

# SPS Series 12W - 150W AC-DC DIN Rail Power Supplies



## Key Features

- Class 2 (Limited Power Source)
- 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	SPS-1-030-24DC
Frame Size	1			2	
Input Voltage	85-264VAC or 120-370VDC				
Output Wattage	12W	15W	15W	24W	30W
Output Voltage	5VDC	12VDC	24VDC	12VDC	24VDC
Output Current	2.4A	1.25A	0.63A	2A	1.25A
Efficiency	82%	88%	89%	88%	89%
<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				
Dimensions	90 x 18 x 58mm			90 x 35 x 58mm	
Weight	78g			120g	
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	150mVp-p
Voltage Trim Range	4.5-5.5VDC	10.8-13.8VDC	21.6-29VDC	10.8-13.8VDC	21.6-29VDC
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	30-36VDC
Output Short Circuit	Hiccup Mode				
Connector Size Range	AWG 24-12 (0.2-2.5mm <sup>2</sup> ) flexible / solid cable				

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## Technical Specification

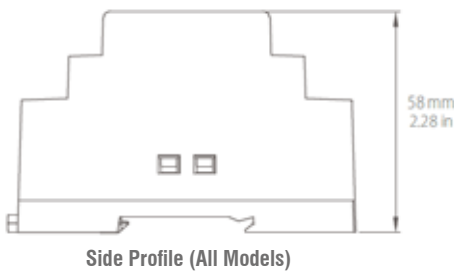
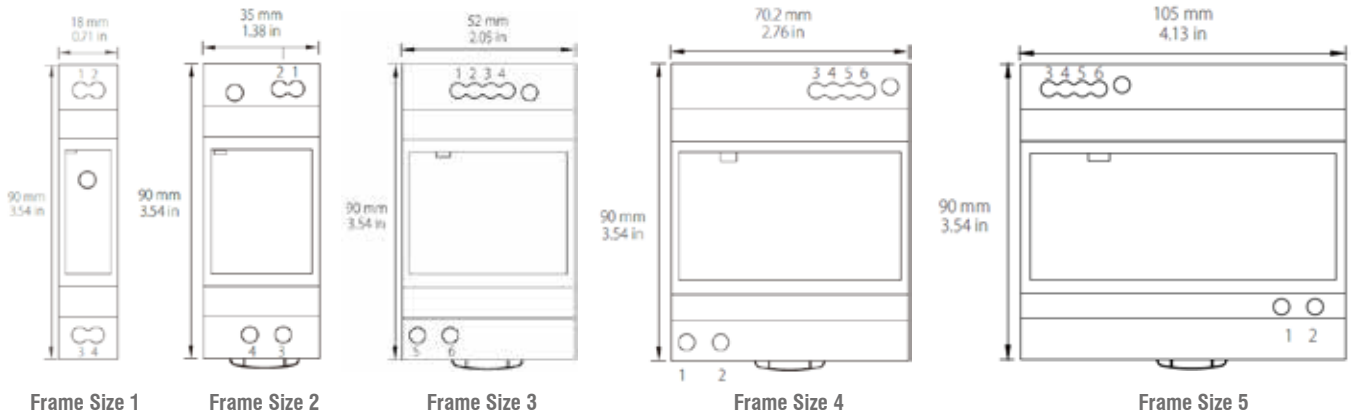
Model	SPS-1-060-24DC	SPS-1-092-24DC	SPS-1-150-24DC*
Frame Size	3	4	5
Input Voltage	85-264VAC or 120-370VDC		
Output Wattage	60W	92W	150W (230VAC) / 127.4W (115VAC)
Output Voltage	24VDC		
Output Current	2.5A	3.83A	6.25A (230VAC) / 5.3A (115VAC)
Efficiency	90%		
<b>General Specification</b>			
Approval	cURus - Class 2		cURus
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		
Dimensions	90 x 52 x 58mm	90 x 70.2 x 58.4mm	90 x 105 x 58.4mm
Weight	190g	270g	320g
Case Material	Plastic		
<b>Input Specifications</b>			
Rated Input Voltage	85-264VAC or 120-370VDC		
Line Frequency	47 to 63Hz		
Inrush Current (115/230VAC)	30/60A	35/70A	60A (240VAC)
<b>Output Specifications</b>			
Output Voltage Accuracy	±1%		
Minimum Load	0%		
Line Regulation	±1%		
Load Regulation	±1%		
Turn On Time	500ms at full load		
Voltage Fall Time	80ms		
Voltage Rise Time	80ms		
Hold Up Time (115/230VAC)	12/30ms	30ms (100-240VAC)	
Temperature Coefficient	±0.03%/°C (0-50°C) RH non-condensing		
Ripple & Noise	150mVp-p		
Voltage Trim Range	21.6-29VDC	24-25.5VDC	21.6-29VDC
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	105 to 160%	102 to 110%	105 to 135%
Over Voltage Protection	30-36VDC		
Output Short Circuit	Hiccup Mode		
Connector Size Range	AWG 24-12 (0.2-2.5mm <sup>2</sup> ) flexible / solid cable		

\* Not Class 2

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## Dimensions (mm)



## 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

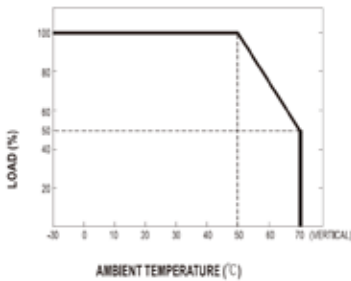
2 Solid: 0.2-2.0mm (AWG24-14) - Use copper conductors only

## Terminal Assignment

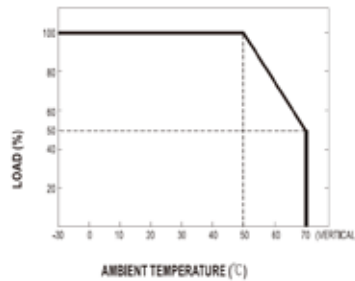
		Frame 1	Frame 2	Frame 3	Frame 4	Frame 5	Description
Output	+	1	1	1, 2	5, 6	5, 6	Positive Output Terminal
	-	2	2	3, 4	3, 4	3, 4	Negative Output Terminal
Input	N	3	4	6	2	1	Input (phase) No Polarity at DC Input
	L	4	3	5	1	2	Input (neutral) No Polarity at DC Input

## Derating Curves

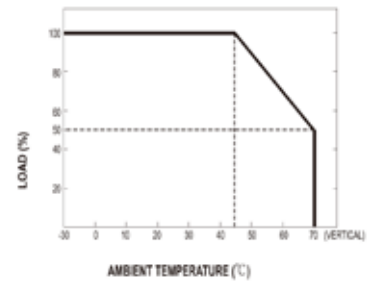
Deduction Curve & Temperature - Frame 1



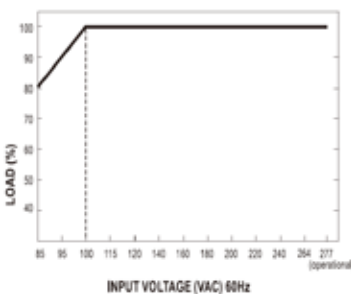
Deduction Curve & Temperature - Frame 2



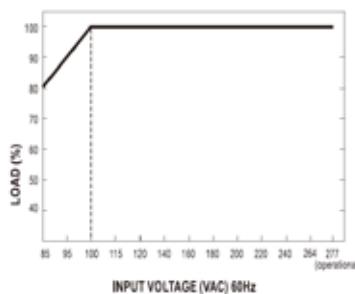
Deduction Curve & Temperature - Frame 3



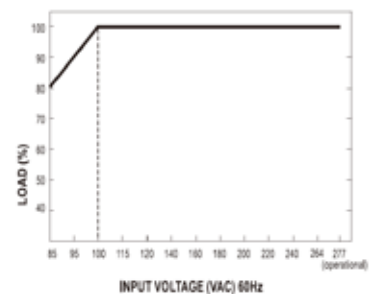
Minus Output & Input Voltage Curve - Frame 1



Minus Output & Input Voltage Curve - Frame 2



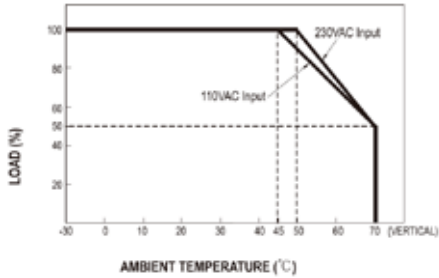
Minus Output & Input Voltage Curve - Frame 3



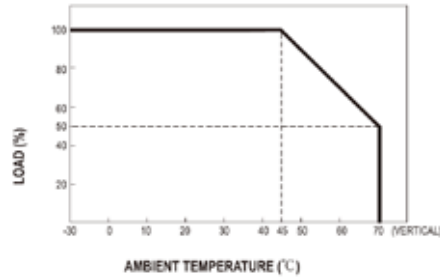
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## Derating Curves (continued)

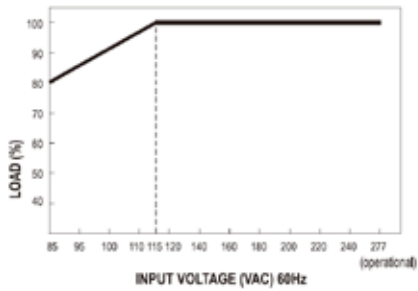
Deduction Curve & Temperature - Frame 4



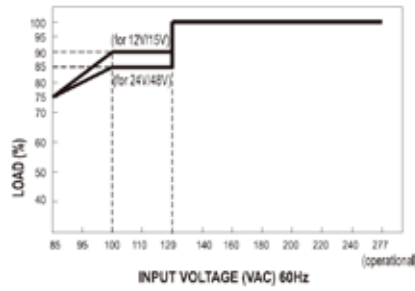
Deduction Curve & Temperature - Frame 5



Minus Output & Input Voltage Curve - Frame 4



Minus Output & Input Voltage Curve - Frame 5



## Wire Gauge Template Selector

A Cross-Section of a Copper Conductor (Electric Wire)	Current-Carrying Capability	Voltage 230V	Rated Current	Current Limiting
1.5	19	4.1	10	16
2.5	27	5.9	16	25
4.0	38	8.9	25	32
6.0	46	10.1	32	40
10.0	70	15.4	50	63