

SPS Series 12W - 150W

AC-DC DIN Rail Power Supplies

IMO

Technical Datasheet

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%	
General Specification						
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					
Input Specifications						
Rated Input Voltage	85-264VAC or 120-370VDC					
Line Frequency	47 to 63Hz					
Inrush Current (115/230VAC)	25/45A					
Output Specifications						
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					
Control & Protection						
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 (0.2-2.5mm²) 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%				90.5%	
General Specification						
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					
Input Specifications						
Rated Input Voltage	85-264VAC or 120-370VDC					
Line Frequency	47 to 63Hz					
Inrush Current (115/230VAC)	30/60A		35/70A		60A (240VAC)	
Output Specifications						
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					
Control & Protection						
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 (0.2-2.5mm²) flexible / solid cable					

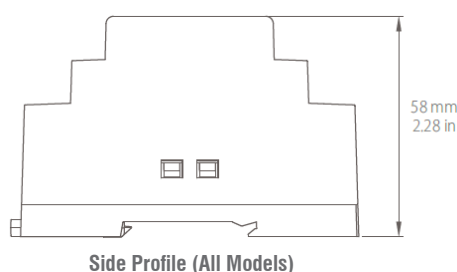
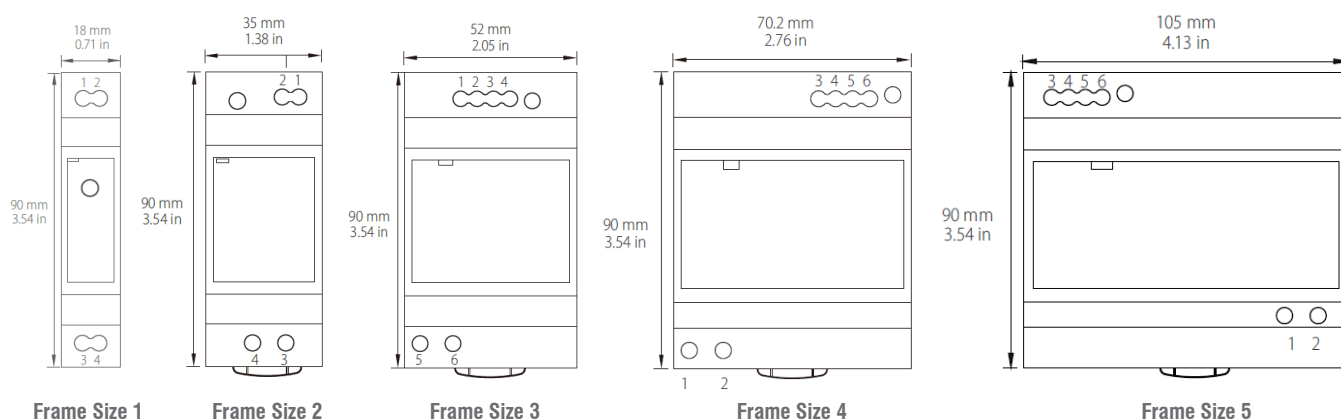
* Not Class 2

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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

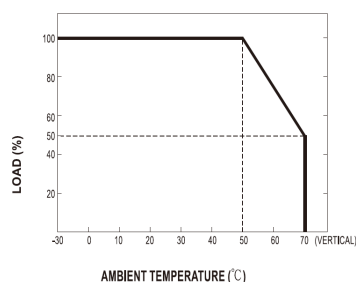
2 Solid: 0.2-2.0mm (AWG24-14) - Use copper conductors only

Terminal Assignment

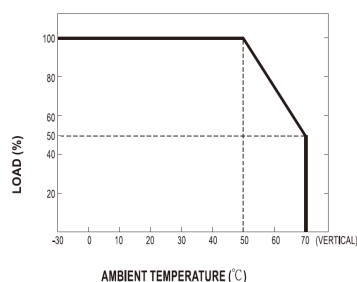
		Frame 1	Frame 2	Frame 3	Frame 4	Frame 5	Description
Output	+	1	1	1, 2	5, 6	5, 6	Positive Output Terminal
	-	2	2	3, 4	3, 4	3, 4	Negative Output Terminal
Input	N	3	4	6	2	1	Input (phase) No Polarity at DC Input
	L	4	3	5	1	2	Input (neutral) No Polarity at DC Input

Derating Curves

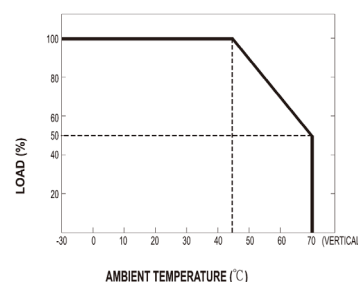
Deduction Curve & Temperature - Frame 1



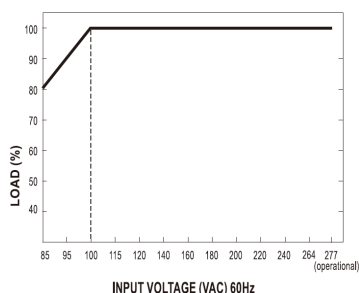
Deduction Curve & Temperature - Frame 2



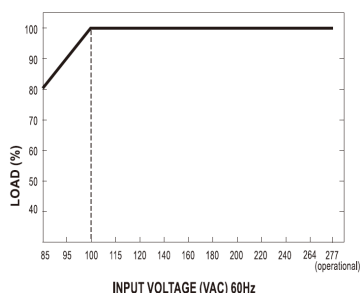
Deduction Curve & Temperature - Frame 3



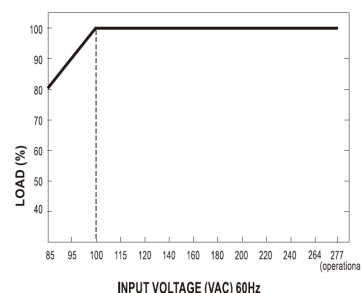
Minus Output & Input Voltage Curve - Frame 1



Minus Output & Input Voltage Curve - Frame 2



Minus Output & Input Voltage Curve - Frame 3



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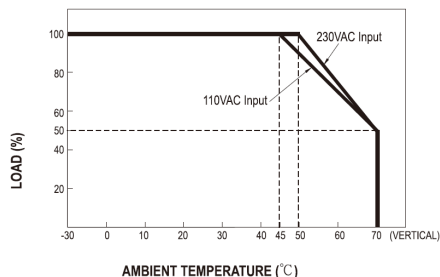
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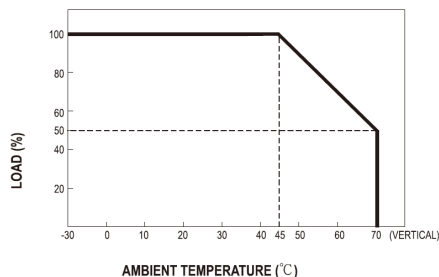
Technical Datasheet

Derating Curves (continued)

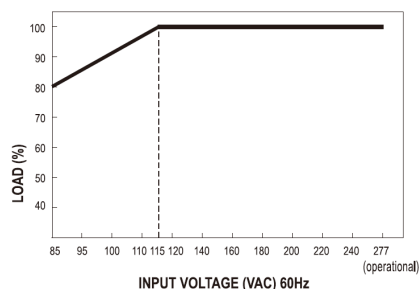
Deduction Curve & Temperature - Frame 4



Deduction Curve & Temperature - Frame 5



Minus Output & Input Voltage Curve - Frame 4



Minus Output & Input Voltage Curve - Frame 5

