

**date** 04/27/2021

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## SERIES: VSBU-120 | DESCRIPTION: AC-DC POWER SUPPLY

#### **FEATURES**

- up to 120 W continuous power
- industry standard 3" x 5" footprint
- universal input 90~260 Vac
- single output from 3.3~48 V
- active power correction
- internal EMI filter
- no minimum load required
- input surge current, over voltage, over load, and over current protections
- efficiency 80%





MODEL	output voltage	output current	output power	ripple and noise	efficiency
	<b>range</b> (Vdc)	max (A)	max (W)	<b>max</b> (mVp-p)	<b>typ</b> (%)
VSBU-120-3.3	3~5	22	73	66	80
VSBU-120-5	5~6	22	110	50	80
VSBU-120-7.5	6~9	15.3	115	75	80
VSBU-120-9	9~11	13.33	120	90	80
VSBU-120-12	11~13	10	120	120	80
VSBU-120-15	13~16	8	120	150	80
VSBU-120-18	16~21	6.67	120	180	80
VSBU-120-24	21~27	5	120	240	80
VSBU-120-30	27~33	4	120	300	80
VSBU-120-36	33~40	3.33	120	360	80
VSBU-120-48	40~50	2.5	120	480	80

### **PART NUMBER KEY**

VSBU-120 - XX - X

Base Number Output Voltage Power Fail Detect "Blank" = No P = Yes

### **INPUT**

parameter	conditions/description	min	typ	max	units
voltage		90		260	Vac
frequency		47		63	Hz
current	at 115 Vac, full load at 230 Vac, full load			1.7 1.0	A A
inrush current	at 115 Vac, 25°C, full load, cold start at 230 Vac, 25°C, full load, cold start		30 65	37 75	A A
power factor corrections	full load at 90 ~ 260 Vac	0.95	0.97	1.0	

## **OUTPUT**

parameter	conditions/description	min	typ	max	units
line regulation	full load		0.5	1	%
load regulation	at 230 Vac		3	5	%
temperature coefficient	all output	-0.04		0.04	%/°C
transient response	full load to half load at 100 Vac			4	ms
start-up	full load at 100 Vac	0.3	1	2	S
hold-up	full load at 110 Vac	16			ms

## **PROTECTIONS**

parameter	conditions/description	min	typ	max	units
over voltage protection		112		132	%
over current protection		110		150	%

### **SAFETY & COMPLIANCE**

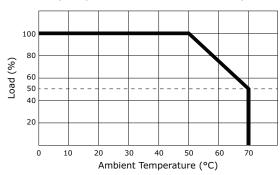
parameter	conditions/description	min	typ	max	units
isolation voltage	primary to secondary	4,242			Vdc
isolation voltage	primary to earth ground	2,121			Vdc
isolation resistance	test voltage of 500 Vdc	50			МΩ
safety approvals	UL 60950-1 2nd edition, EN 60950-1 2nd edition				
EMI/EMC	CISPR 22 class B, FCC part-15 class B				
leakage current	full load at 240 Vac		0.4	0.75	mA
RoHS compliant	yes				
MTBF	MIL-HDSK-217F, 25°C ambient	100,000			hrs

### **ENVIRONMENTAL**

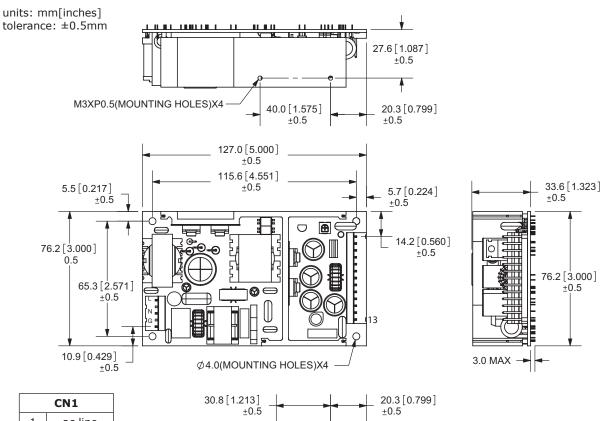
parameter	conditions/description	min	typ	max	units
operating temperature		0		70	°C
storage temperature		-40		85	°C
operating humidity	non-condensing	5		95	%
storage humidity		0		75	%

#### **DERATING CURVES**

#### output power vs. ambient temperature



### **MECHANICAL DRAWING**



	CN1	30.8 [1.213] ±0.5	20.3 [0.79 ±0.5
1	ac line		
2	ac neutral		<u> </u>
3	ground		27.6 [1.087] ±0.5
			±0.5 ]
			·

#### note:

- 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.

CN2			
1	V1		
2	V1		
3	V1		
4	V1		
5	V1		
6	V1		
7	com		
8	com		
9	com		
10	com		
11	com		
12	com		
13	n/c		

\*pin 13 for optional power fail detect

#### **REVISION HISTORY**

rev.	description	date
1.0	initial release	11/19/2010
1.01	applied new spec template	02/29/2012
1.02	V-Infinity branding removed	06/26/2012
1.03	safety marks updated	08/14/2012
1.04	updated derating curve	02/07/2013
1.05	updated output connector part number	09/24/2020
1.06	updated safety marks and features	04/27/2021

The revision history provided is for informational purposes only and is believed to be accurate.



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