

# PS Series 12 VDC and 24 VDC Power Supplies

## Switching power supplies at linear supply prices

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

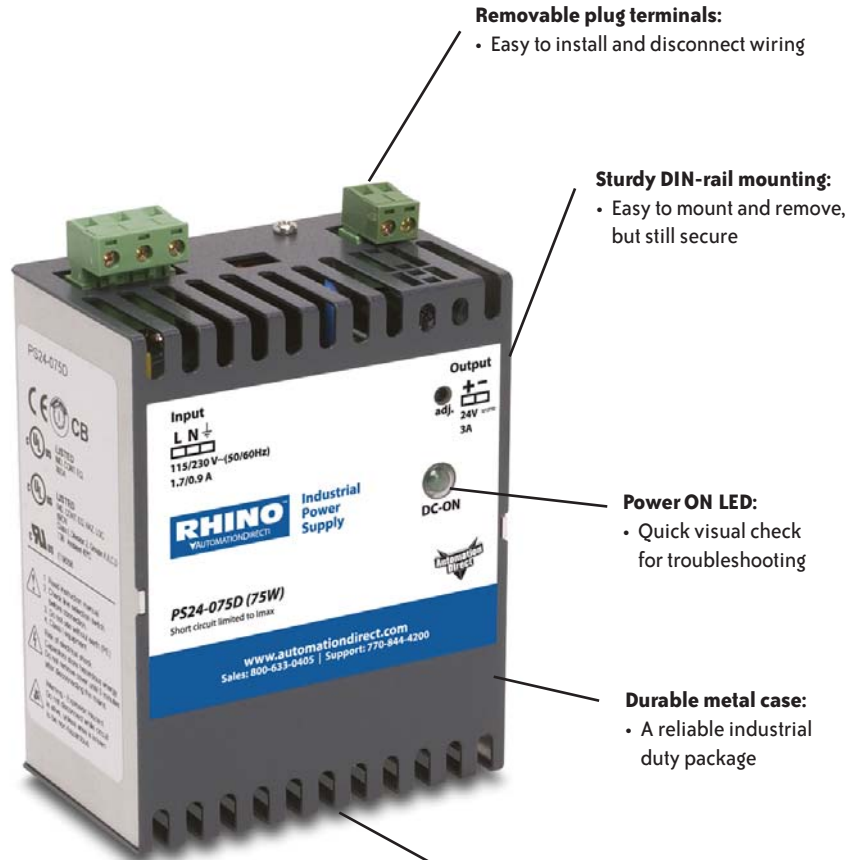
These power supplies use efficient switching technology to produce the most power in the smallest space, while generating a minimum amount of heat. The constant-current short circuit protection limits the output current as the voltage is reduced to safely protect your control components from direct shorts 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
- 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
- Worldwide safety approvals: UL/cUL 508, 60950 and 1604\* (Class I, Div. 2) CE (see Note on following page about IEC 61000-3-2)
- Low profile case

\* PS12-050D, PS24-050D and PS24-500D do not meet UL 1604 Class I Div 2.



#### Removable plug terminals:

- Easy to install and disconnect wiring

#### Sturdy DIN-rail mounting:

- Easy to mount and remove, but still secure

#### Power ON LED:

- Quick visual check for troubleshooting

#### Durable metal case:

- A reliable industrial duty package

#### Constant current protection with auto-recovery:

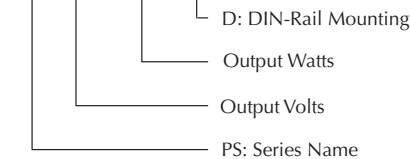
- No current spikes to damage powered devices due to improper wiring or a powered device failure

#### Efficient switching technology:

- Smaller size and less heat generated results in less wasted space and energy

## Part numbering system

PS12-050D



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

# PS Series Power Supplies Specifications



PS12-050D / PS24-050D



PS12-075D / PS24-075D



PS24-150D



PS24-300D



PS24-500D



PS24-600D

General Specifications	
<b>Temperature</b>	Operating (ambient) -25°C to +70°C max Derating above 50°C 2%/C Storage (non-operating) -25°C to +85°C max Temperature drift 0.02%/C
<b>Humidity</b>	95% (non-condensing) relative humidity max
<b>Switching Frequency</b>	80 kHz typical (PWM)
<b>Isolation</b>	According to IEC/EN 60950, UL 60950, UL 508
<b>Output Regulation</b>	Input variation: ± 0.2% max Load variation: 50 W, 75 W, 150 W models: ± 1% max 300 W, 500 W, 600 W models: ± 0.3% max
<b>Output Voltage Ripple</b>	< 50 mV peak-peak (20 MHz bandwidth)
<b>Output Protection</b>	Current limit: 110% maximum output rating Voltage limit: 140% Vout nom
<b>Vibration</b>	1gn 20 sweeps each axis
<b>Shock</b>	15gn, 11mS each axis
<b>Enclosure Rating</b>	IP 20
<b>Enclosure Material</b>	Aluminum (chassis) / stainless steel (cover)
<b>Mounting</b>	Snap-on with self-locking spring for 35mm DIN rails
<b>Connection</b>	Removable screw terminals for 22-10 AWG
<b>Agency* Approvals</b>	UL/cUL 60950 recognized UL/cUL 508 listed UL/cUL 1604 listed (Class I, Div 2, groups A,B,C, and D hazardous locations), <b>except PSxx-050 and PS24-500D</b> , which are not UL/cUL 1604 listed. CE (See IEC 61000-3-2 Note below)

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

**\* PS12-050D, PS24-050D and PS24-500D do not meet UL 1604 (Class I, Div. 2).**

**Note: IEC 61000-3-2 Power Factor Correction**

**The IEC 61000-3-2 standard is intended to reduce the amount of disturbance a device feeds back into its power source. AutomationDirect power supplies all carry the CE mark. Normally, 61000-3-2 is met or does not apply. Only our PS24-150D and PS24-300D could potentially be used in a manner not compliant with the 61000-3-2 standard.**

Replacement terminal blocks are available. See price list.

Input Specifications							
Part Number	Input Voltage Range	Input Frequency Range	Input Current (Typical)		Inrush Current (<2mS)		Efficiency (Typ.)
			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%
PS24-050D	93-264 VAC		1.2 A	0.7 A			87%
PS12-075D	93-132 VAC 187-264 VAC (switch selectable)		1.7 A	0.9 A	<16.5 A	<33 A	83%
PS24-075D			1.7 A	0.9 A			85%
PS24-150D	3.0 A		1.7 A	<35 A	<70 A	84%	
PS24-300D	5.4 A		3.3 A			87%	
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%

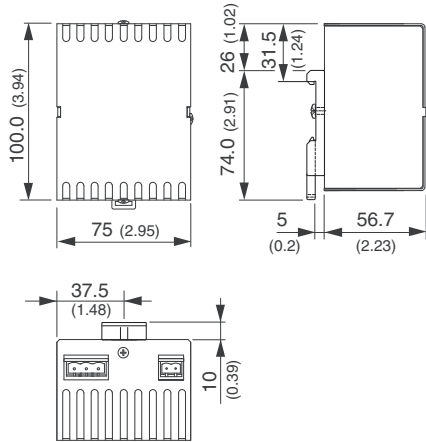
Output Specifications								
Part Number	Output Voltage	Output Voltage Adj. Range	Output Current (Max.)	Output Power (Max.)	Output Voltage Regulation*	Hold-Up Time		MTBF (IEC 1709 @ 25°C)
						115 VAC	230 VAC	
PS12-050D	12 VDC	12-14 VDC	3.5 A	50 W	1%	25 mS	30 mS	2,992,000 hours
PS24-050D	24 VDC	24-28 VDC	2.0 A	50 W				
PS12-075D	12 VDC	12-14 VDC	6.0 A	75 W				
PS24-075D	24 VDC	24-28 VDC	3.0 A	75 W				
PS24-150D			6.0 A	150 W				
PS24-300D			12.0 A	300 W				
PS24-500D	24 VDC	24-28 VDC	20.0 A	500 W	0.3%	20 mS	N/A	1,467,000 hours
PS24-600D			24.0 A	600 W				

\*Load variation (10-90%)

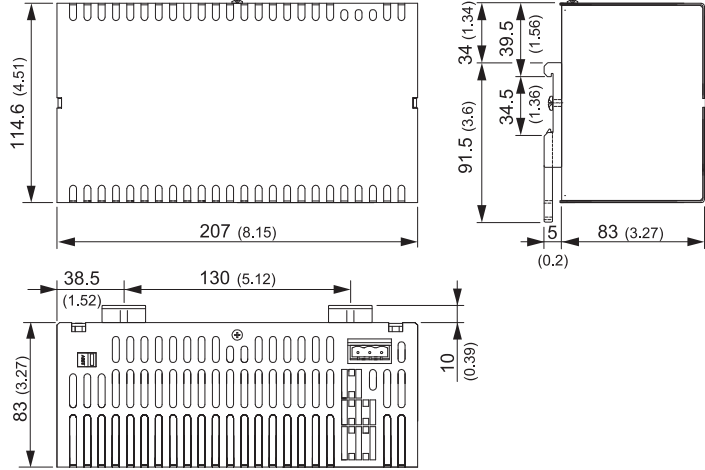
**Notes: Output current characteristic suitable for battery charging applications. Not recommended for redundancy or parallel operation.**

# PS Series Power Supplies Dimensions

**PS12-050D, PS24-050D**

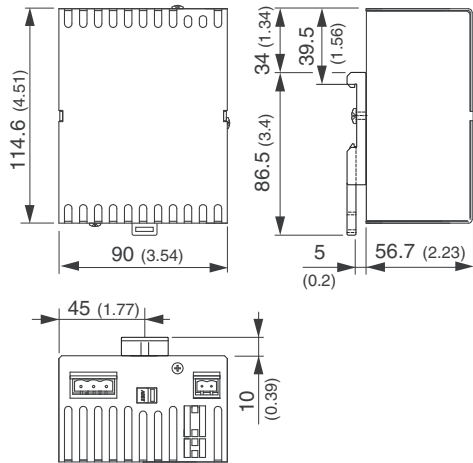


**PS24-300D**

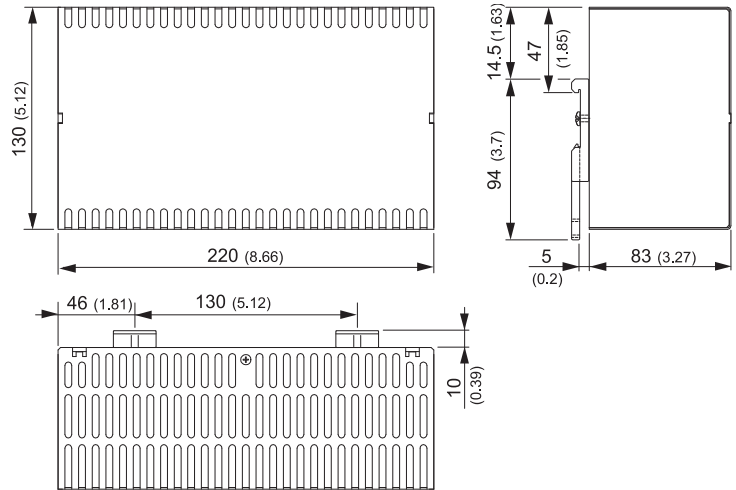


*Note: All dimensions are in millimeters (inches).  
Tolerances ±0.5mm*

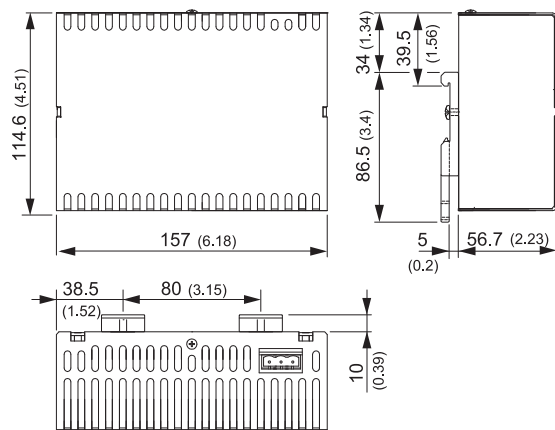
**PS12-075D, PS24-075D**



**PS24-500D**



**PS24-150D**



**PS24-600D**

