

RHINO Installation Instructions for PSS0524-100 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 ≥ 20 mm (0.79 in) 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.
- Note that 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 can cause electric shock, safety hazard, fire, and/or product failure.
- Warning: When connecting the device, secure GND connection before connecting L and N. When disconnecting the device, remove the L and N connections before removing the GND connection.

2. Device description (Fig. 1)

- (1) Input & Output terminal block connector (V1: 24VDC, V2: 5VDC)
- (2) DC voltage adjustment potentiometer for V1: 24VDC
- (3) DC OK indicator LED (green)

3. Connection (Fig. 1)

The terminal block connector allows easy and fast wiring.

4. Mounting (Fig. 2)

- Mounting holes for power supply assembly onto the mounting surface. Power supply shall be mounted on minimum 2 mounting holes using M3 x 0.5 screw minimum 5 mm (0.19 in) length.
- This surface belongs to customer's system or panel where the power supply is mounted.
- Connector:
Use flexible (stranded wire) or solid wire 22–12 AWG. The torque at the connector shall not exceed 1.3 Nm (11.3 in-lb). The insulation stripping length should not exceed 0.28 in or 7 mm. Fork terminal recommended for stranded wire. Refer to figure 3.

5. Installation of Mounting Accessories (Fig. 4)

- Only use M3 screw ≤ 6 mm through the base mounting holes. This is to keep a safety distance between the screw and internal components.
- Refer to Figure 4: Recommended mounting tightening torque: 0.4 to 0.8 Nm (3.5 to 7 in-lb).

FOR TECHNICAL ASSISTANCE CALL 770-844-4200

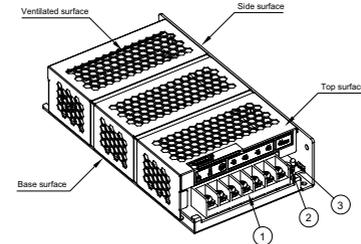


Figure 1 - Device Descriptions

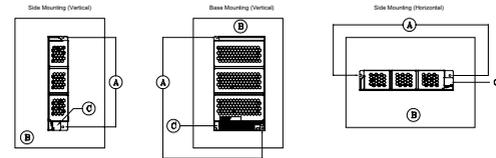


Figure 2 - Mounting

AutomationDirect
P/N V70GK004003 (22-18AWG)
V70GK004008 (16-14AWG)
V70GK004003 (12AWG)
or equivalent

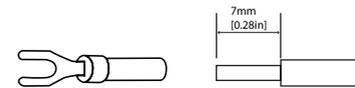


Figure 3 - Wire Type

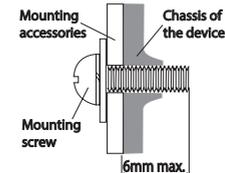


Figure 4 - Mounting Screw

Technical Data For PSS0524-100

Input (AC)	
Nominal input voltage	100-240 VAC / 125-250 VDC
Voltage range	85-264 VAC (DC input range 125-375 VDC)
Frequency	47-63 Hz (0 Hz @ DC input)
Nominal current	2.0A max. @ 115 VAC, 1.1A max. @ 230 VAC
Inrush current limitation. I _{2t} (+25 °C) typ.	< 50A @ 115 VAC, < 100A @ 230 VAC
Leakage current	< 1 mA @ 240 VAC
Output (DC)	
Nominal output voltage / adjustment range	V1: 24 VDC / 22.8-26.4 VDC; V2: 5 VDC / fixed
Output Voltage Tolerance	V1: +/- 2% (initial setpoint tolerance from factory); V2: fixed
Output power*	100W
Output current	V1: 0.3-4.0 Amp; V2: 0.8-7.0 Amp (each output can work within the current range, but ensure that the total output power does not exceed 100W)
PARD (ripple and noise) (20MHz)	V1: <200mVpp; V2: <80mVpp (each measured with AC coupling mode, and in parallel with 0.1uF ceramic capacitor and 47uF electrolytic capacitor.)
Start-up time	<1000ms@100% load and typical line input
Hold-up time	> 15ms @ 115VAC, >80ms @ 230VAC with 100% load
Rise time	V1: <30ms; V2: <20ms @100% load
Dynamic response (overshoot and undershoot O/P voltage)	+/-5%@V1: 0-100% rated load and V2: 60%rated load and vice versa (Slew rate: 0.1A/uS)
Start-up with capacitive loads	V1: 4000uF max
Efficiency	> 84% @ 115 VAC & > 86% @ 230 VAC
Line regulation	< 0.5% typical (@ 85-264VAC input)
Load regulation	<1% typical (@85 to 264 VAC input, V1: 20-100% rated load and V2: 60% rated load and vice versa)
General Data	
Type of housing	Aluminum
Dimensions (L x W x H)	178 mm x 97 mm x 38 mm (7.0 in x 3.82 in x 1.50 in)
Weight	0.52 kg (1.15 lb)
MTBF	> 700,000 hrs.
Connection method	Screw connection
Noise	Sound pressure level (SPL) < 40 dBA
Cooling	Convection
Terminal input/output	M3.5 x 7 Pins (Rated 300V/15A)
Wire size / torque	0.82-2.08 mm ² (AWG 18-14) / 1.3 Nm (11.3 in-lb)
Shock test (non-operating)	IEC60068-2-27, 30G (300m/S ²) for a duration of 18ms 3 times per direction, 18 times in total
Vibration (non-operating)	IEC60068-2-6, 10Hz to 150Hz @ 50m/S ² (5G peak); 20 min per axis for all X, Y, Z direction
Safety / Environmental	
EMC / Emissions	FCC Title 47, Class B/EN55032:CISPR32, Class B
Immunity	IEC61000-4-2; IEC61000-4-3; IEC61000-4-4; IEC61000-4-5; IEC61006-4-6; IEC61006-4-8; IEC61006-4-11; IEC61006-4-12
Voltage dips	IEC61000-4-11 100% dip; 1 cycle (20ms); self recoverable
Galvanic isolation	Input to Output : 3KVAC, Input to Ground : 1.5KVAC, Output to Ground : 0.5KVAC
Approvals	UR/cUR recognized to UL60950-1 and CSA C22.2 No. 60950-1 (file no. E198298); CB test certificate and report to IEC60950-1, CE (EMC and Low Voltage directive)
  E198298	
RoHS Compliant	Yes
Operating temperature	-10 °C to +70 °C* (14°F to 158°F)
Storage temperature	-25 °C to +85 °C (-13°F to 185°F)
Humidity	< 95 % RH non-condensing

All parameters are specified at 25°C (77°F)

* Operating to 70 °C (158°F) possible with a linear derating to half power from 50°C to 70°C (122°F to 158°F)