



# RHINO POWER SUPPLIES – PSM SERIES

## INSTALLATION INSTRUCTIONS

### PSM Series Industrial Power Supply

Part Number	* AC-Input Voltage Range	Output Power Max.	**Output	*** Output Voltage Adjustment Range	Recommended Circuit Breaker (Characteristic B)
PSM12-078S	85VAC - 264VAC Universal Input 50 / 60Hz	78 Watt	12.0VDC / 6.0A	12.0 - 14.0VDC	6 - 16A
PSM24-090S		90 Watt	24.0VDC / 3.75A	24.0 - 28.0VDC	
PSM24-090S-N		90 Watt	24.0VDC / 3.75A	24.0 - 28.0VDC	
PSM12-156S	115VAC / 230VAC Autorange 85VAC - 132VAC 187VAC - 264VAC 50 / 60Hz	156Watt	12.0VDC / 12.0A	12.0 - 14.0VDC	10 - 16A
PSM24-180S		180 Watt	24.0VDC / 7.5A	24.0 - 28.0VDC	
PSM24-360S		360 Watt	24.0VDC / 15.0A	24.0 - 28.0VDC	
PSM24-600S		600 Watt	24.0VDC / 25.0A	24.0 - 28.0VDC	

Note: All output terminals shall be wired to the load.

\* Observe output current derating at operation below an input voltage of 110VAC

\*\* Maximum output current at Vout nom

\*\* Adjustable by potentiometer with a screwdriver.

Input current:	@ Vin=115VAC	@ Vin=230VAC	Power Consumption	@ Vin=115VAC	@ V20in=230VAC
PSM12-078S	2.0A typ.	1.0A typ.	PSM12-078S	95 Watt typ.	93 Watt typ.
PSM24-090S (N)	2.1A typ.	1.0A typ.	PSM24-090S (N)	106 Watt typ.	105 Watt typ.
PSM12-156S	2.5A typ.	1.4A typ.	PSM12-156S	175 Watt typ.	173 Watt typ.
PSM24-180S	2.8A typ.	1.5A typ.	PSM24-180S	209 Watt typ.	207 Watt typ.
PSM24-360S	5.0A typ.	2.5A typ.	PSM24-360S	425 Watt typ.	412 Watt typ.
PSM24-600S	10.0A typ.	5.0A typ.	PSM24-600S	690 Watt typ.	670 Watt typ.

<b>Operating temperature range: Natural Air Convection Cooling</b>	-25°C - +70°C max , -13°F - +158°F max												
<b>Output Power Derating: above +40°C [104°F]</b>	<table> <tr><td>PSM12-078S</td><td>0.5%/K</td></tr> <tr><td>PSM24-090S(N)</td><td>1.5%/K</td></tr> <tr><td>PSM12-156S</td><td>3.0%/K</td></tr> <tr><td>PSM24-180S</td><td>3.0%/K</td></tr> <tr><td>PSM24-360S</td><td>3.0%/K</td></tr> <tr><td>PSM24-600S</td><td>6.0%/K</td></tr> </table>	PSM12-078S	0.5%/K	PSM24-090S(N)	1.5%/K	PSM12-156S	3.0%/K	PSM24-180S	3.0%/K	PSM24-360S	3.0%/K	PSM24-600S	6.0%/K
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PSM24-360S	3.0%/K												
PSM24-600S	6.0%/K												
<b>Storage temperature range:</b>	-25°C - +85°C max (-13°F - +185°F max)												
<b>Parallel Operation:</b>	Up to 5 power supplies possible. User selectable standard mode and parallel mode by jumper on PCB.												
<b>Connections:</b>	Screw type terminal COMBICON. Recommended tightening torque 0.5 to 0.6Nm												
<b>Case material:</b>	Aluminium (chassis) and Zinc-plated steel (cover)												

### To Install

1. Read and follow Safety and Installation instructions on the back of this page.
2. Hook top of power supply's DIN rail clip on DIN rail
3. Push down tab on top of power supply to open DIN rail clip.
4. Rotate power supply into DIN rail and release tab.
5. Verify the DIN rail clip is securely fastened on DIN rail.
6. Connect wires as indicated on power supply. All output terminals shall be wired to the load.



# RHINO POWER SUPPLIES – PSM SERIES

## Safety Instructions:

- Before installation read these instructions carefully and completely. These installation instructions cannot cover every possible installation, operation or maintenance situation. Further information can be obtained from the product data-sheets, which can be downloaded, from the Internet at <http://www.automationdirect.com>.
- These power supplies are constructed in accordance with the safety requirements of IEC/EN/60950, EN 60204, EN50178, IEC/EN 60079-15 and EN61558-2-8. They are approved (BG-mark) in accordance with EN60950, EN50178 and fulfil the requirements of the Low Voltage Directive (LVD). They are Approved by CSA.
- Before any installation, maintenance or modification work ensure that the main switch is switched off and prevented from being switched on again. Non-observance, touching of any live components or improper handling of this power supply can result in death, severe personal injury or substantial property damage. Proper and safe operation is dependent on proper storage, handling, installation and operation.
- Compliance with the relevant national regulations (in the USA, Europe and other countries) must be ensured. Before operation is started the following conditions must be ensured:
  - Connection to mains supply in compliance with national regulations (NEC, NEMA, VDE0100 and EN50178).
  - Use of stranded wires, all strands must be fastened in the terminal blocks. (Potential danger of contact with the case)
  - Power supply and mains cables must be sufficiently fused.
  - Degree of protection I to IEC536. The non-fused protective earth connection must be connected to the FG terminal (Protection Class I).
  - All output wires must be rated for the power supply output current and must be connected with the correct polarity.
  - Sufficient cooling must be ensured.
- **Never work on the power supply if power is supplied!** Risk of electric arcs and electrical shock, which can cause death, severe personal injury or substantial property damage.
- **Warning:** Hazardous voltages and components storing a very substantial amount of energy are present in this power supply during normal operating conditions. However, these are inaccessible. Improper handling may result in an electric shock or serious burns! **Do not open the power supply until at least 5 minutes after it has been disconnected from the mains on all poles.**
- Only trained personnel may open the power supply.

- Do not introduce any objects into the power supply. The output voltage adjustment potentiometer may only be actuated using an insulated screwdriver.
- Keep away from fire and water

## Installation Instructions:

- This power supply is designed for professional indoor systems. In operation the power supply must not be accessible. It may be installed and put into service by qualified personnel only.
- Do not operate without PE connection! To comply with EMC and safety standards (CE mark, approvals) the power supply must be operated only if PE terminal is connected to the non-fused earth conductor.
- The correct mounting position for optimal cooling performance must be observed. **Do not cover any ventilation holes.** Please allow minimum free space of 80mm (3.15in.) above and below, and 50mm (1.97”) on each side of the power supply for air convection. Observe power derating.
- All output terminals shall be wired to the load.
- The internal fuse is not accessible, as it may not be replaced by the user. If this internal fuse has blown, the power supply likely has an internal defect and, for safety reasons, must be discarded, or, if under warranty, returned. In case this internal fuse has to be replaced in the field, replace only with same type and rating of fuse for continued protection against risk of fire.
- **Recycling:** The unit contains elements that are suitable for recycling, and components that need special disposal. You are therefore requested to make sure that the power supply will be recycled environment friendly at the end of its service life.
- **Warning:** To minimize the risk of potential safety problems, follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.
  - Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation or operations.
  - If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call us at 770-844-4200.
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