connector

Use flexible cable (stranded or solid) of AWG No. 18-12. User should calculate and select the suitable wire specification (type/quantity/diameter) according to actual output current. The torque at the Connector shall not exceed 0.78 Nm (6.94 lbf.in). The insulation stripping length should not exceed 0.275" or 7 mm. AutomationDirect P/N V70GK004003 lug or equivalent recommend for standard wire. (Refer to Fig. 3).

4. Installation of Mounting Accessories (Fig. 4)

- Only use M3 screw ≤ 3 mm (0.20 inch) through the base mounting holes. This is to keep a safe distance between the screw and internal components.
- Recommended mounting tightening torque: 0.39~0.69 Nm (3.47~6.08 lbf.in).

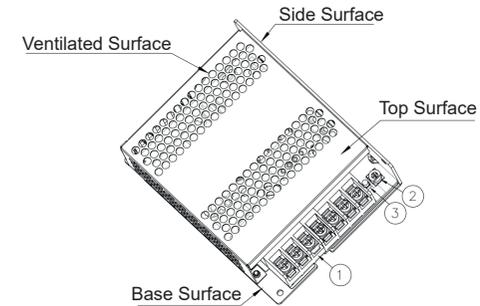


Figure 1 - Device Descriptions

Base Mounting (Horizontal)

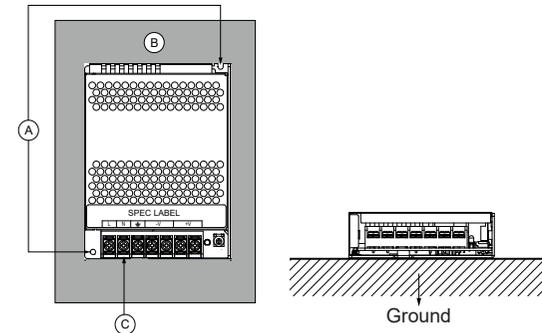


Figure 2 - Mounting

AutomationDirect P/N V70GK004003 can be used

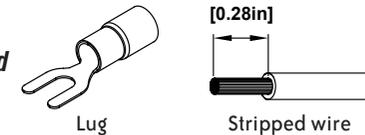


Figure 3 - Stripped Wire

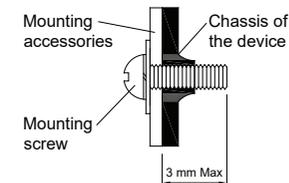


Figure 4 - Mounting Screw

Technical Data for PSS12-100-S & PSS24-100-S

| Specifications | | PSS12-100-S | PSS24-100-S |
|--|---------------|---|--|
| Input (AC) | | | |
| Input Voltage range | | 90-264 VAC | |
| Frequency | | 47-63 Hz | |
| Nominal Current | | 1.9 A typ. @ 115 Vac, 1.2 A typ. @ 230 Vac | |
| Inrush Current Limitation. I2t (+25 °C) typ | | 55 A typ. @ 230 Vac | |
| Leakage current | | < 0.5 mA @ 240 Vac | |
| Recommend circuit breaker (Characteristic B) | | 20 A | |
| Output (DC) | | | |
| Nominal output voltage / Adjustment Range | | 12 Vdc | 24 Vdc |
| Output Power | | 102 W Max. | 108 W Max. |
| Output Current | | 8.5 A | 4.5 A |
| PARV (20MHz) | | < 120 mVpp @ 0°C to 70°C, 360 mVpp typ. @ -30°C to 0°C | < 150 mVpp @ 0°C to 70°C, 450 mVpp typ. @ -30°C to 0°C |
| Start-up Time | | 500 ms typ. @ 115 Vac & 230 Vac | |
| Hold-up Time | | 9 ms typ. @ 115 Vac, 42 ms typ. @ 230 Vac | |
| Rise Time | | 30 ms typ. @ 115 Vac & 230 Vac | |
| Efficiency | | 87.5% typ. | 90.0% typ. |
| Line Regulation | | ± 0.5% (@ 115 Vac & 230 Vac input) | |
| Load Regulation | | ± 0.5% (@ 115 Vac & 230 Vac input) | |
| General Data | | | |
| Case Chassis / Cover | | Aluminum / SGCC | |
| Dimensions (L x W x H) | | 129 x 97 x 30 mm (5.08 x 3.82 x 1.18 inch) | |
| Weight | | 0.285 kg (0.628 lb) | |
| MTBF | | > 700,000 hrs as per Telcordia SR-332 I/P: 230 Vac, O/P: 100% Load, Ta: 25°C) | |
| Noise | | Sound Pressure Level (SPL) < 25 dBA | |
| Cooling | | Convection | |
| Input / Output Terminal | | M3.5 x 7 Pins (Rated 300 V / 20 A) | |
| Wire size / torque | | 0.82-3.31 mm ² (AWG 18-12) / 0.8 Nm (7.1 in-lb) | |
| Input/Output wire | | AWG 18-12 | |
| Shock Test | Non-Operating | IEC 60068-2-27, Half Sine Wave: 50 G for a duration of 11 ms, 3 shocks for each 3 directions | |
| | Operating | IEC 60068-2-27, Half Sine Wave: 10 G for a duration of 11 ms, 3 shocks for each 3 directions. | |
| Vibration | Non-Operating | IEC 60068-2-6, Random: 5 Hz to 500 Hz (2.09 G); 20 min per axis for all X, Y, Z direction | |
| | Operating | IEC 60068-2-6, Sine Wave: 20 Hz to 500 Hz (5 G); 10 min per cycle, 60 min for each axis (X, Y, Z) | |
| Safety / Environmental | | | |
| EMC / Emissions | | EN 55032 | |
| Immunity | | EN 55035, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8 | |
| Voltage Dips | | Conform to IEC 61000-4-11 | |
| Galvanic isolation | | Input to Output : 4.0 KVAC, Input to Ground : 2.0 KVAC, Output to Ground : 1.25 KVAC | |
| Approvals | | cULus: UL 62368-1, CAN/CSA C22.2 No. 62368-1 CB scheme: IEC 62368-1, IEC 60335-1, IEC 61558-1/-2-16 CE: In conformance with EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU | |
| | |    | |
| RoHS Compliant | | Yes | |
| Operating temperature | | -30°C to +70°C (-40°C Cold Start) | |
| Storage temperature | | -40°C to +85°C | |
| Humidity at +25 °C, no condensation | | 20 to 90% RH (Non-Condensing) | |