

# SBU120 SERIES

## 120W Open Frame Switching Power Supplies For I.T.E.

### Description:

The SBU120 series of compact, open frame constructed, AC/DC switching mode power supplies provide 120 Watts of continuous output power. They are suited for use in disc drive systems, microprocess or based systems, portable equipments and many other applications. All models meet FCC Part-15 class B and CISPR-22 class B emission Limits and are designed to comply with UL/c-UL(UL 60950) ,TUV/GS(EN 60950) and new CE requirements. All units are 100% burned in and tested.

### Features:

- Wide Input Voltage 90 to 264 VAC,47 to 63 Hz
- Internal EMI filter
- Single to Triple Output
- Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal
- Output connector mates with Molex housing 09-50-3131 and Molex 2478 series crimp terminal
- Output Voltage Available From 3 VDC Thru 50 VDC
- Input Surge Current, Over Voltage and Over Load protection
- Output Voltage Protection(Crowbar Design)
- Power Factor Correction
- Power Fail Detect(Optional)
- Class I Insulation
- Size: 3"x5"x1.32"
- 2 year warranty



### Safety Approvals :



### Electrical Characteristics:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vin	Input Voltage	Operating Voltage	90		260	VAC
Fin	Input Frequency		47		63	Hz
PFC	Power Factor Correction	Io=Full load, Vin=90~260VAC	0.95	0.97	1.0	
Wo	Output Power Range	Vin=90 to 264 VAC	0		120	W
Vo	Output Voltage Range		See rating Chart			V
Io	Output Current Range		See rating Chart			A
Iil	Input Current (Low Line)	Io=Full load, Vin=115VAC			1.7	A
Iih	Input Current (High Line)	Io=Full load, Vin=230VAC			1.0	A
Irl	Low Line Inrush Current	Io=Full load, 25°C,Cool start, Vin=115VAC		16	20	A
Irh	High Line Inrush Current	Io=Full load, 25°C,Cool start, Vin=230VAC		46	51	A
Eff	Efficiency	Io=Full load, Vin=230VAC	70	80	88	%
REG-i	Line Regulation	Io=Full load		0.5	1	%
REG-o	Load Regulation	Vin=230VAC		3	5	%
OVP	Over Voltage Protection		112		132	%
OCP	Over Current Protection		110		150	%
Ttr	Transient Response	Io=Full load to Half Load, Vin=100VAC			4	mS
Thold	Hold-Up Time	Io=Full load, Vin=110VAC	16			mS
Ts	Start Up Time	Io=Full load, Vin=100VAC	0.3	1	2	S
* Vp-p	Ripple & Noise (Peak to Peak)	Full load, Vin=90VAC		0.5	1	%
Ilk	Safety Ground Leakage Current	Io=Full load, Vin=240VAC		0.4	0.75	mA
Tc	Temperature Coefficient	All output	-0.04		0.04	%/°C

\* Note: The Ripple & Noise which is under 3.3VDC at 2% max

### Environmental :

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Toper	Operating Temperature		0		70	°C
Tstg	Storage Temperature		-40		85	°C
Hr	Relative Humidity		5		95	%
Pd	Derate linearly from 100% load at 50°C to 50% load at 70°C					

### Safety Specifications:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vps	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4242			VDC
Vpg	Dielectric Withstanding Voltage for Primary to Ground	Primary to ground	2121			VDC
Ri	Isolation Resistance	Test Voltage=500VDC	50			MΩ
CISPR	EMI requirements for CISPR-22	Vin=220VAC	B			CLASS
FCC	EMI requirements for FCC PART-15	Vin=110VAC	B			CLASS

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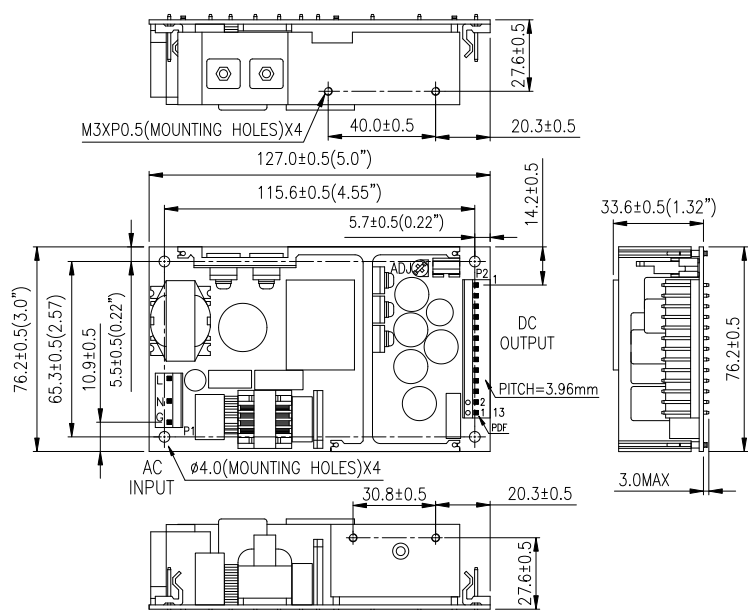
## 120W Open Frame Switching Power Supplies For I.T.E. Output Voltage And Current Rating Chart (Single Output) :

Model Number	OUTputVoltage	OUTput Current	Total Regulation	Maximum OUTput Power
SBU120-101	3 ~ 5 VDC	22.00 ~ 20.00 A	5%	100W
SBU120-102	5 ~ 6 VDC	22.00 ~ 18.33 A	5%	110W
SBU120-103	6 ~ 9 VDC	19.16 ~ 12.77 A	5%	115W
SBU120-104	9 ~ 11 VDC	13.33 ~ 10.90 A	4%	120W
SBU120-105	11 ~ 13 VDC	10.90 ~ 9.23 A	3%	120W
SBU120-106	13 ~ 16 VDC	9.23 ~ 7.50 A	3%	120W
SBU120-107	16 ~ 21 VDC	7.50 ~ 5.71 A	3%	120W
SBU120-108	21 ~ 27 VDC	5.71 ~ 4.44 A	2%	120W
SBU120-109	27 ~ 33 VDC	4.44 ~ 3.63 A	2%	120W
SBU120-110	33 ~ 40 VDC	3.63 ~ 3.00 A	2%	120W
SBU120-111	40 ~ 50 VDC	3.00 ~ 2.40 A	2%	120W

## Output Voltage And Current Rating Chart ( Multi Output ) :

Model Number	Output#1				Output#2				Output#3				Maximum Output Power
	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax	
SBU120-200	+3.3V	1.5A	15A	5%	+12V	0.6A	6A	5%					120W
SBU120-201	+5V	1.5A	15A	5%	+12V	0.8A	6A	5%					120W
SBU120-202	+5V	1.5A	15A	5%	+15V	0.6A	6A	5%					120W
SBU120-203	+5V	1.5A	15A	5%	+24V	0.4A	3.5A	5%					120W
SBU120-204	+3.3V	1.5A	15A	5%	+5V	0.8A	6A	5%					79.5W
SBU120-215	+5V	1.5A	15A	5%					-24V	0.2A	2A	5%	120W
SBU120-219	+28V	0.4A	3.92A	5%					+5V	0A	2A	5%	120W
SBU120-300	+3.3V	1.5A	15A	5%	+12V	0.6A	6A	5%	-12V	0A	0.8A	5%	120W
SBU120-300-1	+3.3V	1.5A	15A	5%	+12V	0.6A	6A	5%	+12V	0A	0.8A	5%	120W
SBU120-301	+5V	1.5A	15A	5%	+12V	0.8A	6A	5%	-5V	0A	0.8A	5%	120W
SBU120-301-1	+5V	1.5A	15A	5%	+12V	0.8A	6A	5%	+5V	0A	0.8A	5%	120W
SBU120-302	+5V	1.5A	15A	5%	+12V	0.8A	6A	5%	-12V	0A	0.8A	5%	120W
SBU120-302-1	+5V	1.5A	15A	5%	+12V	0.8A	6A	5%	+12V	0A	0.8A	5%	120W
SBU120-303	+5V	1.5A	15A	5%	+15V	1.0A	6A	5%	-15V	0A	0.8A	5%	120W
SBU120-303-1	+5V	1.5A	15A	5%	+15V	1.0A	6A	5%	+15V	0A	0.8A	5%	120W
SBU120-304	+5V	1.5A	15A	5%	+24V	0.45A	3.5A	5%	-24V	0.25A	0.8A	5%	120W
SBU120-304-1	+5V	1.5A	15A	5%	+24V	0.45A	3.5A	5%	+24V	0.25A	0.8A	5%	120W
SBU120-305	+5V	1.5A	15A	5%	+24V	0.4A	3.5A	5%	-12V	0A	0.8A	5%	120W
SBU120-305-1	+5V	1.5A	15A	5%	+24V	0.4A	3.5A	5%	+12V	0A	0.8A	5%	120W
SBU120-306	+3.3V	1.5A	15A	5%	+12V	0.8A	6A	5%	-5V	0A	0.8A	5%	120W
SBU120-306-1	+3.3V	1.5A	15A	5%	+12V	0.8A	6A	5%	+5V	0A	0.8A	5%	120W
SBU120-307	+5V	1.5A	15A	5%	+10V	0.6A	6A	5%	-10V	0A	1.0A	5%	120W
SBU120-307-1	+5V	1.5A	15A	5%	+10V	0.6A	6A	5%	+10V	0A	1.0A	5%	120W
SBU120-308	+3.3V	1.5A	15A	5%	+5V	0.8A	6A	5%	-12V	0A	1.0A	5%	91.5W
SBU120-308-1	+3.3V	1.5A	15A	5%	+5V	0.8A	6A	5%	+12V	0A	1.0A	5%	91.5W

## Mechanical Specifications :



## PIN CHART

MODEL	PIN	1	2	3	4	5	6	7	8	9	10	11	12	13 (Optional)
SBU120-1XX-13PIN	OUT	OUT	OUT	OUT	OUT	OUT	RTN	RTN	RTN	RTN	RTN	RTN	RTN	PFD
SBU120-219-13PIN	N/C	N/C	Vo1	Vo1	Vo1	Vo1	COM	COM	COM	COM	Vo3	COM	COM	PFD
SBU120-215-13PIN	N/C	N/C	Vo1	Vo1	Vo1	Vo1	COM	COM	COM	COM	Vo3	COM	COM	PFD
SBU120-2XX-13PIN	Vo2	Vo2	Vo1	Vo1	Vo1	Vo1	COM	COM	COM	COM	N/C	COM	COM	PFD
SBU120-3XX-13PIN	Vo2	Vo2	Vo1	Vo1	Vo1	Vo1	COM	COM	COM	COM	Vo3	COM	COM	PFD

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

## Note:

- Dimensions are shown in inches or mm .
- Weight: 350~428gs approx.
- Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal.
- Output connector mates with Molex housing 09-50-3131 and Molex 2478 series crimp terminal.