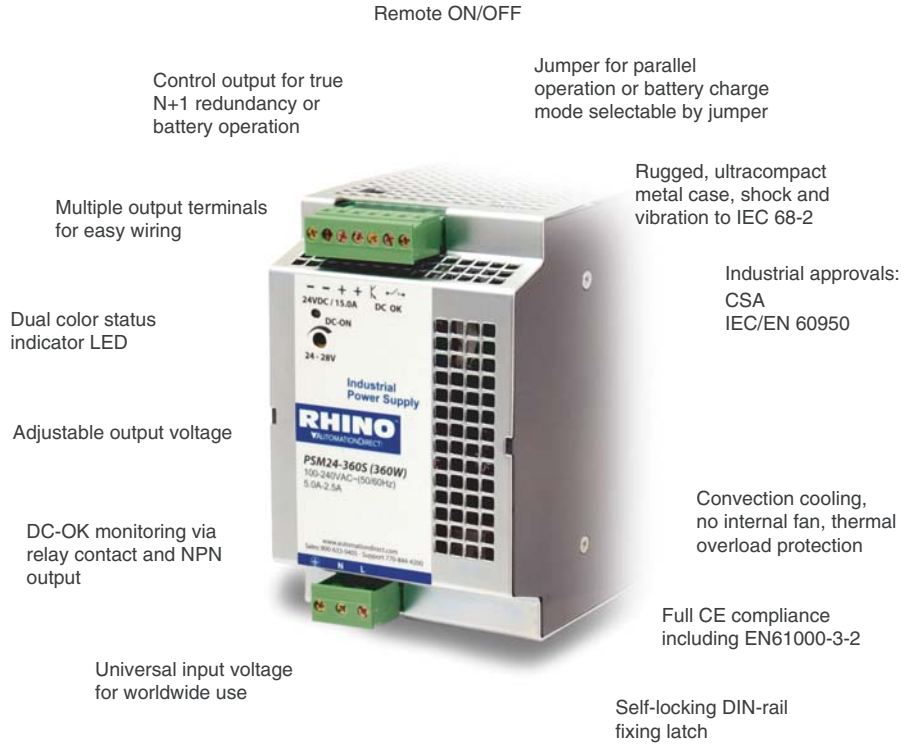


RHINO PSM Series Power Supplies

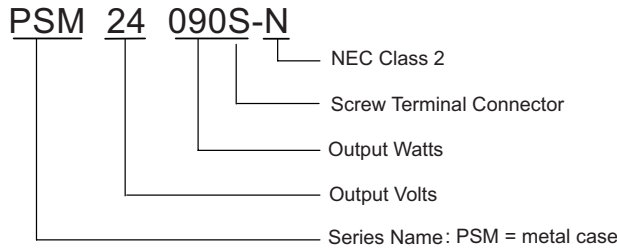
Our versatile switching power supplies are DIN-rail mountable

Features

- Industrial grade design
- Sturdy metal case to withstand harsh industrial environments
- Model PSM24-090S-N meets NEC Class 2
- Universal 100/230 VAC input voltage
- Adjustable output voltage
- Low output ripple
- Short-circuit, overvoltage and overtemperature protection
- Power Good signal
- Remote ON/OFF
- Optional wall mounting
- Specialty modules for redundancy, power backup and UPS
- Terminal connectors included
- 3-year product warranty



Part Numbering System



RHINO PSM Industrial Power Supplies			
Part Number	*Output Voltage (V_{nom})	**Output Current (I_{max})	***Output Power (P_{max})
PSM12-078S	12 VDC	6.5 A	78 W
PSM24-090S	24 VDC	3.75 A	90 W
PSM24-090S-N	24 VDC	3.75 A	90 W
PSM12-156S	12 VDC	13.0 A	156 W
PSM24-180S	24 VDC	7.5 A	180 W
PSM24-360S	24 VDC	15.0 A	360 W
PSM24-600S	24 VDC	25.0 A	600 W

*12V models adjustable from 12 to 14 VDC. 24V models adjustable from 24 - 28 VDC

**Maximum current at nominal output voltage

***Up to an operating temperature of +40°C

RHINO PSM Series Power Supplies Specifications

Input Specifications									
Part Number	Input Voltage Range	Input Frequency Range	Input Current (Typical) at full load		Inrush Current max (<2ms) @ +25°C		Holdup Time	Efficiency (Typical) @ 115VAC	Circuit Breaker or Fuse (slo-blo)
			115 VAC	230 VAC	115 VAC	230 VAC			
PSM12-078S	100 - 240 VAC 85 - 264 VAC (47 - 63 Hz)	47-63 Hz	2.0 A	1.0 A	<12 A	<20 A	20 ms min. (full load 115/230 VAC)	82%	6.0 A to 16.0 A
PSM24-090S			2.1 A	1.0 A				85%	
PSM24-090S-N			2.1 A	1.0 A				85%	
PSM12-156S	100 - 120 VAC/ 220 - 230 VAC		2.5 A	1.4 A	<13 A	<25 A		85%	
PSM24-180S	85 - 132 VAC/ 187 - 264 VAC		2.8 A	1.5 A				88%	
PSM24-360S	85 - 132 VAC/ 187 - 264 VAC (47 - 63 Hz) Autoselect		5.0 A	2.5 A	<16 A	<25 A		87%	
PSM24-600S			10.0 A	5.0 A				<25 A	<30 A

Output Specifications										
Part Number	Price	Output Voltage	Output Voltage Adj. Range	Output Current (Max.)	Output Power (Max.)	Output Overvoltage Protection	Power - Good Signal			MTBF (IEC 61709 @ 25°C)
							Trigger Threshold	Active Output Signal	Relay Output	
PSM12-078S	<--->	12 VDC	12 - 14 VDC	6.5 A	78 watts	20 V	9 - 11 V	11 V ± 1 V/20 mA max.	DC OK = contact closed (rated:30 VDC 1.0A)	350,000 hours
PSM24-090S	<--->	24 VDC	24 - 28 VDC	3.75 A	90 watts	35 V	18 - 22 V	22 V ± 2 V/10 mA max		
PSM24-090S-N	<--->			3.75 A	90 watts	35 V		22 V ± 2 V/10 mA max		
PSM12-156S	<--->	12 VDC	12 - 14 VDC	13.0 A	156 watts	20 V	9 - 11 V	11 V ± 1 V/40 mA max.		
PSM24-180S	<--->	24 VDC	24 - 28 VDC	7.5 A	180 watts	35 V	18 - 22 V	22 V ± 2 V/20 mA max		
PSM24-360S	<--->			15.0 A	360 watts	35 V				
PSM24-600S	<--->			25.0 A	600 watts	35 V				

General Specifications	
Specification	Description
Temperature	Operating (ambient): -25°C to + 70°C max (-13°F to 158°F). Above +40°C(104°F) load derating Storage (non-operating): -25°C to + 85°C max (-13°F to 185°F). Temperature drift: 0.02%/C. Cooling: convection, no internal fan
Humidity	95% (non-condensing) relative humidity maximum
Isolation	According to IEC/EN 60950, EN50178, EN61558-2-8, EN60204, CSA
Output Regulation	Input variation: 0.5% maximum. Load variation (10 to 100%): 0.5% maximum
Output Voltage Ripple	100 mV peak-to-peak typical (20 MHz bandwidth), (200 mV peak - peak maximum at Imax)
Output Protection	Current limit: 110% constant current, automatic recovery, thermal protection, output rating, Voltage limit: 140% Vout nom
Overtemperature Protection	Switch off at overtemperature, automatic restart
Status Indicator	Dual color LED (green: DC Ok; Red: DC Off)
Remote ON/OFF	By external contact. DC On: -S contact open. DC Off: -S connected via 1 KΩ to -Vout
Maximum Capacitive Load	Unlimited
Vibration	IEC 60068-2-6: 3 axis, sine sweep, 10-55 Hz, 1g, 1 oct/min
Shock	IEC 60068-2-27: 3 axis, 15g half sine, 11ms
Enclosure Rating	IP20 (IEC 529)
Enclosure Material	Aluminum (chassis) / zinc plated steel (cover)
Mounting	Snap-on with self-locking spring for 35mm DIN rails per EN 50022-35x15/75, or wall mount with bracket
Connection	Pluggable screw terminals (plugs included) 2 terminals per output (not available in 600 watt unit.)
Agency Approvals	CE/CSA C22 2 No. 60950-1-03, CSA to UL STD. 60950-1, pending UL
Note: Unless otherwise stated all specifications are valid at nominal input voltage, full load and +25°C after warmup time.	

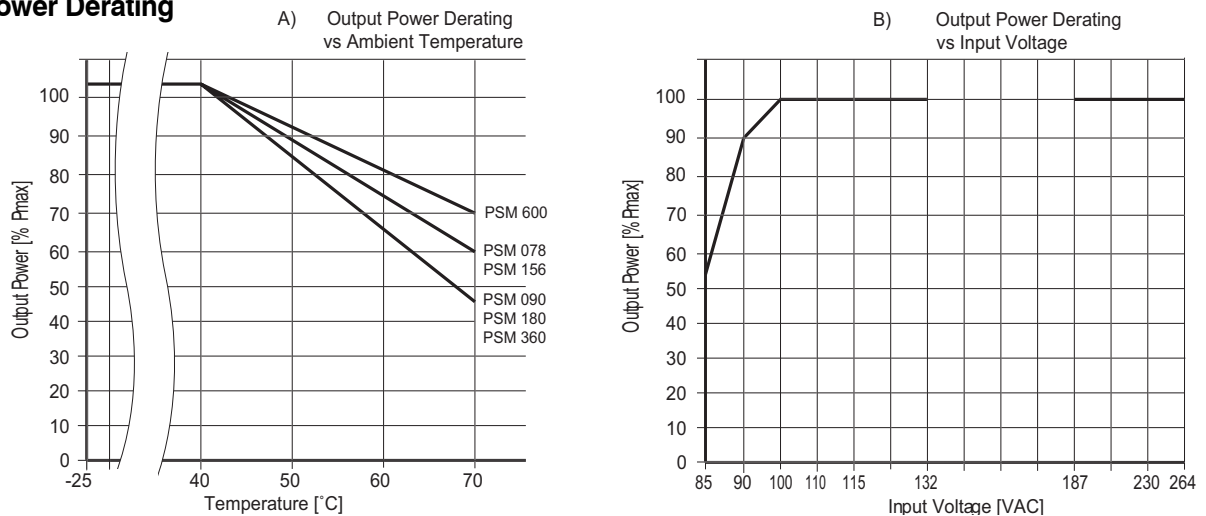
- PLC Overview
- DL05/06 PLC
- DL105 PLC
- DL205 PLC
- DL305 PLC
- DL405 PLC
- Field I/O
- Software
- C-more HMIs
- Other HMI
- AC Drives
- Motors
- Steppers/ Servos
- Motor Controls
- Proximity Sensors
- Photo Sensors
- Limit Switches
- Encoders
- Pushbuttons/ Lights
- Process
- Relays/ Timers
- Comm.
- TB's & Wiring
- Power
- Enclosures
- Appendix
- Part Index

RHINO PSM Series Power Supplies Specifications

General Specifications (continued)		
Specification	Standard	Document Number
Harmonic Limits	Harmonic Current Limits	EN 61000-3-2, Class A for limited output power
Safety Standards	Information technology equipment	IEC/EN60950
	Industrial control equipment	CSA
	Electrical equipment of machines	EN 60204
	Electronic equipment for power installation	EN 50178
	Safety, transformers	EN 61558-2-8
	Limited power source (model PSM24-090S-N)	EN 60950 sect. 2.5 and NEC Class 2
Safety Approvals	CB-Report per IEC 60950	EN 50178, EN 60079-15 EN 61558-2-8, CSA
Safety Class	Degree of electrical protection Class1	IEC 536
Electromagnetic Compatibility (EMC), Emissions	EMC, Emissions	EN 61204-3, EN61000-6-3
	Conducted RI suppression on input	EN 55011 class B, EN 55022 class B
	Radiated RI suppression	EN 55011 class B, EN 55022 class B
Electromagnetic Compatibility (EMC), Immunity	EMC, Immunity	EN 61000-6-2, EN 61204-3
	Electrostatic Discharge (ESD)	IEC / EN 61000-4-2 4 kV (contact discharge) / 8 kV (air discharge)
	Radiated RF field immunity (80-1000 MHz)	IEC / EN 61000-4-3 10 V / m
	Electrical fast transient / burst immunity	IEC / EN 61000-4-4 2 kV
	Surge immunity	IEC / EN 61000-4-5 1 kV / 2 kV
	Immunity to conducted RF disturbances (0.15 to 80 MHz)	IEC / EN 61000-4-6 10 V
	Power frequency field immunity	IEC / EN 61000-4-8 30 A / m
	Voltage dips	IEC / EN 61000-4-11(70% UN Crit. B/40%/100% UN Crit. C)
Pollution Degree	2*	

*Note: Normally, only non-conductive pollution occurs. Temporary conductivity caused by condensation is to be expected.

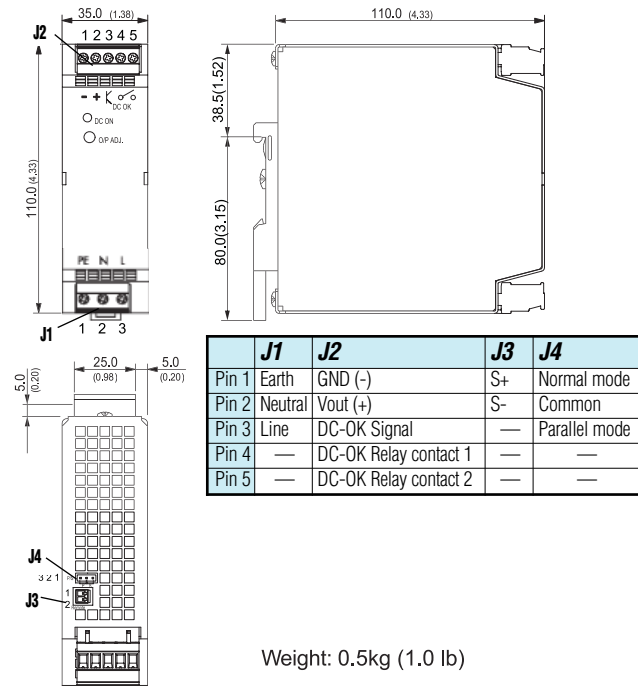
Output Power Derating



Note: Unless otherwise stated, all specifications are valid at nominal input voltage, full load and +25°C after warmup time.

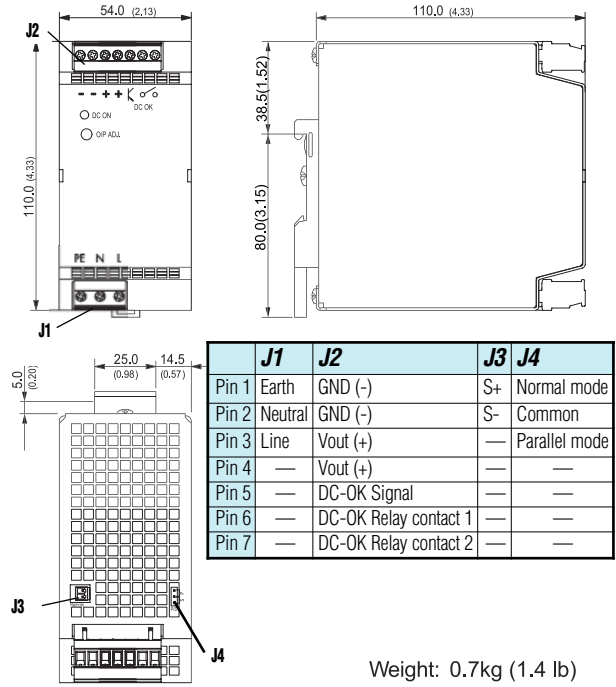
RHINO PSM Series Dimensions/Connections

PSM12-078S, PSM24-090S, PSM24-REM360S, PSM24-BCM360S



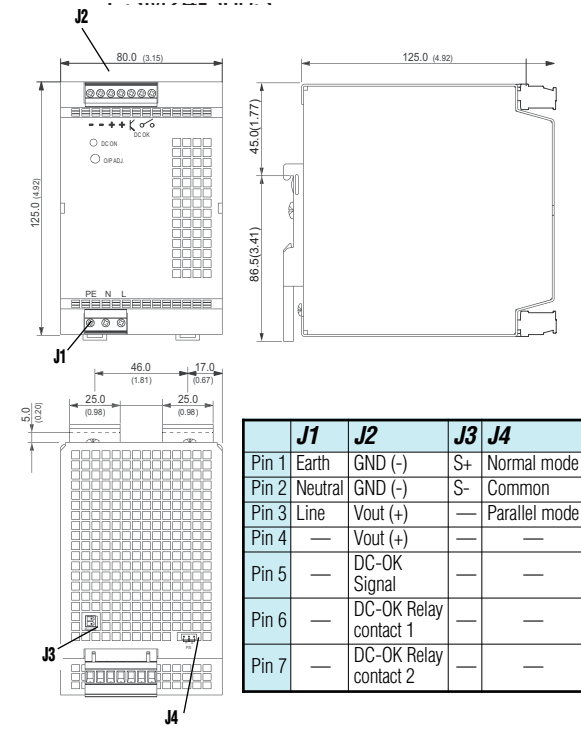
Weight: 0.5kg (1.0 lb)

PSM12-156S, PSM24-180S, PSM24-BFM600S

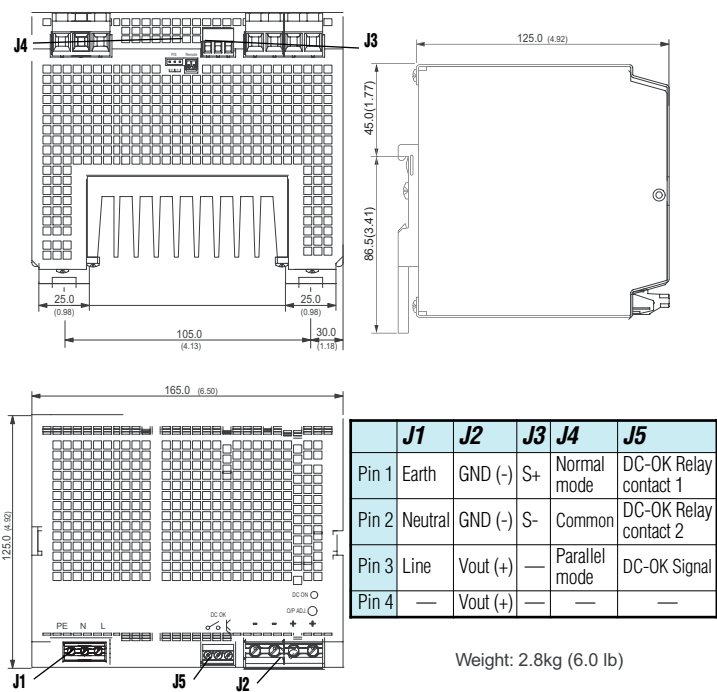


Weight: 0.7kg (1.4 lb)

PSM24-360S



PSM24-600S



Weight: 2.8kg (6.0 lb)

All dimensions in millimeters (inches)
Tolerances: ±0.5mm (±0.02")

PLC Overview

DL05/06 PLC

DL105 PLC

DL205 PLC

DL305 PLC

DL405 PLC

Field I/O

Software

C-more HMIs

Other HMI

AC Drives

Motors

Steppers/Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Pushbuttons/Lights

Process

Relays/Timers

Comm.

TB's & Wiring

Power

Enclosures

Appendix

Part Index

RHINO PSM24-REM360S Redundancy Module

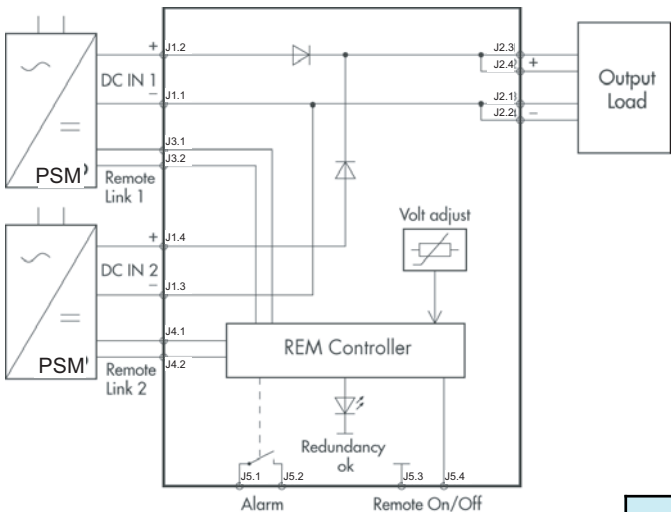
Using two PSM24 power supplies and a redundancy module, you can configure a redundant power system, featuring active current sharing, without any additional components. Even if one power supply fails or becomes disconnected, the second unit will supply full current to the load. The module has an alarm contact for monitoring of operations. The inputs are hot-swappable and can be loaded up to 15A each.



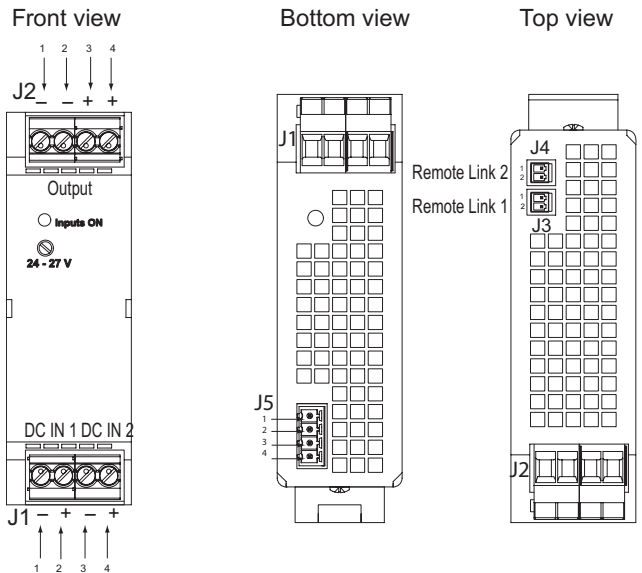
Redundancy Module					
Part Number	Price	Input	Max Power per Input	Output Voltage Adjust	Output Power Max
PSM24-REM360S (includes terminal plugs)	<--->	2 x 24 VDC 2 x Control Input	2 x 360 W	24 VDC (24 - 27 VDC)	360 W

General Specifications	
Operating Temperature	-25°C to +70°C max (-13°F to +158°F), derating above 40°C (104°F)
Electromagnetic Compatibility	In correspondence to connected units (no internal switching device)
Redundancy OK Signal	Trigger threshold at 18 to 22 VDC. Contact closed if one or both inputs failed
Dimensions	Same as model PSM24-090S (see dimensions page)
Remote Link Wire 0.5m	Two cables included with PSM24-REM360S module
Remote ON/OFF	By external contact: ON = J5.3 + J5.4 not shorted OFF = J5.3 + J5.4 shorted
Alarm Contact Rating	30 VDC/1.0 A max

Redundancy Module Function Diagram



Redundancy Module Connector Positions



	J1	J2	J3 Voltage control 1 for Input 1	J4 Voltage control 2 for Input 2	J5
Pin 1	Input 1 -Vin	GND (-)	S+	S+	DC-OK Signal
Pin 2	Input 1 +Vin	GND (-)	S-	S-	DC-OK Relay contact
Pin 3	Input 2 -Vin	Vout (+)	—	—	Remote ON/OFF
Pin 4	Input 2 +Vin	Vout (+)	—	—	Remote ON/OFF

Note: this redundancy module only works with the PSM series. Other series of power supplies are not compatible.