

PS BU58 series

V1.3

60W Open Frame Power Supply for General Purpose

The SBU58 series of AC/DC switching mode power supplies provide 60 Watts of continuous output power. All models meet EN 55032, BS EN55032 class B and AS/NZS CISPR 32 class B emission limits and are designed to comply with UL/c-UL and CE marking conformity assessment. All units pass burn-in test at full load condition.



FEATURES:

- * Wide Operating Voltage 90 to 264 VAC, 47 to 63 Hz
- * Internal EMI Filter
- * Crowbar Mode Over Voltage Protection
- * Single Output
- * Class I System
- * 3-Year Warranty

APPLICATIONS:

- * Monitor
- * Industrial PC
- * Set-Top Box
- * AV Equipment
- * CCD Recorder

APPROVALS:



GENERAL SPECIFICATION:

- * **Short Circuit Protection:** Auto Recovery
- * **Cooling:** Free Air Convection
- * **Protection Classes:** Class I
- * **Safety:** IEC 62368-1 Edition 2.0, IEC 62368-1 Edition 3.0, UL 62368-1, CAN/CSA-C22.2 NO. 62368-1, EN 62368-1

Electrical Characteristics:

Characteristic	Condition	Min.	Typ.	Max.	Unit
Safety Approval Input Voltage Range	Safety Approval & Specification in Label	100		240	VAC
Input Operate Voltage Range	Detail to See Fig.1	90		264	VAC
Input Frequency	Sine Wave	47		63	Hz
Output Power Range	See Rating Chart			60	W
Low Line Input Current	Full Load, Vin=100VAC		1.6		A
High Line Input Current	Full Load, Vin=240VAC		0.66		A
Low Line Input Inrush Current	Full Load, 25°C, Cool Start, Vin=100VAC			30	A
High Line Input Inrush Current	Full Load, 25°C, Cool Start, Vin=240VAC			72	A
Safety Ground Leakage Current	Vin=240VAC, Fi=60Hz			0.75	mA
Efficiency	Full Load, Vin=230VAC, Detail to See Rating Chart	See Rating Chart			
Line Regulation	Full Load, Vin=100~120VAC	0.5		1	%
Load Regulation	Vin=230VAC, 10~90% Load Change at Condition	2		5	%
Over Voltage Protection	Over Voltage Protection	112		132	%
Over Load Protection	Recovers Automatically After Fault Condition is Removed	110		150	%
Time of Transient Response	Io=Full Load to Half Load, Vin=110VAC			4	ms
Hold-Up Time	Full Load, Vin=100VAC	See Rating Chart			
Start-up time	Full Load, Vin=100~240VAC			2	s
Temperature Coefficient	Full load, Vin=100~240VAC			±0.04	%/°C
Dielectric Withstanding Voltage (P-S)	Primary to Secondary			4242	VDC
Dielectric Withstanding Voltage (P-G)	Primary to PE			2121	VDC
EMC Emission	Compliance to EN55032 (CISPR32)			B	Class

Environmental:

Characteristic	Condition	Min.	Typ.	Max.	Unit
Operating Temperature	Detail to See Fig.2 (Derate Linearly from 100% Load at 50°C to 50% Load at 70°C)	0		70	°C
Storage Temperature	10 ~ 95% RH	-40		85	°C
Operating Humidity	Non-Condensing	0		95%	RH
Storage Humidity		0		95%	RH
Electro Static Discharge	Air Discharge, IEC61000-4-2			8	kV
Electro Static Discharge	Contact Discharge, IEC61000-4-2			4	kV
Mean Time Between Failure	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F	100k			h
Operating Altitude (Elevation)	All Condition			2000	m
Vibration	10 ~ 500Hz, 10min./1cycle, 60min. Each Along X, Y, Z Axes			5	G
Surge Voltage	Line-Neutral			1	kV
Surge Voltage	Line-PE & Neutral-PE			2	kV

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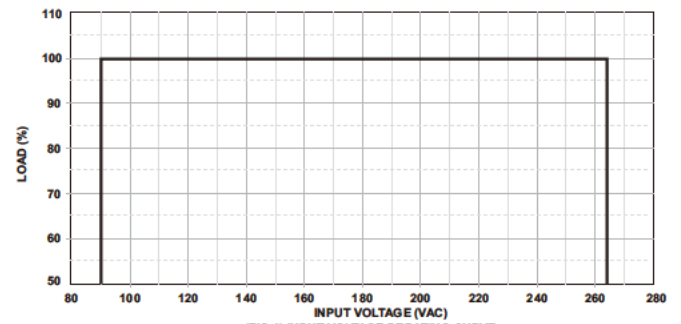
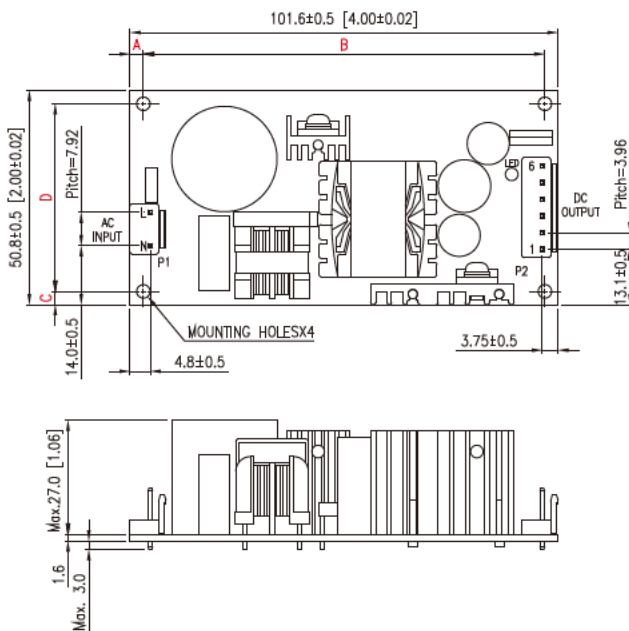
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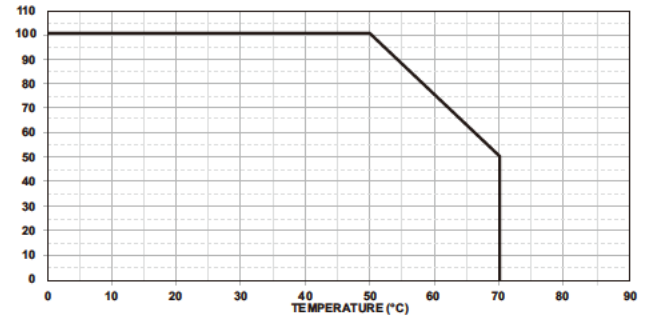
SPECIFICATION NOTE :

- Output can provide up to peak load when the power supply starts up. Continuous staying in more than rated load is not allowed.
- At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
- Line regulation is defined by changing $\pm 10\%$ of input voltage from nominal line at rated load.
- Load regulation is defined by changing $\pm 40\%$ of measured output load from 60% rated load.
- The ripple is measured from peak to peak with a bandwidth-limit of 20MHz (Measured at the output connector with a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor).
- Hold up time is measured from the end of the last charging pulse to the time which the main output drops down to low limit of main output at rated load and nominal line.
- Efficiency is measured at rated load, and nominal line.

MECHANICAL DIMENSIONS: (UNIT: mm [inch])



(FIG.1) INPUT VOLTAGE DERATING CURVE



(FIG.2) TEMPERATURE DERATING CURVE

P/N: PS BU58-XXX-H3 (Standard)
or PS BU58-XXX-H4 (Optional)

	H3 (Standard)	H4 (Optional)
MOUNTING HOLES	3.2 ± 0.5	4.0 ± 0.5
A	3.15 ± 0.5	4.3 ± 0.5
B	95.3 ± 0.5	93.0 ± 0.5
C	3.15 ± 0.5	4.0 ± 0.5
D	44.5 ± 0.5	42.8 ± 0.5

PACKING :

- Dimensions are shown in mm.
- Weight: 140gs approx.
- Input connector mates with JST housing VHR-3N and JST SVH series crimp terminal.
- Output connector mates with JST housing VHR-6N and JST SVH series crimp terminal.

PIN CHART

MODEL	PIN	1	2	3	4	5	6
PS BU58-1XX	OUT	OUT	OUT	RTN	RTN	RTN	RTN

Rating Chart:

MODEL NO.	Setting Voltage Range (Factory setting, can't be adjusted)		Output Current (Based on the output volt.)		Maximum Output Power (W)	Ripple & Noise (mVp-p)	Total Regulation (%)	Typ. Efficiency (%)	Typ. No Load Consumption (W)	Hold-Up Time (ms)	Protection Mode
	min	max	min	max							
	(VDC)	(VDC)	(A)	(A)							
PS BU58-105	11.0	13.0	4.61	5.45	60	130	± 5	84	0.5	12	Hiccup
PS BU58-106	13.0	16.0	3.75	4.61	60	160	± 5	85	0.5	12	Hiccup
PS BU58-107	16.0	21.0	2.85	3.75	60	200	± 5	85	0.5	12	Hiccup
PS BU58-108	21.0	27.0	2.22	2.85	60	180	± 3	85.5	0.5	12	Hiccup
PS BU58-111	40.0	48.0	1.25	1.50	60	300	± 2	87.5	0.5	12	Hiccup