

LPS Series 120W

AC-DC DIN Rail Power Supplies



Key Features

- 12, 24 & 48 VDC/ 10A, 5A & 2.5A 120W
- Universal Input: 90-264VAC / 120-375VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated



Technical Specification - 120W Output

Model	LPS-1-120-12DC		LPS-1-120-24DC	LPS-1-120-48DC
Input Voltage	90-264VAC / 127-375VDC			
Output Wattage	120W			
Output Voltage / Power Dissipation	12VDC / 24W	24VDC / 20W		48VDC / 19W
Output Current	10A	5A		2.5A
Efficiency	85.5%	88%		89%
General Specification				
Approval	CE/ cULus			
Isolation Voltage	3000VAC/4242VDC			
Isolation Resistance	100MΩ @ 500VDC			
Ambient Temperature	-20 to +70°C / -4 to +158°F			
Derating	(61 to 71°C) 2.5%/°C / (141.8 to 159°F) 1.8%/°F			
Storage Temperature	-40 to +85°C / -40 to 185°F			
Relative Humidity	10 to 95% RH			
Cooling	Free air convection			
Dimensions	L125 x W40 x D113 (126.5 inc. DIN rail mount) mm			
Weight	600g			
Case Material	Metal			
Input Specifications				
Rated Input Voltage	115 - 230VAC (auto select)			
Input Voltage Range	90-264VAC, 127-375VDC			
Line Frequency	50/60Hz			
Power Factor @ 115VAC	0.55 Typical (0.58 Measured)			
Power Factor @ 230VAC	0.70 Typical (0.75 Measured)			
Inrush Current (115 / 230VAC)	20 / 35A			
Output Specifications				
Output Voltage Accuracy	±1%			
Minimum Load	0%			
Line Regulation	±0.5%			
Load Regulation	±1%			
Turn On Time	1000ms after AC applied to input at full resistive load			
Voltage Fall Time	150ms			
Voltage Rise Time	150ms			
Hold Up Time (115 / 230VAC)	10 / 16ms			
Temperature Coefficient	±0.03%/°C			
Ripple & Noise	<120mVp-p			
Voltage Trim Range	11.4 ~ 14.5VDC	22.5 ~ 28.5VDC		45 ~ 55VDC
DC ON & LOW Indicator (Green & Red LED)	10 ~ 11.2VDC	17.6 ~ 19.4VDC		37 ~ 43VDC
Control & Protection				
Rated Overload Protection	105-130%			
Over Voltage Protection	14-17VDC	29-33VDC		50-65VDC
Output Short Circuit	Shutdown Output Voltage with Auto Recovery			

Note:

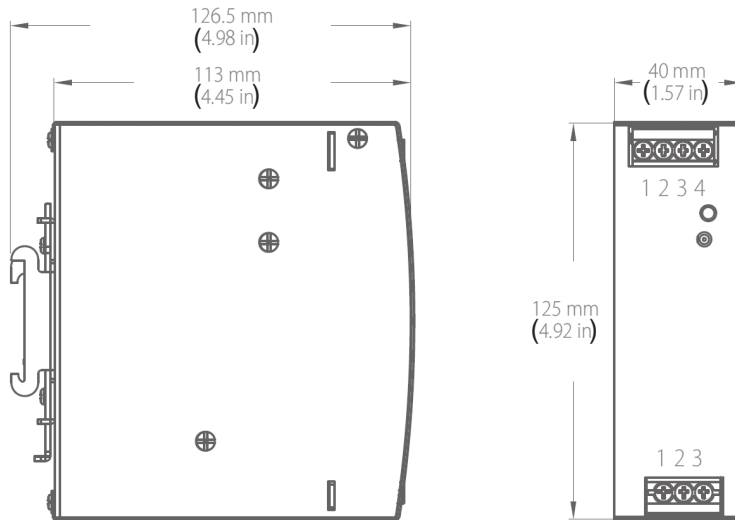
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 * F & 47 F parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

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Dimensions mm (in)



Pin Connections

Input		Output	
Pin No.	Description	Pin No.	Description
1	FG (⊕)	1, 2	DC OUTPUT V-
2	AC / N	3, 4	DC OUTPUT V+
3	AC / L		

Installation

Ventilation / Cooling

Normal convection
All sides 25mm (0.98in) free space for cooling

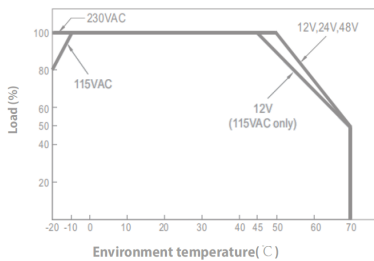
Connector Size Range

- AWG24-10 (0.2 ~ 4mm²) flexible / solid cable,
- Input connector can withstand torque at maximum 1,016Nm/ 0.7494 lb-ft
- Output connector can withstand torque at maximum 0.62Nm/ 0.4573 lb-ft
- Cable stripping 8mm (0.315in)
- Only use copper conductors 60/75°C (140/167°F)

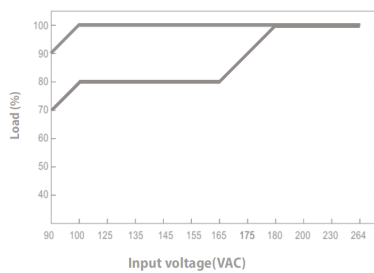
Construction

Easy snap-on mounting onto the DIN-Rail (TS35/7.5 or TS35/15), unit sits safely and firmly on the rail.

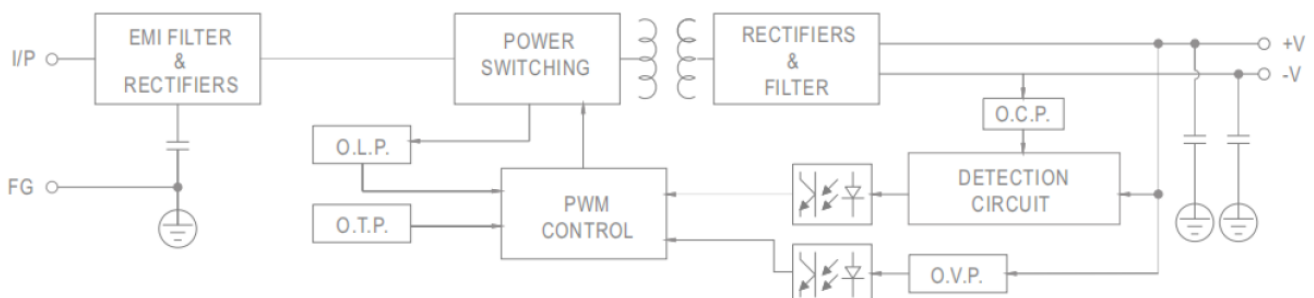
Derating Curve



Minus Output & Input Voltage Curves



Circuit Schematic



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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	4.1kW	10A	16A
2.5	27	5.9kW	16A	25A
4.0	38	8.9kW	25A	32A
6.0	46	10.1kW	32A	40A
10.0	70	15.4kW	50A	63A