

# MPU12B SERIES

## 12W Wall Mount Switching Power Supplies For Medical Equipment

### Description:

The MPU12B series of AC/DC switching mode power supplies provide 12 watts of continuous output power. This series is suitable for use in Blood Pressure measurements, Frequency Therapy Device and Dental Curing light applications. All models are designed to comply with TUV/T-mark (EN 60601-1) and new CE requirements.



### Features:

- Wide Input Voltage 90 to 264 VAC, 47 to 63 Hz
- 3 Prong Plug-In Mains Connector
- Output Voltage Available From 5VDC Thru 27VDC
- Optional Output Connector (See appendix)
- Single Output
- Class II
- Over Voltage and Over Load protection.
- Over temperature Detection
- CEC level V and Energy Star 2.0 Compliance
- 3 year warranty

### Safety Approvals:



### Electrical Characteristics:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V <sub>in</sub>	Input Voltage	Operating Voltage	90		264	VAC
f <sub>in</sub>	Input Frequency		47		63	Hz
P <sub>o</sub>	Output Power Range	V <sub>in</sub> =90 to 264VAC	0		12	W
V <sub>o</sub>	Output Voltage Range		See rating chart			V
I <sub>o</sub>	Output Current Range		See rating chart			A
I <sub>il</sub>	Input Current (Low Line)	I <sub>o</sub> =Full load, V <sub>in</sub> =115VAC		0.25	0.35	A
I <sub>ih</sub>	Input Current (High Line)	I <sub>o</sub> =Full load, V <sub>in</sub> =230VAC		0.17	0.22	A
I <sub>rl</sub>	Low Line Inrush Current	I <sub>o</sub> =Full load, 25°C, Cool start, V <sub>in</sub> =115VAC		14	16	A
I <sub>rh</sub>	High Line Inrush Current	I <sub>o</sub> =Full load, 25°C, Cool start, V <sub>in</sub> =230VAC		28	30	A
Eff	Efficiency	I <sub>o</sub> =Full Load, V <sub>in</sub> =230VAC	73.3	77.7	85	%
REG-i	Line Regulation	I <sub>o</sub> =Full Load		0.5	1	%
REG-o	Load Regulation	V <sub>in</sub> =230VAC		3	5	%
OVP	Over Voltage Protection		112		132	%
OCP	Over Current Protection		110		150	%
T <sub>tr</sub>	Time of Transient Response	I <sub>o</sub> =Full Load to Half Load, V <sub>in</sub> =100VAC			4	mS
T <sub>hold</sub>	Hold-Up Time	I <sub>o</sub> =Full Load, V <sub>in</sub> =110VAC	10	16		mS
T <sub>s</sub>	Start Up Time	I <sub>o</sub> =Full Load, V <sub>in</sub> =100VAC	0.3	1	2	S
V <sub>rn</sub>	Ripple & Noise(Peak to Peak)	Full Load, V <sub>in</sub> =90VAC		0.5	1	%
I <sub>lk</sub>	Safety Ground Leakage Current	I <sub>o</sub> =Full Load, V <sub>in</sub> =240VAC			0.1	mA
TC	Temperature Coefficient	All output	-0.04		0.04	%/°C
T <sub>jsd</sub>	Thermal Shutdown ① by Junction Temperature Controller	The parameter is not subject to production test-verified by design/characterization of integrated controller.	-25		130	°C

① As long as faulty conditions have been removed, the adaptor will automatically power up as usual.

### Environmental :

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
T <sub>oper</sub>	Operating Temperature		0	50	70	°C
T <sub>stg</sub>	Storage Temperature		-40		85	°C
H <sub>r</sub>	Relative Humidity	No-Condensing	5		95	%
MTBF	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F		0.1M			Hrs
P <sub>d</sub>	Derate linearly from 100% load at 50°C to 50% load at 70°C					

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### Safety Specifications:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V <sub>ps</sub>	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	5803			VDC
EN55022	Meet EMI requirements: En55022	V <sub>in</sub> =230VAC, 50Hz	B			CLASS

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

Model Number	Output Voltage	Output Current	Total <sup>①</sup> Regulation	Maximum Output Power
MPU12B-102	5 ~ 6 VDC	2.00 ~ 1.66 A	5%	10W
MPU12B-103	6 ~ 8 VDC	2.00 ~ 1.50 A	5%	12W
MPU12B-104	8 ~ 11 VDC	1.50 ~ 1.09 A	5%	12W
MPU12B-105	11 ~ 13 VDC	1.09 ~ 0.92 A	5%	12W
MPU12B-106	13 ~ 16 VDC	0.92 ~ 0.75 A	5%	12W
MPU12B-107	16 ~ 21 VDC	0.75 ~ 0.57 A	3%	12W
MPU12B-108	21 ~ 27 VDC	0.57 ~ 0.44 A	3%	12W

The output voltage under 15V had been approved by TUV/PSE.

① The total regulation on model 102~103 is required to use AWG#18 / 6FT output cable.

The total regulation on model 104~108 is required to use AWG#20 / 6FT output cable.

The regulation and efficiency will be changed by modified output cable.

### Mechanical Specifications:( UK Type)

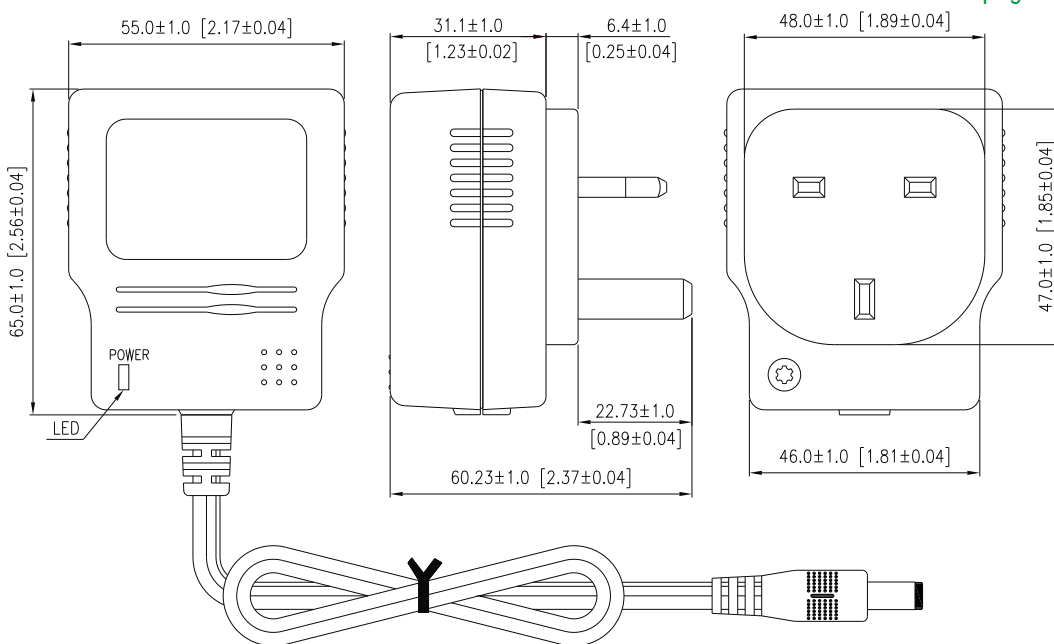
Note:

1. Dimensions are shown in mm.

2. Weight: 150gs approx.

3. Optional output connector:

See page Appendix.



### Distribution:

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