DATASHEET
Rev. B

Wall Industries, Inc.

PSIBU120 SERIES

90~260VAC Input Voltage Range
Up to 120 Watts, Active Power Factor Correction
Single, Dual, and Triple Outputs
AC/DC Open Frame Switching Power Supplies

FEATURES

- Class I
- Active Power Factor Correction
- 5” x 3” x 1.32”Open Frame Package
- Single to Triple Outputs
- RoHS Compliant
- Wide Input Voltage Range: 90~260VAC, 47~63Hz
- Internal EMI Filter
- Over Voltage Protection and Over Load Protection
- Up to 120 Watts Output Power
- Power Fail Detect (Optional)
- 100% Burn-in Tested
- Wide Operating Ambient Temperature (-20°C to +70°C)
- Meets FCC Part-15 Class B and CISPR-22 Class B Emission Limits
- UL/cUL (UL 60950-1:2nd Ed), TUV/GS (EN60950-1:2nd Ed), and CE Approvals

DESCRIPTION

The PSIBU120 series of Class I AC/DC switching mode power supplies provides up to 120 Watts of continuous output power in a compact 5” x 3” x 1.32” open frame package. This series has single, dual, and triple output models with a wide input voltage range of 90~260VAC. These power supplies have active power factor correction, an internal EMI filter, and over load and over voltage protection. All models meet FCC Part-15 Class B and CISPR-22 Class B Emission Limits. This series also has UL/cUL (UL 60950-1:2nd Edition) and TUV/GS (EN60950-1:2nd Edition) safety approvals and meets new CE requirements. All models are RoHS compliant and have been 100% burn-in tested.

Wall Industries, Inc. • Tel: 603-778-2300 • Toll Free: 888-597-9255 •
website: www.wallindustries.com • e-mail: sales@wallindustries.com

SPECIFICATIONS: PSSIBU120 Series

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION		TEST CONDITIONS		Min	Nom	Max	Unit
INPUT SPECIFICATIONS							
Input Voltage Range		Safety Approvals Input Voltage Range		100		240	VAC
		Operating Input Voltage Range		90		260	
Input Frequency				47		63	Hz
Input Current	Low Line	Io = Full Load, Vin = 115VAC				1.7	A
	High Line	Io = Full Load, Vin = 230VAC				1.0	
Inrush Current	Low Line	Io = Full Load, 25°C, Cool Start, Vin = 115VAC			30	37	A
	High Line	Io = Full Load, 25°C, Cool Start, Vin = 230VAC			65	75	
Power Factor Correction (PFC)		Io = Full Load, Vin = 90~260VAC		0.95	0.97	1.0	
OUTPUT SPECIFICATIONS							
Output Voltage Range				See Table			
Load Regulation		Vin = 230VAC			3	5	%
Line Regulation		Io = Full Load			0.5	1	%
Output Power		Vin = 90~260VAC		0		120	W
Output Current Range				See Table			
Ripple & Noise (peak to peak)		< 3.3VDC output models	Full Load, Vin = 90VAC			2	%
		All other outputs			0.5	1	
Transient Response Time		Io = Full Load to Half Load, Vin = 100VAC				4	ms
Hold-Up Time		Io = Full Load, Vin = 110VAC		16			ms
Start-Up Time		Io = Full Load, Vin = 100VAC		0.3	1	2	s
Temperature Coefficient		All outputs		-0.04		+0.04	%/°C
PROTECTION							
Over Voltage Protection				112		132	%
Over Current Protection		The OCP range is set between 110-150% of total output power		110		150	%
GENERAL SPECIFICATIONS							
Efficiency		Io = Full Load, Vin = 230VAC		70	80	88	%
Dielectric Withstanding Voltage		Primary to Secondary		4242			VDC
		Primary to Ground		2121			
Isolation Resistance		Test Voltage = 500VDC		50			MΩ
Safety Ground Leakage Current		Io = Full Load, Vin = 240VAC			0.4	0.75	mA
ENVIRONMENTAL SPECIFICATIONS							
Operating Temperature		Derate linearly from 100% Load at 50°C to 50% load at 70°C		-20	50	+70	°C
Storage Temperature				-40		+85	°C
Operating Humidity				0		95	%
Storage Humidity				0		75	%
MTBF		Operating Temperature at 25°C, calculated per MIL-HDBK-217F		100,000 hours			
PHYSICAL SPECIFICATIONS							
Weight				Approximately 12.3~15.1oz (350~428g)			
Dimensions (L x W x H)				5.0 x 3.0 x 1.32 inches (127.0 x 76.2 x 33.6 mm)			
SAFETY & EMI							
EMI Requirements for CISPR-22		Vin = 220VAC		B			Class
EMI Requirements for FCC PART-15		Vin = 110VAC		B			Class
Safety Approvals		UL/cUL (UL 60950-1:2nd Edition)(1), TUV/GS (EN60950-1:2nd Edition), CE					

NOTES

1. This product is Listed to applicable standards and requirements by UL.

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

MODEL SELECTION TABLE

SINGLE OUTPUT MODELS

Model Number	Input Voltage Range	Output Voltage Range	Output Current Range	Total Regulation	Maximum Output Power
PSIBU120-101	90 ~ 260VAC	3 ~ 5 VDC	22.00 ~ 20.00 A	5%	100W
PSIBU120-102		5 ~ 6 VDC	22.00 ~ 18.33 A	5%	110W
PSIBU120-103		6 ~ 9 VDC	19.16 ~ 12.77 A	5%	115W
PSIBU120-104		9 ~ 11 VDC	13.33 ~ 10.90 A	4%	120W
PSIBU120-105		11 ~ 13 VDC	10.90 ~ 9.23 A	3%	120W
PSIBU120-106		13 ~ 16 VDC	9.23 ~ 7.50 A	3%	120W
PSIBU120-107		16 ~ 21 VDC	7.50 ~ 5.71 A	3%	120W
PSIBU120-108		21 ~ 27 VDC	5.71 ~ 4.44 A	2%	120W
PSIBU120-109		27 ~ 33 VDC	4.44 ~ 3.63 A	2%	120W
PSIBU120-110		33 ~ 40 VDC	3.63 ~ 3.00 A	2%	120W
PSIBU120-111		40 ~ 50 VDC	3.00 ~ 2.40 A	2%	120W

Note: For single output models the output voltage is specified as a range (Ex: 40~50 VDC); the customer must specify what they would like the output voltage set at.

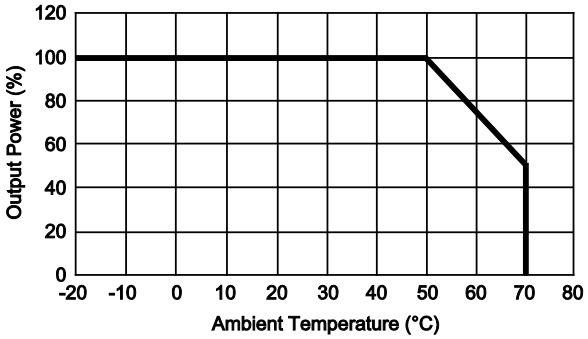
DUAL OUTPUT MODELS

Model Number	Output #1				Output #2				Maximum Output Power
	Vo (nom)	Io (min)	Io (max)	Reg (max)	Vo (nom)	Io (min)	Io (max)	Reg (max)	
PSIBU120-200	+3.3 VDC	1.5A	15A	5%	+12 VDC	0.6A	6A	5%	120W
PSIBU120-201	+5 VDC	1.5A	15A	5%	+12 VDC	0.8A	6A	5%	120W
PSIBU120-202	+5 VDC	1.5A	15A	5%	+15 VDC	0.6A	6A	5%	120W
PSIBU120-203	+5 VDC	1.5A	15A	5%	+24 VDC	0.4A	3.5A	5%	120W
PSIBU120-204	+3.3 VDC	1.5A	15A	5%	+5 VDC	0.8A	6A	5%	79.5W
PSIBU120-215	+5 VDC	1.5A	15A	5%	-24 VDC	0.2A	2A	5%	120W
PSIBU120-219	+28 VDC	0.4A	3.92A	5%	+5 VDC	0A	2A	5%	120W

TRIPLE OUTPUT MODELS

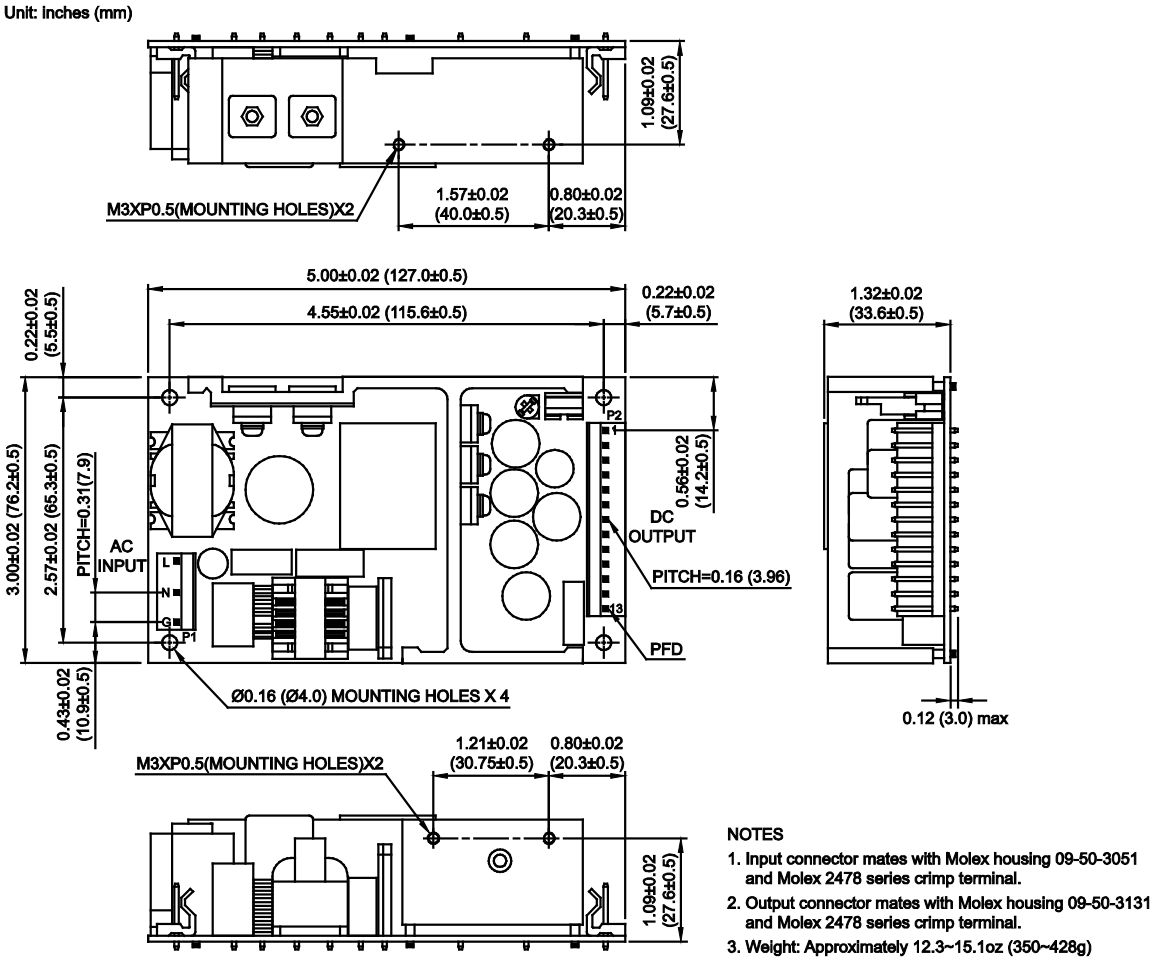
Model Number	Output #1				Output #2				Output #3				Maximum Output Power
	Vo(nom)	Io(min)	Io(max)	Reg(max)	Vo(nom)	Io(min)	Io(max)	Reg(max)	Vo(nom)	Io(min)	Io(max)	Reg(max)	
PSIBU120-300	+3.3 VDC	1.5A	15A	5%	+12 VDC	0.6A	6A	5%	-12 VDC	0A	0.8A	5%	120W
PSIBU120-300-1	+3.3 VDC	1.5A	15A	5%	+12 VDC	0.6A	6A	5%	+12 VDC	0A	0.8A	5%	120W
PSIBU120-301	+5 VDC	1.5A	15A	5%	+12 VDC	0.8A	6A	5%	-5 VDC	0A	0.8A	5%	120W
PSIBU120-301-1	+5 VDC	1.5A	15A	5%	+12 VDC	0.8A	6A	5%	+5 VDC	0A	0.8A	5%	120W
PSIBU120-302	+5 VDC	1.5A	15A	5%	+12 VDC	0.8A	6A	5%	-12 VDC	0A	0.8A	5%	120W
PSIBU120-302-1	+5 VDC	1.5A	15A	5%	+12 VDC	0.8A	6A	5%	+12 VDC	0A	0.8A	5%	120W
PSIBU120-303	+5 VDC	1.5A	15A	5%	+15 VDC	1.0A	6A	5%	-15 VDC	0A	0.8A	5%	120W
PSIBU120-303-1	+5 VDC	1.5A	15A	5%	+15 VDC	1.0A	6A	5%	+15 VDC	0A	0.8A	5%	120W
PSIBU120-304	+5 VDC	1.5A	15A	5%	+24 VDC	0.45A	3.5A	5%	-24 VDC	0.25A	0.8A	5%	120W
PSIBU120-304-1	+5 VDC	1.5A	15A	5%	+24 VDC	0.45A	3.5A	5%	+24 VDC	0.25A	0.8A	5%	120W
PSIBU120-305	+5 VDC	1.5A	15A	5%	+24 VDC	0.4A	3.5A	5%	-12 VDC	0A	0.8A	5%	120W
PSIBU120-305-1	+5 VDC	1.5A	15A	5%	+24 VDC	0.4A	3.5A	5%	+12 VDC	0A	0.8A	5%	120W
PSIBU120-306	+3.3 VDC	1.5A	15A	5%	+12 VDC	0.8A	6A	5%	-5 VDC	0A	0.8A	5%	120W
PSIBU120-306-1	+3.3 VDC	1.5A	15A	5%	+12 VDC	0.8A	6A	5%	+5 VDC	0A	0.8A	5%	120W
PSIBU120-307	+5 VDC	1.5A	15A	5%	+10 VDC	0.6A	6A	5%	-10 VDC	0A	1.0A	5%	120W
PSIBU120-307-1	+5 VDC	1.5A	15A	5%	+10 VDC	0.6A	6A	5%	+10 VDC	0A	1.0A	5%	120W
PSIBU120-308	+3.3 VDC	1.5A	15A	5%	+5 VDC	0.8A	6A	5%	-12 VDC	0A	1.0A	5%	91.5W
PSIBU120-308-1	+3.3 VDC	1.5A	15A	5%	+5 VDC	0.8A	6A	5%	+12 VDC	0A	1.0A	5%	91.5W

DERATING CURVE



MECHANICAL DRAWING

Unit: inches (mm)



NOTES

1. Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal.
2. Output connector mates with Molex housing 09-50-3131 and Molex 2478 series crimp terminal.
3. Weight: Approximately 12.3~15.1oz (350~428g)

PIN CONNECTIONS													
PIN / MODEL	1	2	3	4	5	6	7	8	9	10	11	12	13 (Optional)
PSIBU120-1XX	OUT	OUT	OUT	OUT	OUT	OUT	RTN	RTN	RTN	RTN	RTN	RTN	PFD
PSIBU120-215	N/C	N/C	Vo1	Vo1	Vo1	Vo1	COM	COM	COM	Vo3	COM	COM	PFD
PSIBU120-219	N/C	N/C	Vo1	Vo1	Vo1	Vo1	COM	COM	COM	Vo3	COM	COM	PFD
PSIBU120-2XX	Vo2	Vo2	Vo1	Vo1	Vo1	Vo1	COM	COM	COM	N/C	COM	COM	PFD
PSIBU120-3XX	Vo2	Vo2	Vo1	Vo1	Vo1	Vo1	COM	COM	COM	Vo3	COM	COM	PFD

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.

Contact **Wall Industries** for further information:

Phone: ☎(603)778-2300
Toll Free: ☎(888)597-9255
Fax: ☎(603)778-9797
E-mail: sales@wallindustries.com
Web: www.wallindustries.com
Address: 37 Industrial Drive
Exeter, NH 03833