

# SPS Series

## Single Phase 12W-150W AC-DC DIN Rail Power Supplies

### Key Features

- Class 2 LPS
- Universal input 90-264VAC / 127-370VDC
- Class II Isolation
- 100% full load burn-in test
- Modular design
- IP20 rated protection



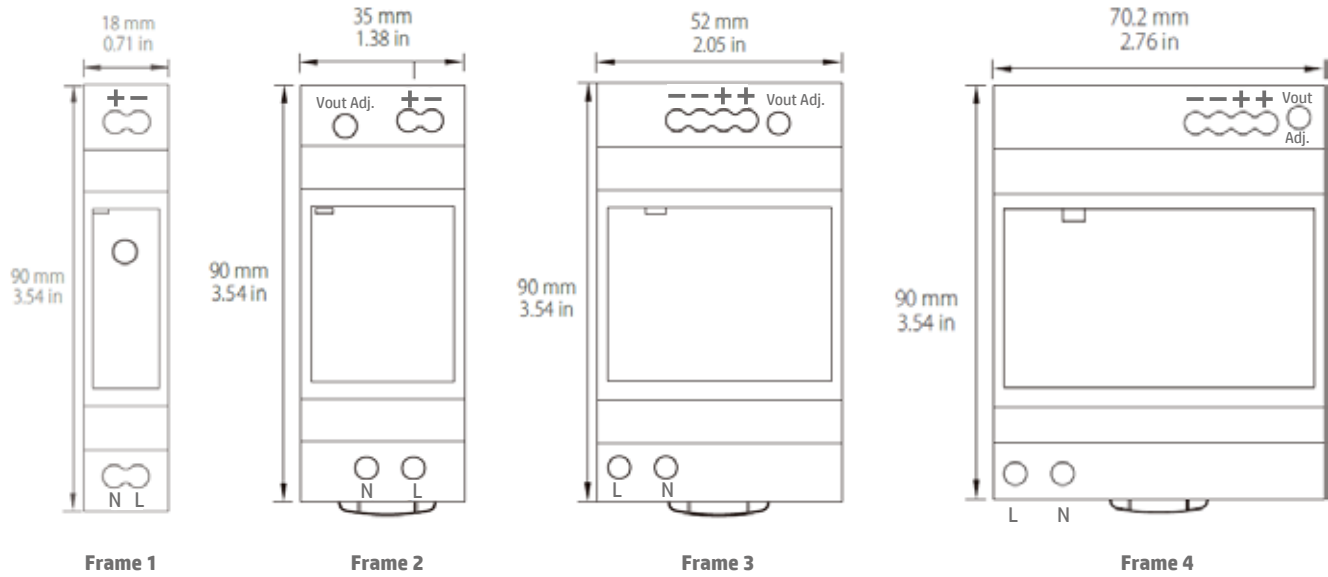
### Technical Specification

Model	SPS-1-012-5DC	SPS-1-015-12DC	SPS-1-015-24DC	SPS-1-024-12DC
Frame Size	1			2
Input Voltage	85-264VAC or 120-370VDC			
Output Wattage	12W	15W	15W	24W
Output Voltage	5VDC	12VDC	24VDC	12VDC
Output Current	2.4A	1.25A	0.63A	2A
Efficiency	82%	88%	89%	88%
<b>General Specification</b>				
Approval	cURus - Class 2			
Isolation Voltage	3000VAC / 4242VDC			
Isolation Resistance	100MΩ @ 500VDC			
Ambient Temperature	-20 to +70°C			
Derating	(50 to 70°C) 2.5%/°C			
Storage Temperature	-40 to +85°C			
Relative Humidity	20 to 90% RH			
Cooling	Free air convection (Fanless)			
Frame Size & Weight (see overleaf)	Frame 1		Frame 2	
Tightening Torque	0.5Nm			
Case Material	Plastic			
<b>Input Specifications</b>				
Rated Input Voltage	85-264VAC or 120-370VDC			
Line Frequency	47 to 63Hz			
Inrush Current (115/230VAC)	25/45A			
<b>Output Specifications</b>				
Output Voltage Accuracy	±1%			
Minimum Load	0%			
Line Regulation	±1%			
Load Regulation	±1%			
Turn On Time	2000ms at full load		500ms at full load	
Voltage Fall Time	80ms			
Voltage Rise Time	80ms			
Hold Up Time (115/230VAC)	30/12ms			
Temperature Coefficient	±0.03%/°C (0-50°C) RH non-condensing			
Ripple & Noise	80mVp-p	120mVp-p	150mVp-p	120mVp-p
Voltage Trim Range	4.5-5.5VDC	10.8-13.8VDC	21.6-29VDC	10.8-13.8VDC
DC ON Indicator (Green LED)	3.5-4.5VDC			
DC LOW Indicator (Red LED)	3.5-4.5VDC			
<b>Control &amp; Protection</b>				
Rated Overload Protection	110 to 145%		105 to 160%	
Over Voltage Protection	5.75-6.5VDC	14.2-16.2VDC	30-36VDC	15-18VDC
Output Short Circuit	Hiccup Mode			
Connector Size Range	AWG 24-12 (0.2-2.5mm <sup>2</sup> ) flexible / solid cable			



SPS-1-030-24DC	SPS-1-060-24DC	SPS-1-092-24DC	SPS-1-150-24DC*
2	3	4	5
85-264VAC or 120-370VDC			
30W	60W	92W	150W (230VAC) / 127.4W (115VAC)
24VDC			
1.25A	2.5A	3.83A	6.25A (230VAC) / 5.3A (115VAC)
89%	90%		90.5%
cURus - Class 2			cURus
3000VAC / 4242VDC			
100MΩ @ 500VDC			
-20 to +70°C			
(50 to 70°C) 2.5%/°C			
-40 to +85°C			
20 to 90% RH			
Free air convection (Fanless)			
Frame 2	Frame 3	Frame 4	Frame 5
0.5Nm			
Plastic			
85-264VAC or 120-370VDC			
47 to 63Hz			
25/45A	30/60A	35/70A	60A (240VAC)
±1%			
0%			
±1%			
±1%			
500ms at full load			
80ms			
80ms			
30/12ms	12/30ms	30ms (100-240VAC)	
±0.03%/°C (0-50°C) RH non-condensing			
150mVp-p			
21.6-29VDC	3.5-4.5VDC		24-25.5VDC
3.5-4.5VDC			
105 to 160%		102 to 110%	105 to 135%
30-36VDC			
Hiccup Mode			
AWG 24-12 (0.2-2.5mm <sup>2</sup> ) flexible / solid cable			

## Dimensions (mm)



## Frame Sizes & Weights

	Frame 1	Frame 2	Frame 3	Frame 4	Frame 5
Height	90mm (3.54in)	90mm (3.54in)	90mm (3.54in)	90mm (3.54in)	90mm (3.54in)
Width	18mm (0.71in)	35mm (1.38in)	52mm (2.05in)	70.2mm (2.76in)	105mm (4.13in)
Depth	58mm (2.28in)	58mm (2.28in)	58mm (2.28in)	58mm (2.28in)	58mm (2.28in)
Weight	78g	120g	190g	270g	320g

### Construction

Easy, safe and secure snap-on, snap-off  
DIN Rail mounting (TS25/7.5 or TS35/15)

### Installation

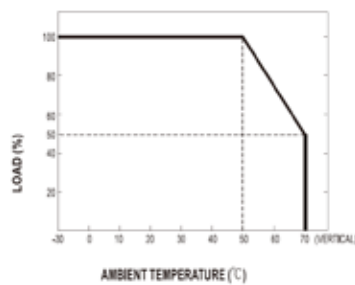
**Ventilation / Cooling**  
Normal convection. All sides 25mm free  
space for cooling recommended

### Terminal Size Range

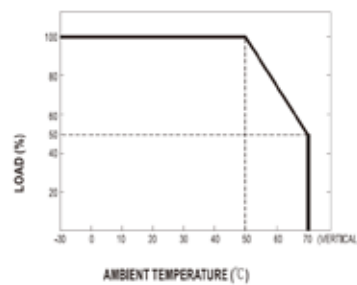
2 Solid: 0.2-2.0mm (AWG24-14)  
Use copper conductors only

## Derating Graphs

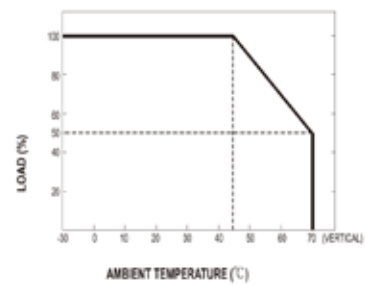
Temperature Derating - Frame 1



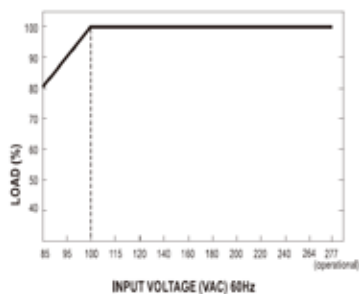
Temperature Derating - Frame 2



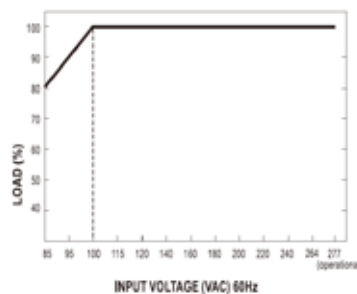
Temperature Derating - Frame 3



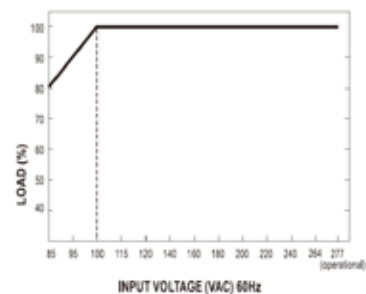
Output Derating - Frame 1

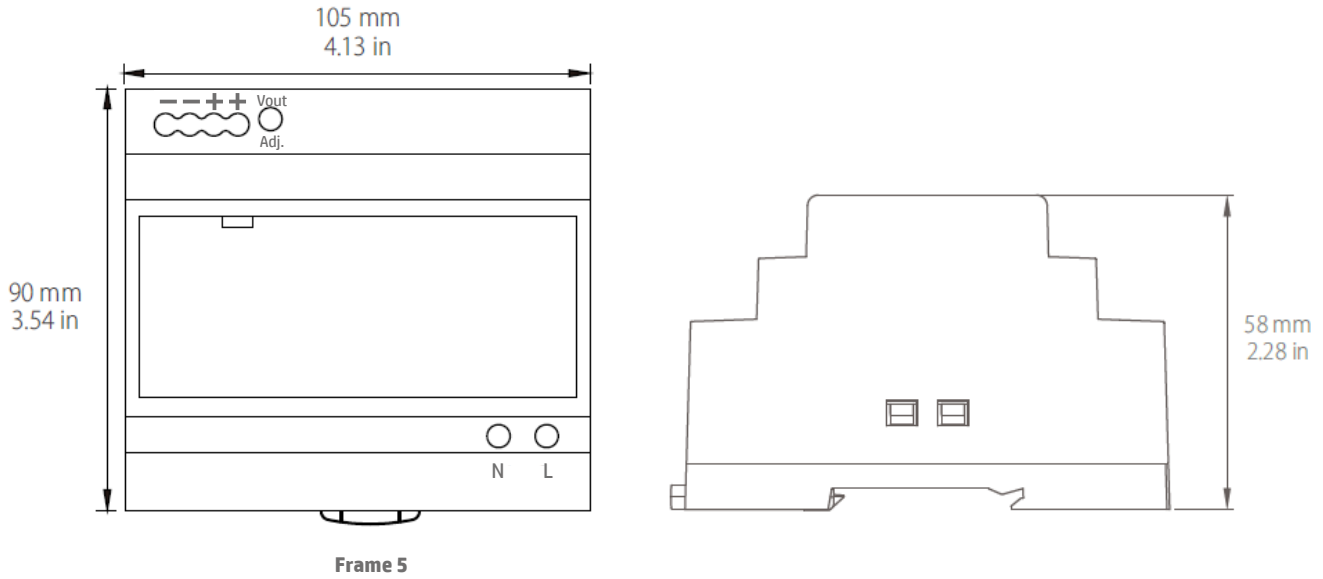


Output Derating - Frame 2



Output Derating - Frame 3

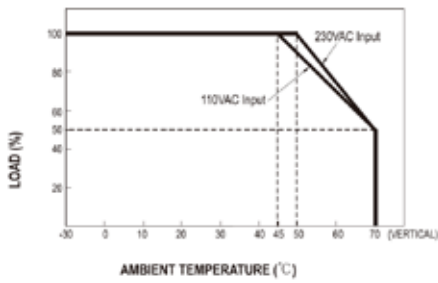




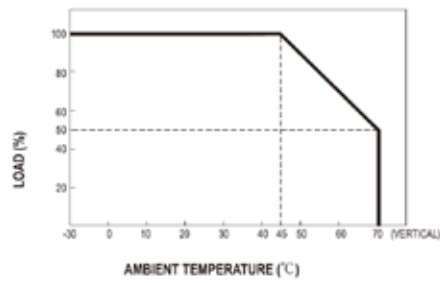
## Terminal Assignment

		Description
Output	V+	Positive Output Terminal
	V-	Negative Output Terminal
	Vout Adj.	DC Output Adjustment Trimmer
Input	N	Neutral Input (No Polarity at DC Input)
	L	Phase Input (No Polarity at DC Input)

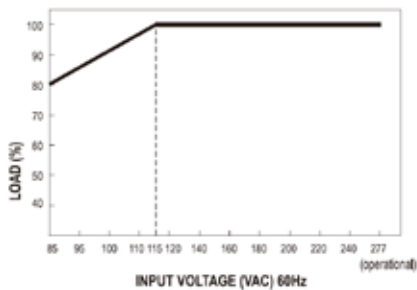
Temperature Derating - Frame 4



Temperature Derating - Frame 5



Output Derating - Frame 4



Output Derating - Frame 5

