

FEATURES

- 100% Burn In
- Class I Insulation
- Internal EMI Filter
- Power Factor Correction
- Power Fail Detect (Optional)
- Wide Input Voltage Range: 90~264VAC
- Over Voltage Protection (Crowbar Design)
- Output Voltages Available from 3VDC thru 50VDC
- Input Surge Current, Over Voltage, and Over Load Protection



DESCRIPTION

The PSSBU120 series of AC/DC switching mode power supplies provides 120 Watts of continuous output power in a compact, open frame constructed design. This series has a universal input range with single, dual, or triple outputs. These units are ideally suited for use in CRT terminals, disc drive systems, microprocessor based systems, portable equipment, and many other applications. All models meet FCC Part-15 class B and CISPR-22 class B emission limits. These supplies also comply with UL/cUL (UL 60950)⁽⁴⁾, TUV/GS (EN 60950), and new CE requirements. All units are 100% burn-in tested.

| SPECIFICATIONS: PSSBU120 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 (V_{in}) | | | | | |
| Operating Voltage Range | | 90 | | 264 | VAC |
| Input Frequency | | 47 | | 63 | Hz |
| Input Current (Low Line) | I _o = Full Load, V _{in} = 115VAC | | | 1.7 | A |
| Input Current (High Line) | I _o = Full Load, V _{in} = 230VAC | | | 1.0 | A |
| Inrush Current (Low Line) | I _o = Full Load, 25°C, Cool Start, V _{in} = 115VAC | | 16 | 20 | A |
| Inrush Current (High Line) | I _o = Full Load, 25°C, Cool Start, V _{in} = 230VAC | | 46 | 51 | A |
| Safety Ground Leakage Current | I _o = Full Load, V _{in} = 240VAC | | 0.4 | 0.75 | mA |
| Start-Up Time | I _o = Full Load, V _{in} = 100VAC | 0.3 | 1 | 2 | s |
| OUTPUT (V_o) | | | | | |
| Output Voltage Range | | See Rating Chart | | | |
| Load Regulation | V _{in} = 230VAC | | 3 | 5 | % |
| Line Regulation | I _o = Full Load | | 0.5 | 1 | % |
| Output Power | V _{in} = 90 to 264VAC | | | 120 | W |
| Output Current Range | | See Rating Chart | | | |
| *Ripple & Noise (peak to peak) | Full Load, V _{in} = 90VAC | | 0.5 | 1 | % |
| Transient Response | I _o = Full Load to Half Load, V _{in} = 100VAC | | | 4 | ms |
| Hold-Up Time | I _o = Full Load, V _{in} = 110VAC | 16 | | | ms |
| PROTECTION | | | | | |
| Over Voltage Protection | | 112 | | 132 | % |
| Over Current Protection | | 110 | | 150 | % |
| GENERAL | | | | | |
| Efficiency | I _o = Full Load, V _{in} = 230VAC | 70 | 80 | 88 | % |
| Dielectric Withstanding Voltage For Primary to Secondary | Primary to Secondary | 4242 | | | VDC |
| Dielectric Withstanding Voltage For Primary to Ground | Primary to Ground | 2121 | | | VDC |
| Isolation Resistance | Test Voltage = 500VDC | 50 | | | MΩ |
| Power Factor Correction | I _o = Full Load, V _{in} = 90~260VAC | 0.95 | 0.97 | 1.0 | |
| ENVIRONMENTAL | | | | | |
| Operating Temperature | Derate linearly from 100% Load at 50°C to 50% load at 70°C | 0 | | +70 | °C |
| Storage Temperature | | -40 | | +85 | °C |
| Relative Humidity | | 5 | | 95 | % |
| Temperature Coefficient | All Outputs | -0.04 | | +0.04 | %/°C |
| MTBF | Operating temperature at 25°C, calculated per MIL-HDBK-217F | | 100,000 | | hours |
| PHYSICAL | | | | | |
| Weight | | Approximately 350 ~ 428 grams | | | |
| Dimensions (L x W x H) | | 5.0 x 3.0 x 1.32 inches 127 x 76.2 x 33.6 mm | | | |
| SAFETY | | | | | |
| EMI Requirements for CISPR-22 | V _{in} = 220VAC | B | | | Class |
| EMI Requirements for FCC PART-15 | V _{in} = 110VAC | B | | | Class |
| Safety | EN60950:A2 | | | | |

*Note: The Ripple & Noise for output voltages under 3.3VDC is 2% max.

MODEL SELECTION TABLES

SINGLE OUTPUT MODELS

| Model Number | Preset Voltage | Output Voltage Range | Output Current Range | Total Regulation | Max Output Power |
|--------------|----------------|----------------------|----------------------|------------------|------------------|
| PSSBU120-101 | 3 VDC | 3 ~ 5 VDC | 22.00 ~ 20.00A | 5% | 100W |
| PSSBU120-102 | 5 VDC | 5 ~ 6 VDC | 22.00 ~ 18.33A | 5% | 110W |
| PSSBU120-103 | 6 VDC | 6 ~ 9 VDC | 19.16 ~ 12.77A | 5% | 115W |
| PSSBU120-104 | 9 VDC | 9 ~ 11 VDC | 13.33 ~ 10.90A | 4% | 120W |
| PSSBU120-105 | 11 VDC | 11 ~ 13 VDC | 10.90 ~ 9.23A | 3% | 120W |
| PSSBU120-106 | 13 VDC | 13 ~ 16 VDC | 9.23 ~ 7.50A | 3% | 120W |
| PSSBU120-107 | 16 VDC | 16 ~ 21 VDC | 7.50 ~ 5.71A | 3% | 120W |
| PSSBU120-108 | 21 VDC | 21 ~ 27 VDC | 5.71 ~ 4.44A | 2% | 120W |
| PSSBU120-109 | 27 VDC | 27 ~ 33 VDC | 4.44 ~ 3.63A | 2% | 120W |
| PSSBU120-110 | 33 VDC | 33 ~ 40 VDC | 3.63 ~ 3.00A | 2% | 120W |
| PSSBU120-111 | 40 VDC | 40 ~ 50 VDC | 3.00 ~ 2.40A | 2% | 120W |

DUAL OUTPUT MODELS

| Model Number | Output #1 | | | | Output #2 *Output #3 for PSSBU120-215 & 219) | | | | Maximum Output Power |
|---------------|-----------|----------|----------|-----------|--|----------|----------|-----------|----------------------|
| | Vo (nom) | Io (min) | Io (max) | Reg (max) | Vo (nom) | Io (min) | Io (max) | Reg (max) | |
| PSSBU120-200 | +3.3 VDC | 1.5A | 15A | 5% | +12 VDC | 0.6A | 6A | 5% | 120W |
| PSSBU120-201 | +5 VDC | 1.5A | 15A | 5% | +12 VDC | 0.8A | 6A | 5% | 120W |
| PSSBU120-202 | +5 VDC | 1.5A | 15A | 5% | +15 VDC | 0.6A | 6A | 5% | 120W |
| PSSBU120-203 | +5 VDC | 1.5A | 15A | 5% | +24 VDC | 0.4A | 3.5A | 5% | 120W |
| PSSBU120-204 | +3.3 VDC | 1.5A | 15A | 5% | +5 VDC | 0.8A | 6A | 5% | 79.5W |
| *PSSBU120-215 | +5 VDC | 1.5A | 15A | 5% | -24 VDC | 0.2A | 2A | 5% | 120W |
| *PSSBU120-219 | +28 VDC | 0.4A | 3.92A | 5% | +5 VDC | 0A | 2A | 5% | 120W |

TRIPLE OUTPUT MODELS

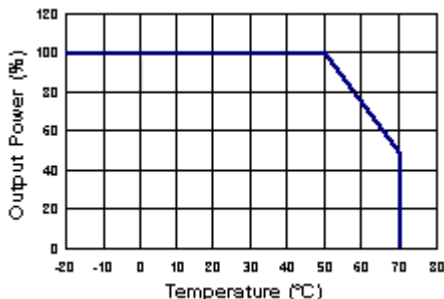
| Model Number | Output #1 | | | | Output #2 | | | | Output #3 | | | | Output Power |
|----------------|-----------|---------|---------|----------|-----------|---------|---------|----------|-----------|---------|---------|----------|--------------|
| | Vo(nom) | Io(min) | Io(max) | Reg(max) | Vo(nom) | Io(min) | Io(max) | Reg(max) | Vo(nom) | Io(min) | Io(max) | Reg(max) | |
| PSSBU120-300 | +3.3 VDC | 1.5A | 15A | 5% | +12 VDC | 0.6A | 6A | 5% | -12 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-300-1 | +3.3 VDC | 1.5A | 15A | 5% | +12 VDC | 0.6A | 6A | 5% | +12 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-301 | +5 VDC | 1.5A | 15A | 5% | +12 VDC | 0.8A | 6A | 5% | -5 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-301-1 | +5 VDC | 1.5A | 15A | 5% | +12 VDC | 0.8A | 6A | 5% | +5 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-302 | +5 VDC | 1.5A | 15A | 5% | +12 VDC | 0.8A | 6A | 5% | -12 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-302-1 | +5 VDC | 1.5A | 15A | 5% | +12 VDC | 0.8A | 6A | 5% | +12 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-303 | +5 VDC | 1.5A | 15A | 5% | +15 VDC | 1.0A | 6A | 5% | -15 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-303-1 | +5 VDC | 1.5A | 15A | 5% | +15 VDC | 1.0A | 6A | 5% | +15 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-304 | +5 VDC | 1.5A | 15A | 5% | +24 VDC | 0.45A | 3.5A | 5% | -24 VDC | 0.25A | 0.8A | 5% | 120W |
| PSSBU120-304-1 | +5 VDC | 1.5A | 15A | 5% | +24 VDC | 0.45A | 3.5A | 5% | +24 VDC | 0.25A | 0.8A | 5% | 120W |
| PSSBU120-305 | +5 VDC | 1.5A | 15A | 5% | +24 VDC | 0.4A | 3.5A | 5% | -12 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-305-1 | +5 VDC | 1.5A | 15A | 5% | +24 VDC | 0.4A | 3.5A | 5% | +12 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-306 | +3.3 VDC | 1.5A | 15A | 5% | +12 VDC | 0.8A | 6A | 5% | -5 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-306-1 | +3.3 VDC | 1.5A | 15A | 5% | +12 VDC | 0.8A | 6A | 5% | +5 VDC | 0A | 0.8A | 5% | 120W |
| PSSBU120-307 | +5 VDC | 1.5A | 15A | 5% | +10 VDC | 0.6A | 6A | 5% | -10 VDC | 0A | 1.0A | 5% | 120W |
| PSSBU120-307-1 | +5 VDC | 1.5A | 15A | 5% | +10 VDC | 0.6A | 6A | 5% | +10 VDC | 0A | 1.0A | 5% | 120W |
| PSSBU120-308 | +3.3 VDC | 1.5A | 15A | 5% | +5 VDC | 0.8A | 6A | 5% | -12 VDC | 0A | 1.0A | 5% | 91.5W |
| PSSBU120-308-1 | +3.3 VDC | 1.5A | 15A | 5% | +5 VDC | 0.8A | 6A | 5% | +12 VDC | 0A | 1.0A | 5% | 91.5W |

NOTES

1. On single output models the output voltage is specified as a range (Ex: 40 ~ 50VDC); the preset voltage will be set as standard models if nothing different is requested. Please contact factory for ordering details.
2. Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal.
3. Output connector mates with Molex housing 09-50-3131 and Molex 2478 series crimp terminal.
4. This product is Listed to applicable standards and requirements by UL.

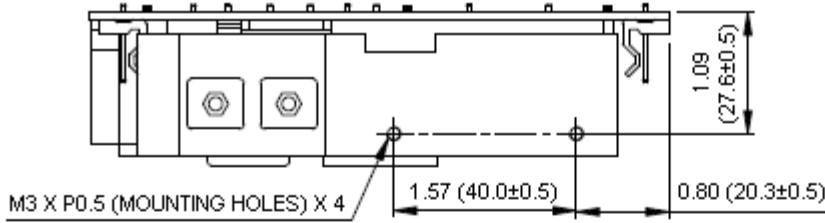
**Due to advances in technology, specifications subject to change without notice.*

DERATING CURVE



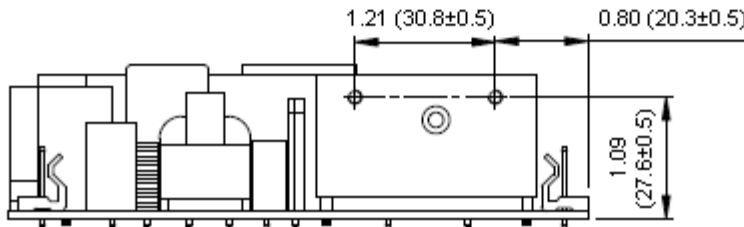
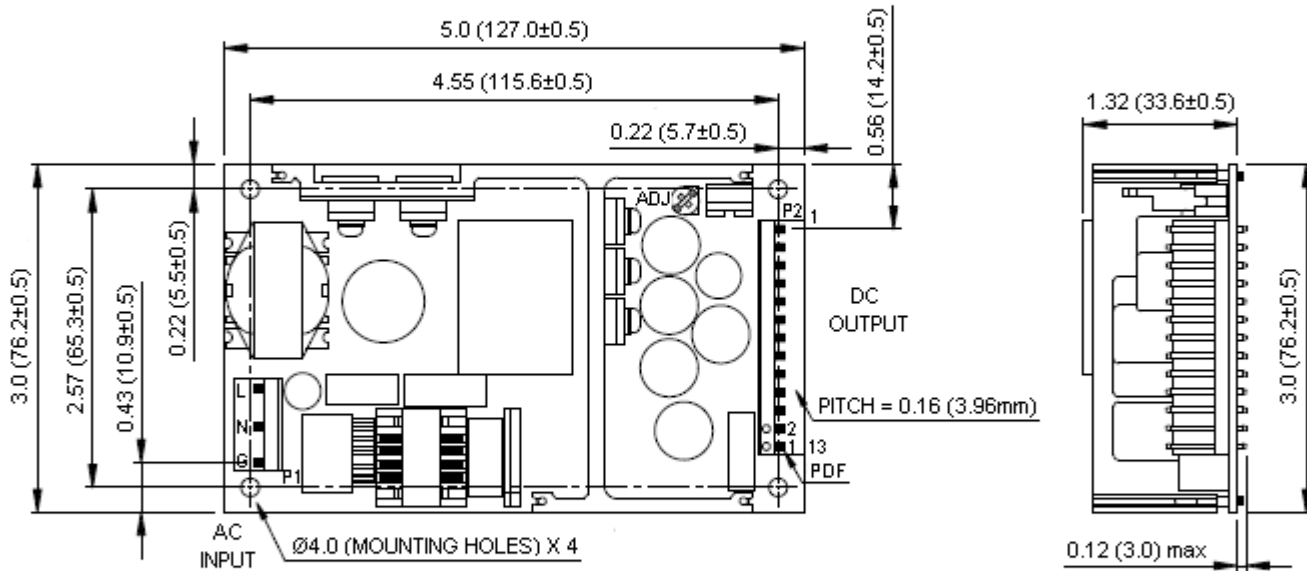
MECHANICAL DRAWING

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.



| PIN CONNECTIONS | | | | | | | | | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|
| MODEL \ PIN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 (optional) |
| PSSBU120-1XX-13PIN | OUT | OUT | OUT | OUT | OUT | OUT | RTN | RTN | RTN | RTN | RTN | RTN | PFD |
| PSSBU120-219-13PIN | N/C | N/C | Vo1 | Vo1 | Vo1 | Vo1 | COM | COM | COM | Vo3 | COM | COM | PFD |
| PSSBU120-215-13PIN | N/C | N/C | Vo1 | Vo1 | Vo1 | Vo1 | COM | COM | COM | Vo3 | COM | COM | PFD |
| PSSBU120-2XX-13PIN | Vo2 | Vo2 | Vo1 | Vo1 | Vo1 | Vo1 | COM | COM | COM | N/C | COM | COM | PFD |
| PSSBU120-3XX-13PIN | Vo2 | Vo2 | Vo1 | Vo1 | Vo1 | Vo1 | COM | COM | COM | Vo3 | COM | COM | PFD |

Note: Vo1: Output#1 Vo2: Output#2 Vo3: Output#3



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

©2019 Wall Industries, Inc. Specifications subject to change without notice. Wall Industries is not responsible for typographical errors. The information contained herein is for informational purposes only. This information is provided by Wall Industries and we make no representations or warranties of any kind, express or implied, about the completeness, accuracy, reliability, suitability or availability with respect to the information contained in this document for any purpose. All product and manufacturer names are trademarks or registered trademarks of their respective companies.