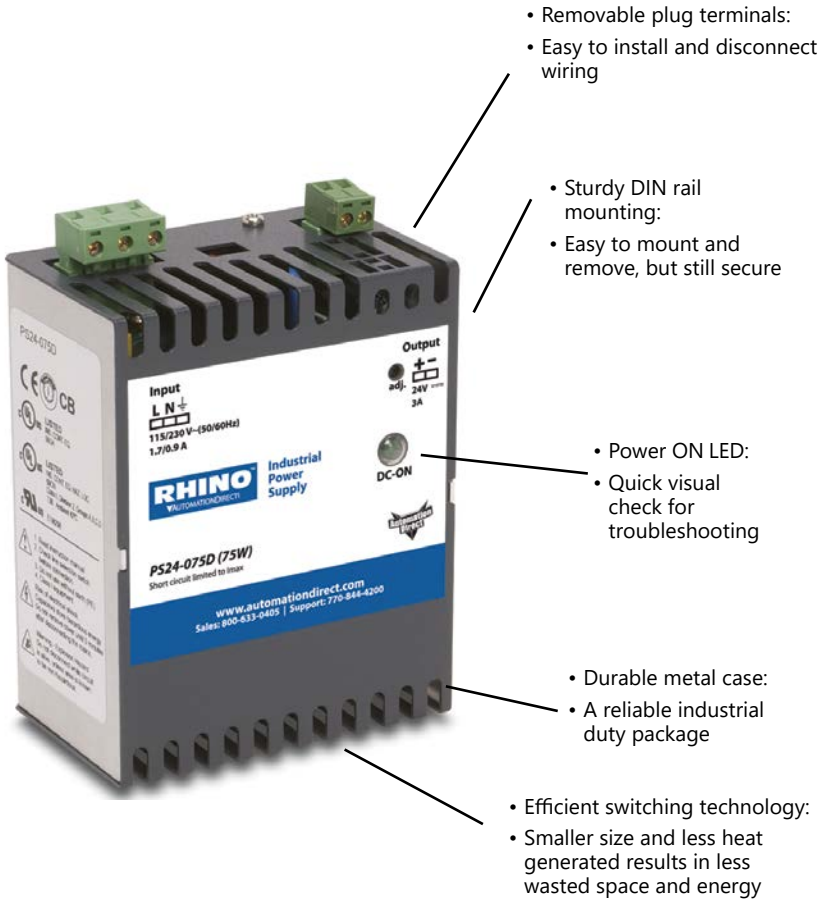
RHINO 12 VDC and 24 VDC Power Supplies PS Series

Switching power supplies at linear supply prices

The PS Series power supplies give you consistent, reliable, switched DC power at linear power supply prices.

These power supplies use efficient switching technology to produce the most power in the smallest space, while generating a minimum amount of heat. The constant-current short circuit protection limits the output current as the voltage is reduced to safely protect your control components from direct shorts and device failures. Once the short is corrected, the PS Series power supplies automatically resume supplying full-voltage power. Precisely regulated output power is suitable for battery charging applications. Extra-sturdy DIN rail mounts and removable plug connections make installation a breeze.

Meeting UL/cUL 60950, 508 and 1604* (Class I, Div. 2), our PS-D (DIN rail mounted) power supplies meet the standards required for practically any industrial control application.

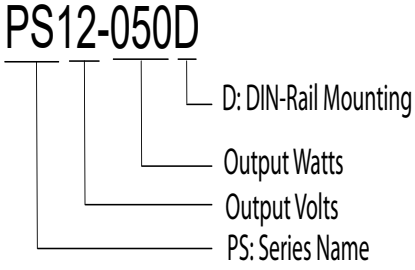


Features

- 2A - 24A at 24 VDC, 3.5A at 12 VDC
- Regulated switch mode type
- Low profile case
- Easy DIN rail mounting
- Constant-current short circuit protection
- Low ripple and noise
- Selectable input voltage (115/230 VAC)
- High EMC immunity
- EMI meets EN 55011-B and FCC Part 15, Level B
- Constant current protection with auto-recovery:
- No current spikes to damage powered devices due to improper wiring or a powered device failure
- Worldwide safety approvals: UL/cUL 508, 60950 and 1604 Class I, Div. 2, CE

[PS12-050D, PS24-050D and PS24-500D do not meet UL 1604 Class I Div 2]

Part numbering system



RHINO Power Supplies Specifications
PS Series

PS12-050D
PS24-050D

PS12-075D
PS24-075D

PS24-150D

PS24-300D

PS24-500D

PS24-600D

General Specifications

Temperature	Operating [ambient]: -25 to 70°C [-13 to 158°F] max, Derating above 50°C 2%/C Storage [non-operating]: -25 to 85°C [-13 to 185°F] max, Temperature drift: 0.02%/C
Humidity	95% [non-condensing] relative humidity max
Switching Frequency	80 kHz typical [PWM]
Isolation	According to IEC/EN 60950, UL 60950, UL 508
Output Regulation	Input variation: ± 0.2% max Load variation: 50W, 75W, 150W models: ± 1% max 300W, 500W, 600W models: ± 0.3% max
Output Voltage Ripple	< 50 mV peak to peak [20 MHz bandwidth]
Output Protection	Current limit: 110% maximum output rating. Voltage limit: 140% Vout nom
Vibration	1gn 20 sweeps each axis
Shock	15gn, 11mS each axis
Enclosure Rating	IP 20
Enclosure Material	Aluminum [chassis] / stainless steel [cover]
Mounting	Snap-on with self-locking spring for 35mm DIN rails
Connection	Removable screw terminals for 22-10AWG, wire stripping length 7-8mm
Agency Approvals	UL/cUL 60950 recognized, File No. E198298, UL/cUL 508 listed File No. E197592, UL/cUL 1604 listed [Class I, Div 2, groups A,B,C, and D hazardous locations], File No. E197886, except PSxx-050D and PS24-500D, which are not UL/cUL1604 listed. CE

Note: All specifications are valid at nominal input voltage, full load and +25°C after warm-up time, unless otherwise stated.

Input Specifications

Part Number	*Input Voltage Range*	*Input Frequency Range*	*Input Current [Typical]*		*Inrush Current [<2mS]*		*Efficiency [Typ @ 115VAC]*	*C-Curve Circuit Breaker or Slow-blow Fuse*
			115 VAC	*230 VAC*	*115 VAC*	*230 VAC*		
PS12-050D	93-264 VAC	47-63 Hz	1.2 A	0.7 A	< 15 A	< 30 A	84%	5.0 A
PS24-050D	93-264 VAC		1.2 A	0.7 A			85%	
PS12-075D	93-132 VAC 187-264 VAC [switch selectable]		1.7 A	0.9 A	< 16.5 A	< 33 A	82%	
PS24-075D			1.7A	0.9 A			86%	
PS24-150D			3.0 A	1.7 A	< 35 A	< 70 A	87%	10.0 A
PS24-300D			5.4 A	3.3 A			88%	15.0 A
PS24-500D	93-132 VAC		9.5 A	N/A	< 50 A	N/A	87%	
PS24-600D	93-132 VAC 187-264 VAC [switch selectable]		10.5 A	6.4 A	< 70 A	< 80 A	88%	20.0 A

Output Specifications

Part Number	*Price*	*Drawing Link*	*Output Voltage*	*Output Voltage Adj. Range*	*Output Current [Max]*	*Output Power [Max]*	*Output Voltage Regulation**	*Hold-Up Time*		*MTBF [IEC 1709 @ 25°C]*
								115 VAC	*230 VAC*	
PS12-050D	Retired	PDF	12VDC	12-14 VDC	3.5 A	50W	1%	25mS	30mS	2,992,000 hours
PS24-050D	Retired	PDF	24VDC	24-28 VDC	2.0 A	50W				
PS12-075D	$-0072j:	PDF	12VDC	12-14 VDC	6.0 A	75W				1,800,000 hours
PS24-075D	Retired	PDF	24VDC	24-28 VDC	3.0 A	75W				
PS24-150D	Retired	PDF			6.0 A	150W				1,939,000 hours
PS24-300D	$0071a:	PDF			12.0 A	300W	0.3%			1,913,000 hours
PS24-500D	$0071b:	PDF			20.0 A	500W		20mS	N/A	1,467,000 hours
PS24-600D	$0071c:	PDF			24.0 A	600W		15mS	25mS	1,434,000 hours

***Load variation (10-90%)**

Notes: Output current characteristic suitable for battery charging applications. Not recommended for redundancy or parallel operation.