

# MPU50 SERIES

## 50W Desk Top Switching Power Supplies For Medical Products.

### Description:

The MPU50 series of AC/DC switching mode power supplies provide 50 Watts of continuous output power. All supplies are UL 94V-0 compliant, include IEC-320-C14 input for worldwide applications. All models meet FCC Part-15 class B and CISPR 11 EN55011 class B emission Limits and are designed to comply with UL, C-UL, CB and CE requirements. All units are 100% burned in and tested.



### Features:

- Wide Input Voltage 90 to 264 VAC, 47 to 63 Hz
- IEC-320-C14 Input Inlet
- Single to Triple Output
- Output Voltage Available From 2VDC Thru 50VDC
- Optional Output Connector (See appendix)
- Input Surge Current, Over Voltage And Over Load protection
- Splash proof
- Two Year Warranty

### Safety Approvals :



### Electrical Characteristics:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V <sub>in</sub>	Input Voltage		90		264	VAC
F <sub>in</sub>	Input Frequency		47		63	Hz
W <sub>o</sub>	Output Power Range	V <sub>in</sub> =90 to 264VAC	0		50	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			1.35	A
I <sub>ih</sub>	Input Current (High Line)	I <sub>o</sub> =Full load, V <sub>in</sub> =230 VAC			0.7	A
I <sub>rl</sub>	Low Line Inrush Current	I <sub>o</sub> =Full load, 25 c, Cool start, V <sub>in</sub> =115VAC		12	15	A
I <sub>rh</sub>	High Line Inrush Current	I <sub>o</sub> =Full load, 25 c, Cool start, V <sub>in</sub> =230VAC		26	30	A
Eff	Efficiency	I <sub>o</sub> =Full Load, V <sub>in</sub> =230VAC	75	83	88	%
REG-i	Line Regulation	I <sub>o</sub> =Full Load		0.5	1	%
REG-o	Load Regulation	V <sub>in</sub> =230VAC		3	7	%
OVP	Over Voltage Protection		112		132	%
OCP	Over Current Protection		110		150	%
T <sub>tr</sub>	Transient Response	I <sub>o</sub> =Full Load to Half Load, V <sub>in</sub> =100VAC			4	mS
Thold	Hold-Up Time	I <sub>o</sub> =Full Load, V <sub>in</sub> =110VAC	16			mS
T <sub>s</sub>	Start Up Time	I <sub>o</sub> =Full Load, V <sub>in</sub> =100VAC	0.3	1.5	2	S
V <sub>rn</sub>	Ripple & Noise (Peak to Peak)	Full Load, V <sub>in</sub> =90VAC		1	2	%
I <sub>lk</sub>	Safety Ground Leakage Current	I <sub>o</sub> =Full Load, V <sub>in</sub> =240VAC			0.1	mA
T <sub>c</sub>	Temperature Coefficient	All output	-0.04		0.04	%/ c

### Environmental :

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
T <sub>oper</sub>	Operating Temperature		0		70	c
T <sub>stg</sub>	Storage Temperature		-40		85	c
H <sub>r</sub>	Relative Humidity		5		95	%
P <sub>d</sub>	Derate linearly from 100% load at 50 c to 50% load at 70 c					

### Safety Specifications:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V <sub>ps</sub>	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	5656			VDC
V <sub>pg</sub>	Dielectric Withstanding Voltage for Primary to ground	Primary to ground	2121			VDC
R <sub>i</sub>	Isolation Resistance	Test Voltage = 500VDC	50			M
CISPR	EMI requirements for CISPR-22	V <sub>in</sub> =220VAC	B			CLASS
FCC	EMI requirements for FCC PART-15	V <sub>in</sub> =110VAC	B			CLASS

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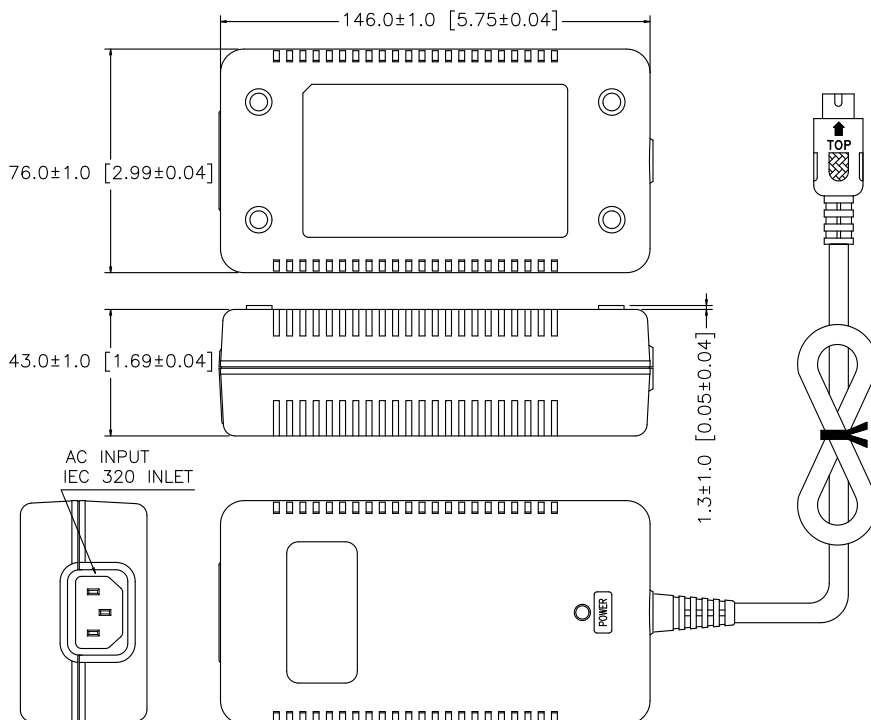
## Output Voltage And Current Rating Chart (Single Output) :

Model Number	Output Voltage	Output Current	Total Regulation	Maximum Output Power
MPU50-100	2 ~ 3 VDC	12.0 ~ 10.0 A	7%	30W
MPU50-101	3 ~ 5 VDC	10.0 ~ 8.00 A	5%	40W
MPU50-102	5 ~ 6 VDC	8.00 ~ 6.66 A	5%	40W
MPU50-103	6 ~ 8 VDC	7.00 ~ 5.25 A	5%	42W
MPU50-104	8 ~ 11 VDC	5.63 ~ 4.00 A	4%	45W
MPU50-105	11 ~ 13 VDC	4.00 ~ 3.46 A	3%	45W
MPU50-106	13 ~ 16 VDC	3.46 ~ 2.81 A	3%	45W
MPU50-107	16 ~ 21 VDC	3.12 ~ 2.38 A	3%	50W
MPU50-108	21 ~ 27 VDC	2.30 ~ 1.85 A	2%	50W
MPU50-109	27 ~ 33 VDC	1.85 ~ 1.51 A	2%	50W
MPU50-110	33 ~ 40 VDC	1.51 ~ 1.25 A	2%	50W
MPU50-111	40 ~ 50 VDC	1.25 ~ 1.00 A	2%	50W

## 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	
MPU50-200	+3.3V	0.5A	5A	7%	+12V	0.2A	2A	5%					40W
MPU50-201	+5V	0.5A	5A	5%	+12V	0.2A	2A	5%					42W
MPU50-202	+5V	0.5A	5A	5%	+15V	0.2A	1.5A	6%					42W
MPU50-203	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%					42W
MPU50-204	+3.3V	1.0A	5A	7%	+5V	0.4A	2A	5%					26.5W
MPU50-209	+12V	0.5A	3A	5%	-12V	0.2A	1A	5%					42W
MPU50-210	+15V	0.5A	2A	5%	-15V	0.2A	1A	5%					42W
MPU50-215	+5V	0.5A	5A	5%	-24V	0.1A	1A	5%					42W
MPU50-216	+5.1V	0.5A	5A	5%	+7.2V	0.2A	2.6A	5%					42W
MPU50-217	+10.5V	0.2A	2A	5%	-10.5V	0.2A	2A	5%					42W
MPU50-218	+5V	0.2A	5A	5%	-5V	0.2A	2A	5%					35W
MPU50-300	+3.3V	0.5A	5A	7%	+12V	0.2A	2A	5%	-12V	0A	0.8A	5%	42W
MPU50-301	+5V	0.5A	5A	5%	+12V	0.2A	2A	5%	-5V	0A	0.8A	5%	42W
MPU50-302	+5V	0.5A	5A	5%	+12V	0.2A	2A	5%	-12V	0A	0.8A	5%	42W
MPU50-303	+5V	0.5A	5A	5%	+15V	0.2A	2A	6%	-15V	0A	0.8A	5%	42W
MPU50-304	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%	-24V	0A	0.5A	5%	42W
MPU50-305	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%	-12V	0A	0.8A	5%	42W
MPU50-306	+3.3V	0.5A	5A	7%	+12V	0.2A	2A	5%	-5V	0A	0.8A	5%	42W

## Mechanical Specifications:



### Note:

1. Dimensions are shown in mm.
2. Weight: 400-550gs approx.
3. Optional output connector: See page Appendix.