

# RHINO PSB Series DIN rail Power Supplies

## Three-Phase PSB Series Units

AutomationDirect's RHINO PSB series of DINrail three-phase input power supplies is perfect for applications that require a basic DC voltage power supply. These low cost power supplies offer high performance and reliability without all the additional features of higher cost full-featured power supplies. The three-phase input eliminates the need for a separate step-down transformer and the output of 24 VDC is available from 60 to 480 Watts. The rugged aluminum housings easily install with integral 35mm DINrail mounting adapters. These high-quality power supplies have a 3-year warranty, include overload, overvoltage and thermal protection, and are UL 508 listed, UL 60950 recognized, CSA certified, CE marked and RoHS compliant. units are covered by a 3-year warranty.



PSB Three-Phase Series Input Specifications											
Part No.	Price	Weight	Housing	Input Voltage*	Input Frequency Range	Nominal Current	Inrush Current Limitation I <sup>2</sup> t @ 77°F (+25°C) typ.	Leakage Current	Recommended Circuit Breaker**	Mains Buffering at Nominal Load (Typ.)	Turn-on Time
PSB24-060-3	<--->	0.56kg (1.23 lb)	Aluminum	350 to 550 VAC (DC input range 450 to 800 VDC), Nominal 3 x 400-500 VAC	47 - 63 Hz (0 Hz @ DC Input)	0.3A @ 400 VAC approx.	<30A @ 400 VAC	<3.5mA	3 x circuit breakers 16A	>30ms @ 3 x 400 VAC, >60ms @ 3 x 500 VAC	<2 sec.
PSB24-120-3	<--->	0.72kg (1.59 lb)	Aluminum			0.5A @ 400 VAC approx.					
PSB24-240-3	<--->	0.99 kg (2.18 lb)	Aluminum			0.8A @ 400 VAC approx.				>35ms @ 3 x 400 VAC, >60ms @ 3 x 500 VAC	
PSB24-480-3	<--->	1.71 kg (3.77 lb)	Aluminum			1.6A @ 400 VAC approx.					>25ms @ 3 x 400 VAC, >50 ms @ 3 x 500 VAC

\* Not designed for use on 575 VAC systems

\*\*Characteristic B

PSB Three-Phase Series Output Specifications									
Part No.	Output Voltage (Vnom) / Adjustment Range	Output Power	Output Current	PARD (ripple and noise) (20MHz)	Startup with Capacitive Loads	Derating above +50°C (122°F)	Max Power Dissipation Idling / Nominal Load Approx.	Efficiency (at 400 VAC and Nominal Values)	MTBF
PSB24-060-3	24 VDC ±2% / 22-28 VDC (≤60W)	60 Watt	2.5A	<50mV / <240 mVpp	Max 10,000 µF	2.5%/°C	9 Watts	86% min @ 3x400 VAC 85% min @ 3x500 VAC	>500,000 hrs.
PSB24-120-3	24 VDC ±2% / 22-28 VDC (≤120W)	120 Watt	5A				18 Watts		
PSB24-240-3	24 VDC ±2% / 22-28 VDC (≤240W)	240 Watt	10A			2.5%/°C. (>70°C [158°F] 4%/°C)	36 Watts	87% min @ 3x400 VAC 86% min @ 3x500 VAC	>300,000 hrs.
PSB24-480-3	24 VDC ±2% / 22-28 VDC (≤480W)	480 Watt	20A			2.5%/°C	72 Watts	86% min @ 3x400 VAC 85% min @ 3x500 VAC	

PSB Three-Phase Series General Specifications	
Output Line Regulation	<0.5% typical (@ 350-550 VAC input, 100% load)
Output Load Regulation	<1% typical (@ 350-550 VAC input, 0-100% load)
Parallel Operation	With decoupling diode
Case Cover	Aluminium (Al5052)
Signals	Green LED DC OK
Humidity at +25°C (77°F), no condensation	<95% RH
Shock	30g half sign, 3 times per direction, 6 directions, per IEC60068-2-27
Vibration (Non-operating)	10 to 150Hz, 5 g, 90 min. each axis per IEC60068-2-6
Pollution Degree	2
Climatic Class	3K3 according to EN 60721

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## PSB Three-Phase Series Certification and Standards

<b>Electrical Equipment of Machines</b>	IEC60204-1 (over voltage category III)
<b>Electronic Equipment for use in Electrical Power Installations</b>	EN 50178 / IEC62103
<b>Safety Entry Low Voltage</b>	PELV (EN 60204), SELV (EN 60950)
<b>Electrical Safety (of information technology equipment)</b>	UL/C-UL recognized to UL60950-1(#E198298), CSA C22.2 No.60950-1 (#249074), CB scheme to IEC60950-1
<b>Industrial Control Equipment</b>	UL listed to UL508 (#E197592), CSA to CSA107.1-01 (#249074)
<b>Protection Against Electric Shock</b>	DIN 57100-410
<b>CE</b>	In conformance with EMC directive 2004/108/EC and low voltage directive 2006/95/EC
<b>EMC for ITE</b>	EN 55022, EN 61000-3-2, EN 61000-3-3, EN 55024
<b>EMC for Industrial</b>	EN 55011
<b>Limitation of Mains Harmonic Currents</b>	EN 61000-3-2

## PSB Three-Phase Series Safety and Protection

<b>Transient Surge Voltage Protection</b>	VARISTOR
<b>Overload/Short Circuit Protection</b>	<150% rated load current, hiccup mode with automatic recovery
<b>Overvoltage Protection</b>	35 VDC max.
<b>Isolation Voltage::</b> <b>Input/output (type test/routine test)</b> <b>Input/GND (type test/routine test)</b> <b>Output/GND (type test/routine test)</b>	4 kVAC / 3 kVAC 1.5 kVAC / 1.5 kVAC 1.5 kVAC / 500 VAC
<b>Protection Degree</b>	IPX0
<b>Safety Class</b>	Class I with GND connection

## Additional Data

Part No.	Dimensions (L x W x H)	Wire Size / Torque *	Ambient Operating Temperature	Storage Temperature
<b>PSB24-060-3</b>	121 mm x 70 mm x 118.5 mm (4.76 in x 2.76 in x 4.67 in)	0.82-2.1mm <sup>2</sup> (AWG 18-14) / 1.18-1.57 Nm (10.41-13.89 lb-in)	-20°C to +75°C (-50°F [122°F] derating) [-4°F to 167°F]	-25°C to +85°C (-13°F to 185°F)
<b>PSB24-120-3</b>		0.82-8.4mm <sup>2</sup> (AWG 18-8) / 1.18-1.57 Nm (10.41-13.89 lb-in)		
<b>PSB24-240-3</b>	121 mm x 85 mm x 120.5 mm (4.76 in x 3.35 in x 4.74 in)			
<b>PSB24-480-3</b>	121 mm x 160 mm x 115 mm (4.76 in x 6.3 in x 4.53 in)	Input - 0.82-2.1mm <sup>2</sup> (AWG 18-14) / 1.18-1.57 Nm (10.41-13.89 lb-in) Output - 3.3 - 5.3mm <sup>2</sup> (AWG12-10) / 1.18-1.57 Nm (10.41-13.89 lb-in)		

\*Stripping length 7 mm (0.28 in) or use suitable lug to crimp

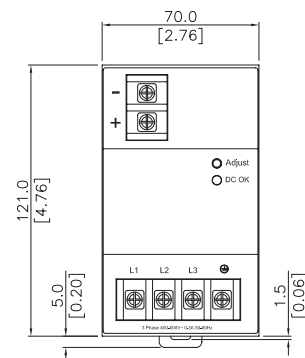
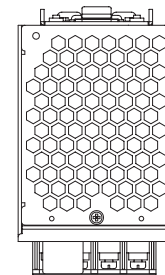
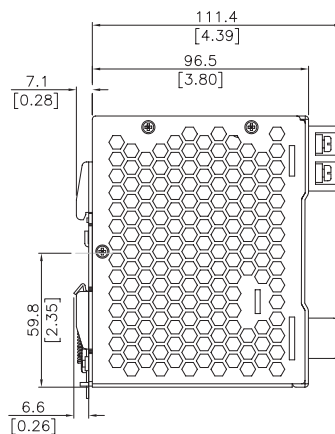
## Dimensions

All dimensions in mm [inches]

**PSB24-060-3**  
**PSB24-120-3**

### Wiring Connection

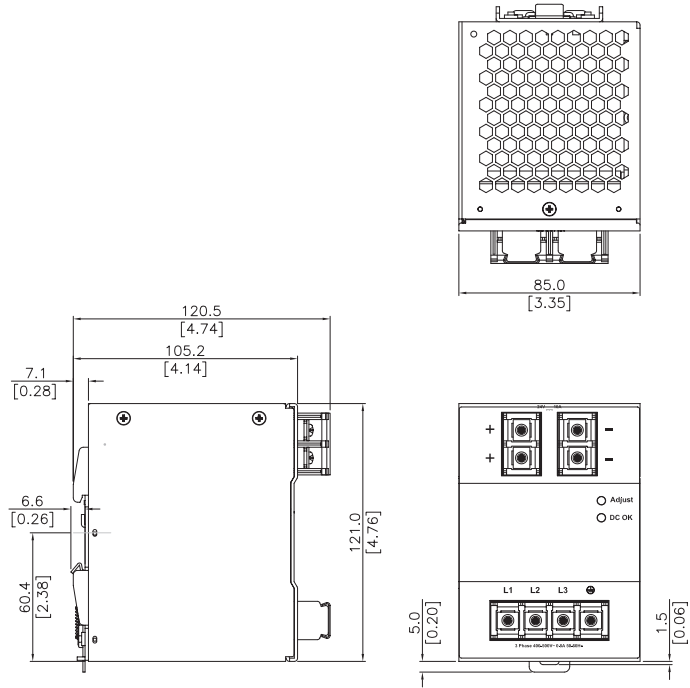
Input		Output	
L1	Line 1	-V	Out -
L2	Line 2	+V	Out +
L3	Line 3		
⏏	AC Ground		



# RHINO PSB Series DIN rail Power Supply Dimensions

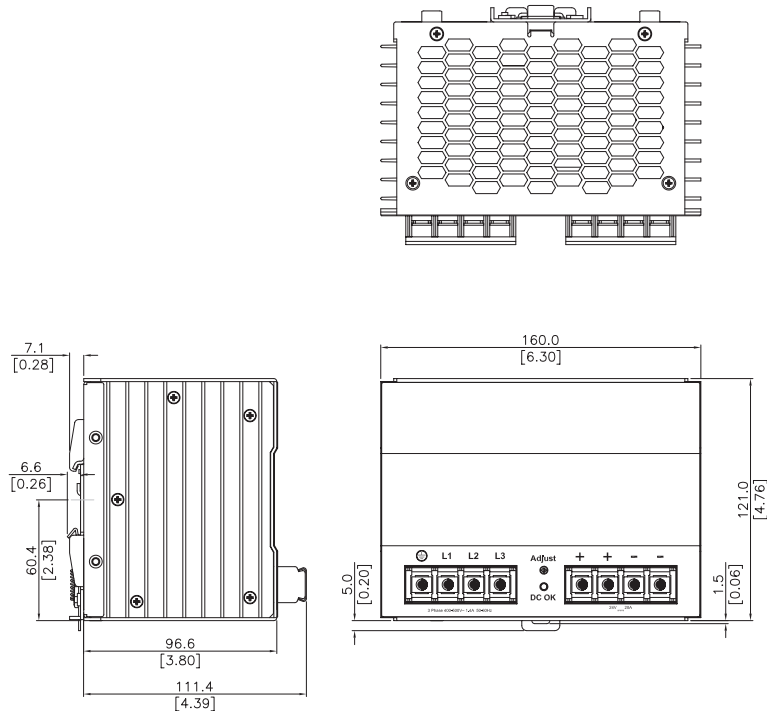
## PSB24-240-3

Wiring Connection			
Input		Output	
L1	Line 1	-V	Out -
L2	Line 2	+V	Out +
L3	Line 3		
	⏏	AC Ground	



## PSB24-480-3

Wiring Connection			
Input		Output	
L1	Line 1	-V	Out -
L2	Line 2	+V	Out +
L3	Line 3		
	⏏	AC Ground	



All dimensions in mm [inches]

## PSB Power Supply Accessories

PSB Series Power Supply Accessories		
Part No.	Price	Description
PSB-CVR	<--->	Universal replacement terminal cover kit for all RHINO PSB series power supplies. Universal kit includes (9) terminal covers to replace all terminal covers on any PSB power supply model

