



Size: 4.69in x 1.26in x 4.88in (119mm x 32mm x 124mm)

FEATURES

- Universal AC Input Range of 85~264VAC
- Support 1+1 or N+1 Redundant System (Suggested to use Redundancy Modules)
- Built-In Active PFC
- High Efficiency up to 92%
- Built-In Current Sharing Function
- Built-In Current Limiting Circuit
- 150% (180W) Peak Load Capacity
- Excellent Partial Load Efficiency
- 100% Full Load Burn-In Test
- Over Voltage, Over Load, Short Circuit, and Over Temperature Protection
- Easy Fuse Tripping due to High Over Load Current
- Built-In DC OK Relay Contact
- 10)% Full Load Burn-In Test
- Can be Installed on TS-35/7.5 or TS-35/15
- UL508, UL60950, and EN60950 Safety Approvals

DESCRIPTION

The PSDG-120 series of AC/DC DIN Rail power supply offers 120 watts of output power in a slim 4.69" x 1.26" x 4.88" package. This series consists of single output models with a universal AC input range of 85~264VAC. There are many built-in functions for this series including active PFC, current sharing function, current limiting circuit, and DC OK relay contact. Each model in this series has excellent partial load efficiency as well as over voltage, over load, short circuit, and over temperature protection. This series has UL508, UL60950, and EN60950 safety approvals and has been 100% full load burn-in tested. Please call factory for order details.

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Current		Ripple & Noise		Voltage Adj. Range	Output Power	Efficiency
			Min Load	Rated Load	0~70°C	-25°C			
PSDG-120-12	85~264VAC	12V	0	10A	≤100mV	≤200mV	12~14V	120W	89.5%
PSDG-120-24		24V	0	5A	≤120mV	≤240mV	24~28V	120W	91%
PSDG-120-48		48V	0	2.5A	≤240mV	≤240mV	48~56V	120W	92%

SPECIFICATIONS

All specifications are based on 25°C, Rated Input, and Rated Load unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage Range		85		264	VAC
Input Frequency		47		63	Hz
Power Factor	@100VAC		0.99		
	@230VAC		0.95		
AC Current	@100VAC			1.5	A
	@230VAC			0.65	
Inrush Current	@100VAC, Cold Start		<30		A
	@230VAC Cold Start		<60		
Leakage Current	Input-Output			0.25	mA
	Input-PG			3.5	
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy			±1.0		%
Line Regulation			±0.5		%
Load Regulation			±1.0		%
Output Power		See Table			
Output Current		See Table			
Ripple & Noise ⁽¹⁾		See Table			
Set Up Time	@230VAC			250	mS
	@100VAC			500	
Hold Up Time	@230VAC input, Full Load		≥20		mS
Temperature Coefficient			±0.03		%/°C
Overshoot and Undershoot				5.0	%

SPECIFICATIONS

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SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
PROTECTION					
Short Circuit Protection		Long-Term Mode, Automatic Recovery			
Over Load Protection	Constant current limiting for some time (150% of rated current, last 3S) then PS stops working for 7S, after 7S if the load ≤ rated current, PS will work normally, automatic recovery	110		150	% Rated Current
Over Voltage Protection	Hiccup Mode, Automatic Recovery	12V Model		18	V
		24V Model		33	
		48V Model		65	
Over Temperature Protection	Detect on heatsink of power transistor; shut down O/P, automatic recovery after temperature goes down.	95	100	105	°C
ENVIRONMENTAL SPECIFICATIONS					
Operating Ambient Temperature		-25		70	°C
Storage Temperature		-40		85	°C
Operating Humidity	Non-Condensing	20		90	%RH
Storage Humidity	Non-Condensing	5		95	%RH
Cooling Method		Free Air Convection			
MTBF	25°C, Full Load	300,000			Hours
GENERAL SPECIFICATIONS					
Efficiency		See Table			
Withstand Voltage	Primary-Secondary	3.0kVAC, ≤10mA			
	Primary-PG	2.5kVAC, ≤10mA			
	Secondary-PG	0.5kVAC, ≤10mA			
Isolation Resistance			≥100		MΩ
Power Boost		150% of Rated Current			
DC OK	V On	When output voltage is up to 90% of rated output voltage			
	V Off	When output voltage is down to 80% of rated output voltage			
DC OK Relay Contact Rating	Max 30V/1A or 60V/0.3A or 30VAC/0.3A Resistive Load				
Parallel Function	Support				
PHYSICAL SPECIFICATIONS					
Weight		22.70oz (643.53g)			
Dimensions (L x W x H)		4.69in x 1.26in x 4.88in (119mm x 32mm x 124mm)			
Packing		28pcts/CTN, 18.02KGs, 0.04cbm			
SAFETY CHARACTERISTICS					
Safety Approvals	UL508 ⁽³⁾ , UL60950 ⁽³⁾ , EN60950				
EMC Emission	EN55022, EN55024, FCC Part 15				Class B
Harmonic Current	EN61000-3-5				Class A
EMC Immunity	EN61000-4-2, 3, 4, 5, 6, 8, 11				Heavy Industry Level
Certificates	IEC 60950-1				
	EN 60950-1				
	EN55022/EN 55024/ EN 61000-3-2/ EN 61000-3-3				
	UL 508				
	CSA C22.2 No. 107.1-01 UL 60950-1 CAN CSA C22.2 No. 60950-1-07				

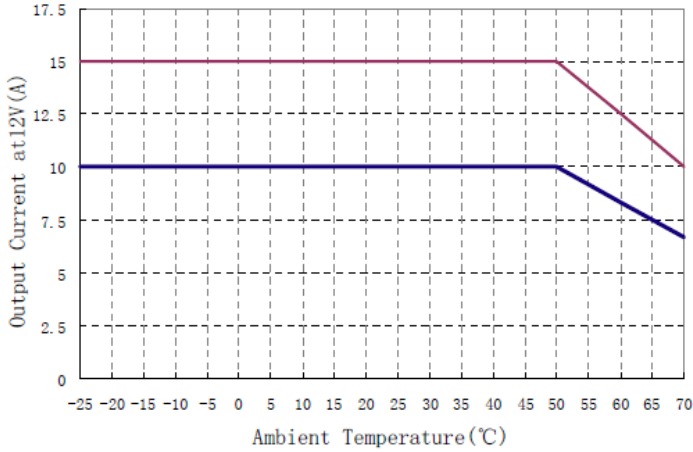
NOTES

1. Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 10uF parallel capacitor.
2. Power supply is considered as a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
3. This product is Listed to applicable standards and requirements by UL.

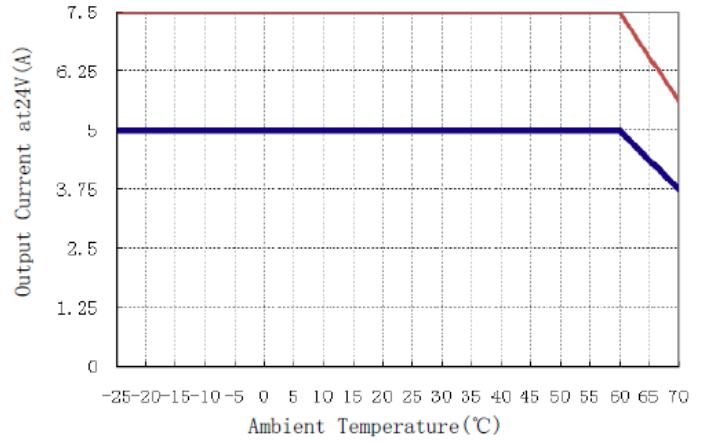
**Due to advances in technology, specifications subject to change without notice.*

DERATING CURVES

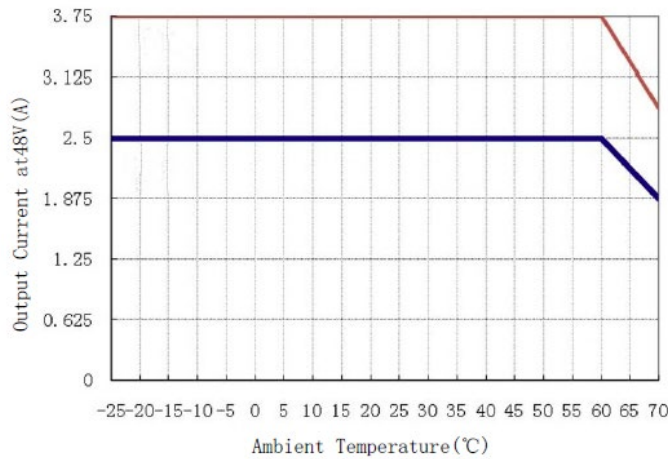
Output Current vs Ambient Temperature at 12V Typ.



Output Current vs Ambient Temperature at 24V typ.

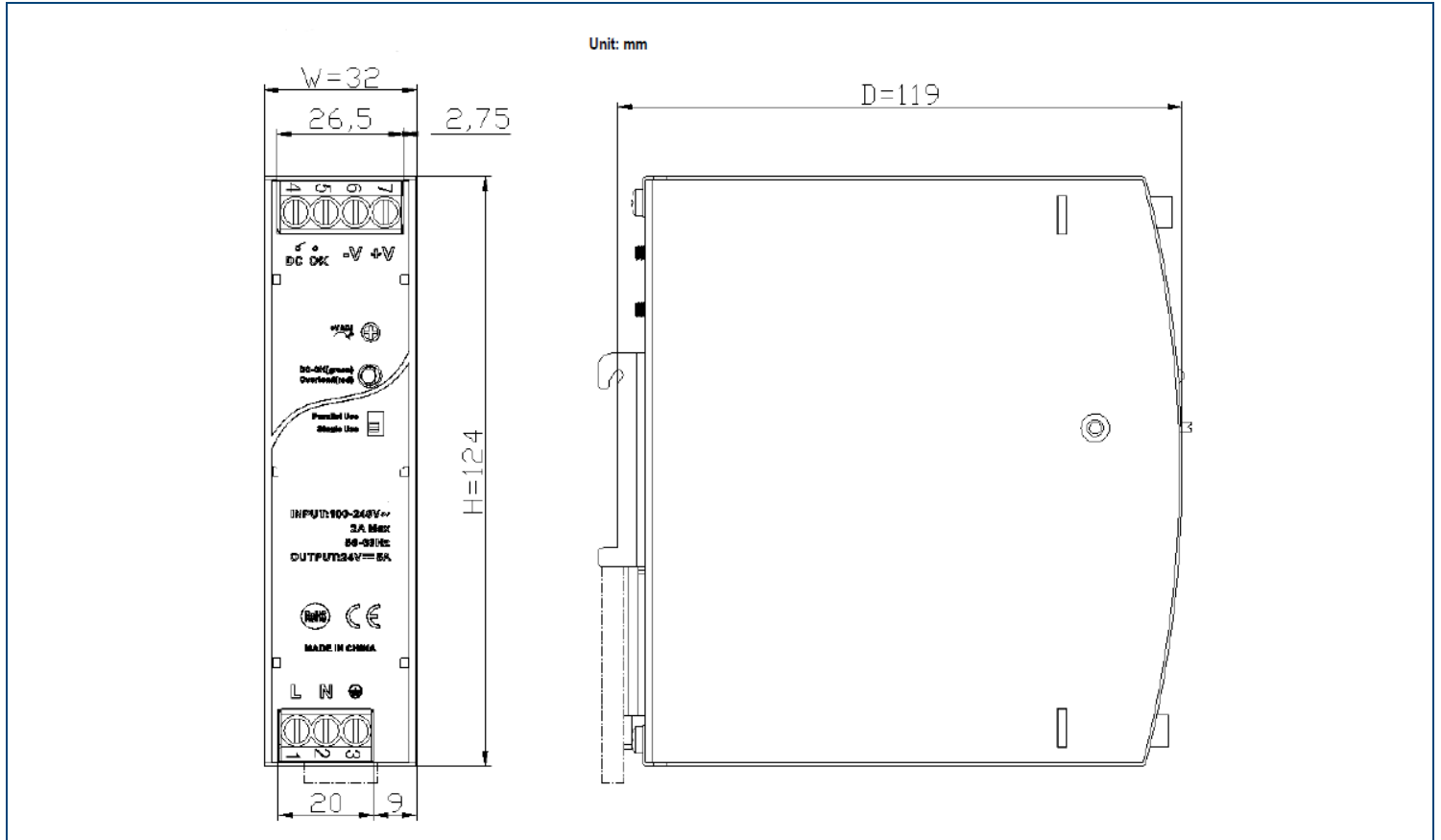


Output Current vs Ambient Temperature at 48V typ.

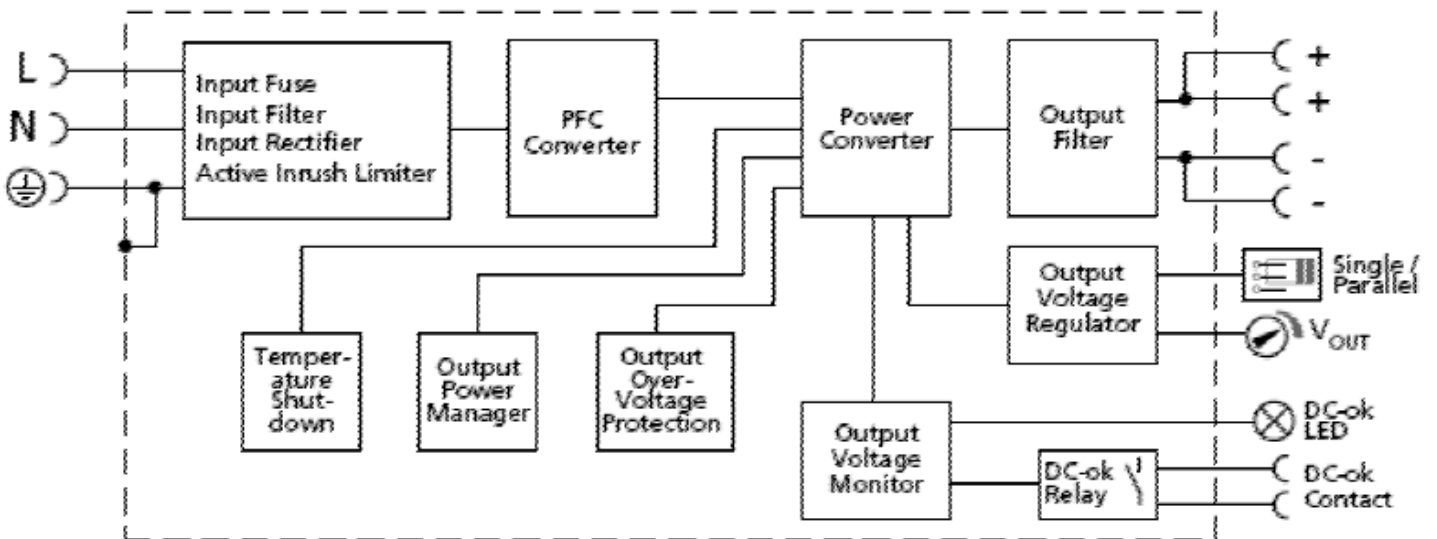


Red line for short time working; Blue line for continual working.

MECHANICAL DRAWINGS



FUNCTION DIAGRAM



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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