HPS Series 120W Higher Performance
AC-DC DIN Rail Power Supplies

Technical Datasheet

Key Features

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

Technical Specification - 120W Output

Model	HPS-1-120-12DC	HPS-1-120-24DC	HPS-1-120-48DC
Input Voltage	90-264VAC / 127-375VDC		
Output Wattage	120W		
Peak Output Wattage	180W (for 3 secs)		
Output Voltage / Power Dissipation	12VDC / 120W	24VDC / 120W	48VDC / 120W
Output Current	10A	5A	2.5A
Efficiency	89%	91%	91%
General Specification			
Approval	cURus		
Isolation Voltage	3000VAC/4242VDC		
Isolation Resistance	100MΩ @ 500VDC		
Ambient Temperature	-25 to +70°C		
Derating	(61 to 71°C) 2.5%/°C		
Storage Temperature	-40 to +85°C		
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	0.96 Typical (0.58 Measured)		
Power Factor @ 230VAC	0.93 Typical (0.75 Measured)		
Inrush Current (115 / 230VAC)	35 / 70A		
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	110-150%		
Over Voltage Protection	14-17VDC	29-33VDC	50-65VDC
Output Short Circuit	Shutdown Output Voltage with Auto Recovery		

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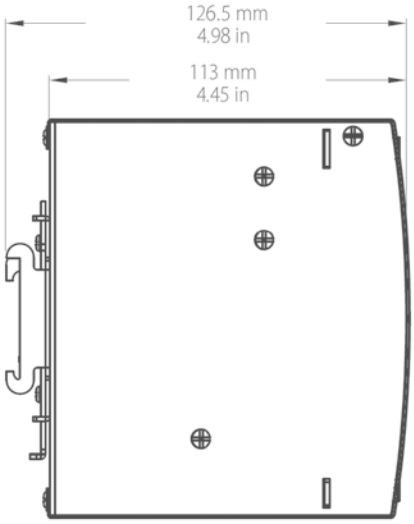
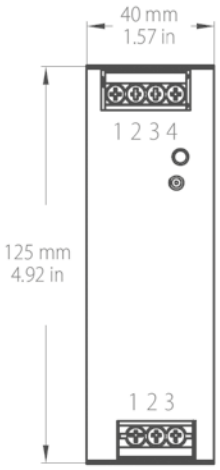
Dimensions (mm)





Pin Connections

Input

Pin No.	Description
1	FG ⏚
2	AC / N
3	AC / L

Output

Pin No.	Description
1, 2	Relay Contact
3	DC OUTPUT V-
4	DC OUTPUT V+

Installation

Ventilation / Cooling
Normal convection
All sides 25mm free space
For cooling recommended

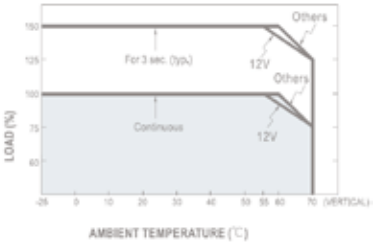
Connector Size Range
AWG24-10 (0.2 ~ 4mm²) flexible / solid cable,
- Input connector can withstand torque at maximum 9 pound-inches
- Output connector can withstand torque at maximum 5.5 pound-inches
  8 m/m striping cable end recommends

Use copper conductors only, 60 / 75°C

Construction

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

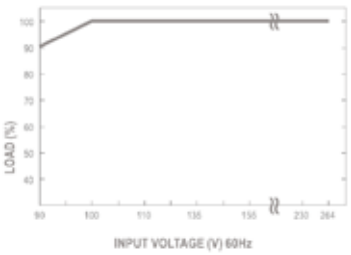
Derating Curve



DC OK Relay Contact

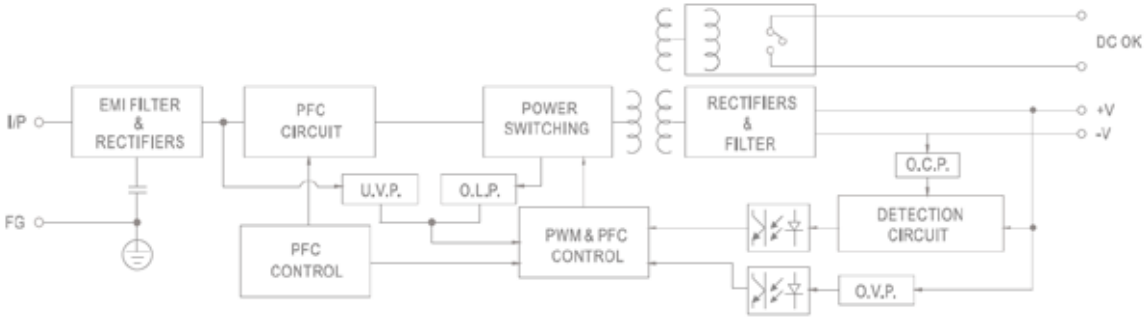
Contact Close	PSU turns on / DC OK
Contact Open	PSU turns off / DC Fail
Contact Ratings (max.)	30V / 1A resistive load

Minus Output & Input Voltage Curves



Peak Loading

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	4.1	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