

The MPU101 series of AC/DC switching mode power supplies provide 100 Watts of continuous output power. All supplies are UL94V-1 min compliant. All models meet FCC Part-18, CISPR-11 and EN55011 class B emission Limits, IEC 60601-1-2:2014 and are designed to comply with UL/cUL, TUV T-mark and conformity assessment in CE marking. All units are 100% burned in and tested.

RoHS2
2011/65/EU



FEATURES:

- * Wide Operating Voltage, 90 to 260 VAC, 47 to 63 Hz
- * IEC-320-C14 Input Inlet
- * Other Input/Output Configurations Available (contact Beta Dyne Sales)
- * Single Output (Factory set, contact Beta Dyne Sales for other Voltage options)
- * Input to Output : 2MOPP
- * High ESD immunity
- * Suitable professional healthcare facility
- * Class I system
- * 5 year warranty



APPLICATIONS:

- * Medical Equipment
- * Patient Monitor
- * Ultrasound system
- * Blood chemistry analyzer
- * Medical Image

GENERAL SPECIFICATION:

- * **Short Circuit Protection:** Auto Recovery
- * **Cooling:** Free Air Convection
- * **Flammability Rating:** UL94V-1
- * **Protection Classes:** Class I
- * **Safety:** IEC60601-1 Edition3.1, ES60601-1:2005(R2012), CSAC22.2 NO.60601-1:14, EN60601-1:2006/A1:2013
The MPU101-105 is available on CCC mark

APPROVALS:



Electrical Characteristics:

Symbol	Characteristic	Condition	Min.	Typ.	Max.	Unit
V _{ins}	Safety Approval Input Voltage Range	Safety Approval & Specification in Label	100		240	VAC
V _{in}	Input Operate Voltage Range	Detail to see Fig.1	90		260	VAC
F _i	Input Frequency	Sine wave	47		63	Hz
PF	Power Factor Correction		0.95		1	
P _o	Output Power Range	See Rating Chart			100	W
I _{il}	Low Line Input Current	Full Load, V _{in} =100VAC			1.25	A
I _{ih}	High Line Input Current	Full Load, V _{in} =240VAC			0.50	A
I _{rl}	Low Line Input Inrush Current	Full Load, 25°C, Cool start, V _{in} =100VAC			50	A
I _{rh}	High Line Input Inrush Current	Full Load, 25°C, Cool start, V _{in} =240VAC			120	A
I _k	Safety Ground Leakage Current	V _{in} =264VAC, F _i =63Hz		0.1	0.175	mA
η	Efficiency	Full Load, V _{in} =230VAC, Detail to see Rating Chart	See Rating Chart			
ΔV _{oi}	Line Regulation	Full Load, V _{in} =100~120VAC or 200~240VAC	0.5		1	%
OVP	Over Voltage Protection		112		132	%
OLP	Over Load Protection	Recovers automatically after fault condition is removed	110		150	%
t _{tr}	Time of Transient Response	Full Load, V _{in} =110VAC			4	ms
t _{hu}	Hold-Up Time	Full Load, V _{in} =100VAC	See Rating Chart			
t _s	Start-up time	Full Load, V _{in} =100~240VAC	0.3		2	s
R _{is}	Insulation Resistance	Primary to Secondary, 500VDC, 25°C/ 70% RH	50			MΩ
T _c	Temperature Coefficient	All Condition			±0.04	%/°C
HV	Dielectric Withstanding Voltage (P-S)	Primary to Secondary, limit current <10mA			4000	VAC
V _{pg}	Dielectric Withstanding Voltage (P-G)	Primary to PE, limit current <10mA			1500	VAC
EMI	EMC Emission	Compliance to EN55011 (CISPR11), EN60601-1-2	B			Class

Environmental:

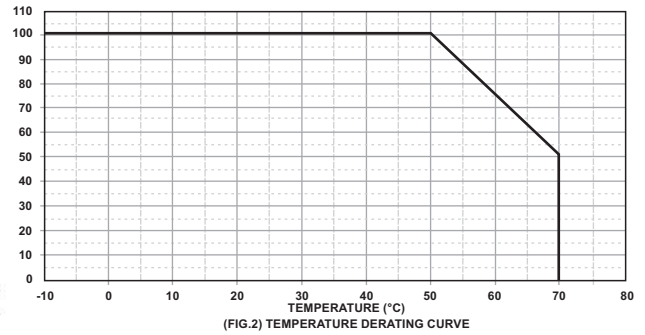
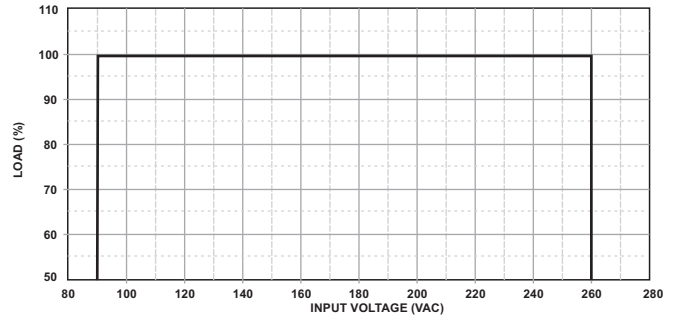
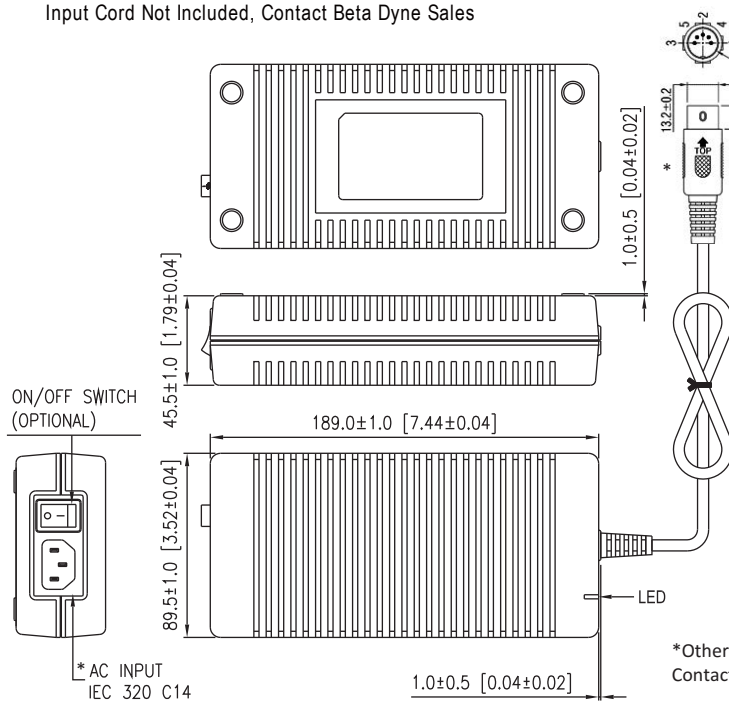
Symbol	Characteristic	Condition	Min.	Typ.	Max.	Unit
T _o	Operating Temperature	Detail to see Fig.2 (Derate linearly from 100% load at 50°C to 50% load at 70°C)	-10		70	°C
T _s	Storage Temperature	10 ~ 95% RH	-40		85	°C
H _o	Operating Humidity	non-condensing	0		95%	RH
H _s	Storage Humidity		0		95%	RH
ESDa	Electro Static Discharge	Air Discharge, IEC61000-4-2			15	kV
ESDc	Electro Static Discharge	Contact Discharge, IEC61000-4-2			8	kV
MTBF	Mean Time Between Failure	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F	100k			h
ELEV	Operating Altitude (Elevation)	All condition			3000	m
VBR	Vibration	10 ~ 500Hz, 10min./1cycle, 60min. each along X, Y, Z axes			5	G
V _{sl}	Surge Voltage	Line-Neutral			1	kV
V _{sg}	Surge Voltage	Line-PE & Neutral-PE			2	kV

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.
- Ripple & noise is measured by using 20MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF capacitor at rated load and nominal line.
- 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)

Input Cord Not Included, Contact Beta Dyne Sales



OUTPUT PIN FUNCTIONS:

- Return
 - Return
 - Vout
 - Return
 - Vout
- Shield = GND

PACKING :

Net weight: 778~800g approx.

*Other output connectors and input configurations are available. Contact Beta Dyne Sales for details.

Rating Chart: (Single Output)

MODEL NO.	Output Voltage (Factory set, can't be adjusted. Contact Beta Dyne Sales for other options)	Output Current	Maximum Output Power	Ripple & Noise	Total Regulation	Typ. Efficiency	Typ. No Load Consumption	Hold-Up Time	Protection Mode
	(VDC)								
MPU101-102	5.0	14.00	70	50	±5	76	3	16	Hiccup
MPU101-103	6.0	13.33	80	60	±5	77	3	16	Hiccup
MPU101-104	10.0	9.00	90	80	±4	82	3	16	Hiccup
MPU101-105	12.0	8.33	100	100	±3	83	3	16	Hiccup
MPU101-106	15.0	6.66	100	100	±3	83	3	16	Hiccup
MPU101-107	18.0	5.55	100	100	±3	85	3	16	Hiccup
MPU101-108	24.0	4.16	100	100	±2	86	3	16	Hiccup
MPU101-109	30.0	3.33	100	100	±2	86	3	16	Hiccup
MPU101-110	36.0	2.77	100	100	±2	86	3	16	Hiccup