



# PSRP Series Switching Power Supplies

## Overview

AutomationDirect's RHINO PRO PSRP series switching power supplies are designed for industrial applications inside a control cabinet. The PSRP series offers a sleek and space-saving design with push connectors in a rugged housing.

## Features

- High efficiency
- Power Boost to start difficult loads with additional power reserve
- Hyper Boost for 20ms
- Compact, space-saving footprint
- Integral 35mm DIN rail mounting
- Integrated device protection
- Quickly connect with push-in spring clamp
- DC OK alarm contact for remote monitoring
- Internal isolating transformer with reinforced insulation



**PSRP-24-120**



**PSRP-24-480-3**

PSRP Series Switching Power Supplies Selection Chart					
Part Number	Price	Output Voltage	Output Current	Output Power	Drawing Link
<b>Single-Phase</b>					
<a href="#">PSRP-12-120</a>	\$205.00	12-15 VDC	10A	120W	<a href="#">PDF</a>
<a href="#">PSRP-24-120</a>	\$156.00	24-28 VDC	5A	120W	<a href="#">PDF</a>
<a href="#">PSRP-24-240</a>	\$209.00		10A	240W	<a href="#">PDF</a>
<a href="#">PSRP-24-480</a>	\$305.00		20A	480W	<a href="#">PDF</a>
<b>Three-Phase</b>					
<a href="#">PSRP-24-120-3</a>	\$173.00	24-28 VDC	5A	120W	<a href="#">PDF</a>
<a href="#">PSRP-24-240-3</a>	\$194.00		10A	240W	<a href="#">PDF</a>
<a href="#">PSRP-24-480-3</a>	\$352.00		20A	480W	<a href="#">PDF</a>
<a href="#">PSRP-24-960-3</a>	\$478.00		40A	960W	<a href="#">PDF</a>



# PSRP Series Switching Power Supplies

## PSRP Series Switching Power Supplies Input Specifications

Part Number	Nominal Voltage	Input Voltage Range	Nominal Frequency	Nominal Input Current	Max. Inrush Current (after 1ms)	Nominal Watts	Efficiency [Typ.]	Circuit Breaker
<b>Single-Phase</b>								
<u>PSRP-12-120</u>	100-240 VAC 100-230 VDC	85-265 VAC 90-250 VDC	50/60 Hz ±6 %	1.3 A @ 100VAC/VDC 0.6 A @ 240VAC/VDC	6A	0.88 kW @ 230VAC	91.6% @ 115VAC 93.1% @ 230VAC	C4
<u>PSRP-24-120</u>				0.87 kW @ 230VAC		92.8% @ 115VAC 94.3% @ 230VAC		
<u>PSRP-24-240</u>				0.95 kW @ 230VAC	93.4% @ 115VAC 94.4% @ 230VAC			
<u>PSRP-24-480</u>		90-265 VAC 90-250 VDC		5.3 A @ 100VAC/VDC 2.3 A @ 240VAC/VDC	7A	0.96 kW @ 230VAC	93.4% @ 115VAC 94.6% @ 230VAC	C6, B10
<b>Three-Phase</b>								
<u>PSRP-24-120-3</u>	(3) 360-500 VAC (3) 208-288 VAC	(3) 324 - 572 VAC (3) 187 - 330 VAC	50/60 Hz ±6 %	0.45 A @ (3 x 360VAC) 0.30 A @ (3 x 500VAC)	9.5 A (3 x 500VAC)	0.61 kW (3 x 400VAC)	92.5% @ 3 x 400VAC 91.8% @ 3 x 480VAC	C4
<u>PSRP-24-240-3</u>				0.75 A @ (3 x 360VAC) 0.55 A @ (3 x 500VAC)	9A (3 x 500VAC)	0.66 kW (3 x 500VAC)	93.7% @ 3 x 400VAC 93.2% @ 3 x 480VAC	
<u>PSRP-24-480-3</u>				1.3 A @ (3 x 360VAC) 1.0 A @ (3 x 500VAC)	13A (3 x 500VAC)	0.65 kW (3 x 500VAC)	94.8% @ 3 x 400VAC 94.5% @ 3 x 480VAC	
<u>PSRP-24-960-3</u>				2.3 A @ (3 x 360VAC) 1.6 A @ (3 x 500VAC)	14A (3 x 500VAC)	0.88 kW (3 x 500VAC)	93.7% @ 3 x 400VAC 93.5% @ 3 x 480VAC	

## PSRP Series Switching Power Supplies Output Specifications

Part Number	Output Voltage Adjustable Range	Output Current	Output Current Power Boost	Output Current Hyper Boost	Output Hold Up Time (Min.)	Parallel Usage/ Serial Usage (Max.)	MTBF (@ 40°C)
<b>Single-Phase</b>							
<u>PSRP-12-120</u>	12-15 VDC	10A @ 12VDC 8A @ 15VDC	150% for min. 4s without voltage variation	350% for min. 20ms @ 60°C	30ms @ 100VAC 10A @ 12VDC	5 / 2	> 900,000h
<u>PSRP-24-120</u>	24-28 VDC	5A @ 24VDC 4.25 A @ 28VDC			30ms @ 100VAC 5A @ 24VDC		> 900,000h
<u>PSRP-24-240</u>		10A @ 24VDC 8.5 A @ 28VDC			30ms @ 100VAC 10A @ 24VDC		> 800,000h
<u>PSRP-24-480</u>		20A @ 24VDC 17A @ 28VDC			200% for min. 20ms @ 60°C		30ms @ 100VAC 20A @ 24VDC
<b>Three-Phase</b>							
<u>PSRP-24-120-3</u>	24-28 VDC	5A @ 24VDC 4.3A @ 28VDC	7.5 A @ 24VDC > 5s	30A/20ms	25ms (3 x 360VAC) 5A @ 24VDC	3	> 1,000,000h
<u>PSRP-24-240-3</u>		10A @ 24VDC 8.6 A at 28VDC	15A @ 24VDC > 5s	35A/20ms	45ms (3 x 500VAC) 10A @ 24VDC		> 1,000,000h
<u>PSRP-24-480-3</u>		20A @ 24VDC 17.2 A @ 28VDC	30A @ 24VDC > 5s	60A/20ms	40ms (3 x 500VAC)		> 900,000h
<u>PSRP-24-960-3</u>		40A @ 24VDC 34A @ 28VDC	60A @ 24VDC > 5s	100A/20ms	40ms (3 x 500VAC)		> 700,000h



# PSRP Series Switching Power Supplies

PSRP Series Switching Power Supplies General Specifications									
Part Number	PSRP-12-120	PSRP-24-120	PSRP-24-240	PSRP-24-480	PSRP-24-120-3	PSRP-24-240-3	PSRP-24-480-3	PSRP-24-960-3	
Temperature	Operating	-25 to 60°C [-13 to 140 °F]	-40 to 60°C [-40 to 140°F]		-40 to 70°C [-40 to 158 °F]		-40 to 60°C [-40 to 140°F]		
	Storage	-40 to 85°C [-40 to 185°F]							
Humidity	5 to 95%, no condensing								
Line Regulation	< 1mV				10mV				
Load Regulation	200mV	220mV	210mV	180mV	Parallel mode on: 1000mV Parallel mode off: 100mV				
Start-up Time (typ)	< 400ms @ U <sub>input</sub> 100-230 VAC				< 400ms		< 600ms		
Short Circuit Protection	Yes								
Leakage Current	0.3 mA		0.78 mA		2mA		(3 x 360VAC / 50Hz) 0.22 mA (3 x 500VAC / 60Hz) 0.34 mA	(3 x 360VAC / 50Hz) 1.15 mA (3 x 500VAC / 60Hz) 1.77 mA	
Overload Protection	Yes								
Overvoltage Shutdown	—				31VDC max.				
Status Indicators	LED (green): OK LED (red): overload, overheating or short-circuit								
Ripple	< 50 mVrms	< 50 mVeff	< 50 mVrms	< 50 mVeff	< 20 mVrms				
Spikes	< 200 mVp-p	< 200 mVss	< 200 mVp-p	< 200 mVss	-				
Vibration	IEC 60068-2-6 ; 5-17.8 Hz: 1.6mm 17.8 - 500 Hz: 2.3 g				IEC 60068-2-6; 5-17.8 Hz: 1.6mm 17.8 - 500Hz: 2g			IEC 60068-2-6 2-17.8 Hz: 7.84 mm 17.8-500 Hz: 5g	
Shock	IEC 60068-2-27 [30g / 11ms]				IEC 60068-2-27 [50g / 6ms]		IEC 60068-2-27 [30g / 6ms]		IEC 60068-2-27 50g sinusoidal 8ms
Protection Rating	IP20								
Mounting	35mm DIN rail (horizontal only)								
Housing Material	Aluminum (enclosed)								
Connection	Push-in spring clamp terminals								
Weight kg [lb]	0.66 [1.45]	0.66 [1.45]	0.85 [1.87]	1.26 [2.77]	0.65 [1.43]	0.78 [1.71]	1.25 [2.75]	2.70 [5.95]	
Agency Approval	UL 508 File E197592, CE								

Additional Data		
Part Number	Solid Wire Size*	
	Output	Input
<a href="#">PSRP-12-120</a>	1.5 - 4 mm <sup>2</sup> [16 - 12 AWG]	0.75 - 4 mm <sup>2</sup> [18 - 12 AWG]
<a href="#">PSRP-24-120</a>	0.75 - 4 mm <sup>2</sup> [18 - 12 AWG]	
<a href="#">PSRP-24-240</a>	1.5 - 10 mm <sup>2</sup> [16 - 8 AWG]	
<a href="#">PSRP-24-480</a>	4 - 10 mm <sup>2</sup> [12 - 8 AWG]	
<a href="#">PSRP-24-120-3</a>	0.2 - 4 mm <sup>2</sup> [24 - 12 AWG]	0.2 - 10 mm <sup>2</sup> [24 - 8 AWG]
<a href="#">PSRP-24-240-3</a>	0.2 - 10 mm <sup>2</sup> [24 - 8 AWG]	0.2 - 10 mm <sup>2</sup> [24 - 8 AWG]
<a href="#">PSRP-24-480-3</a>	0.2 - 10 mm <sup>2</sup> [24 - 8 AWG]	0.2 - 10 mm <sup>2</sup> [24 - 8 AWG]
<a href="#">PSRP-24-960-3</a>	0.75 - 16 mm <sup>2</sup> [18 - 6 AWG]	0.2 - 10 mm <sup>2</sup> [24 - 8 AWG]

\* For other types of wire please see the insert.