

## 50W Desk Top Switching Power Supplies For Medical Equipment



### Safety Approvals



Agree to apply for the PSE  
if order on h and

### Description:

The MPU50 series of AC/DC switching mode power supplies provide 50 Watts of continuous output power. All supplies are UL94V-1 min compliant. They are suited for use in hospital instrument and many other applications. All models meet FCC Part-18 class B and CISPR-11 EN55011 class B emission Limits and are designed to comply with UL/c-UL(UL 60601-1:2nd Edition), TUV/T-mark(EN 60601-1:2nd Edition) and new CE requirements. All units are 100% burned-in and tested.

### Features:

- Wide Operating Voltage 90 to 264 VAC, 47 to 63 Hz
- IEC-320-C14 Input Inlet
- Single to Triple Output
- Optional Output Connector (See appendix)
- Input Surge Current, Over Voltage And Over Load protection
- Splash Proof
- Class I
- 3 year warranty

### Electrical Characteristics:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vin	Safety Approvals Input Voltage Range		100		240	VAC
	Operate Voltage Range		90		264	VAC
fin	Input Frequency		47		63	Hz
Po	Output Power Range	Vin=90 to 264VAC	0		50	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			1.35	A
Iih	Input Current (High Line)	Io=Full load, Vin=230VAC			0.8	A
Irl	Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=115VAC		12	15	A
Irh	High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=230VAC		28	30	A
Eff	Efficiency	Io=Full Load, Vin=230VAC	75	83	88	%
REG-i	Line Regulation	Io=Full Load		0.5	1	%
REG-o	Load Regulation	Vin=230VAC		3	7	%
OVP	Over Voltage Protection		112		132	%
OCP	Over Current Protection		110		150	%
Ttr	Time of Transient Response	Io=Full Load to Half Load, Vin=100VAC			4	mS
Thold	Hold-Up Time	Io=Full Load, Vin=110VAC	1.6			mS
Ts	Start Up Time	Io=Full Load, Vin=100VAC	0.3	1.5	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			0.1	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	50	70	°C
Tstg	Storage Temperature		-40		85	°C
Ho	Operating Humidity		0		95	%
Hr	Storage Humidity		0		75	%
MTBF	Operating Temperature at 25 °C, Calculated per MIL-HDBK-217F		0.1M			Hrs
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	5656			VDC
Vpg	Dielectric Withstanding Voltage for Primary to Ground	Primary to ground	2828			VDC
Ris	Isolation Resistance	Test Voltage=500VDC	50			M Ω
CISPR	EMI requirements for CISPR-11	Vin=220VAC	B			CLASS
FCC	EMI requirements for FCC PART-18	Vin=110VAC	B			CLASS

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

	Output Voltage	Output Current	Total Regulation (1)	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

Mark "\*" means "PSE approval"

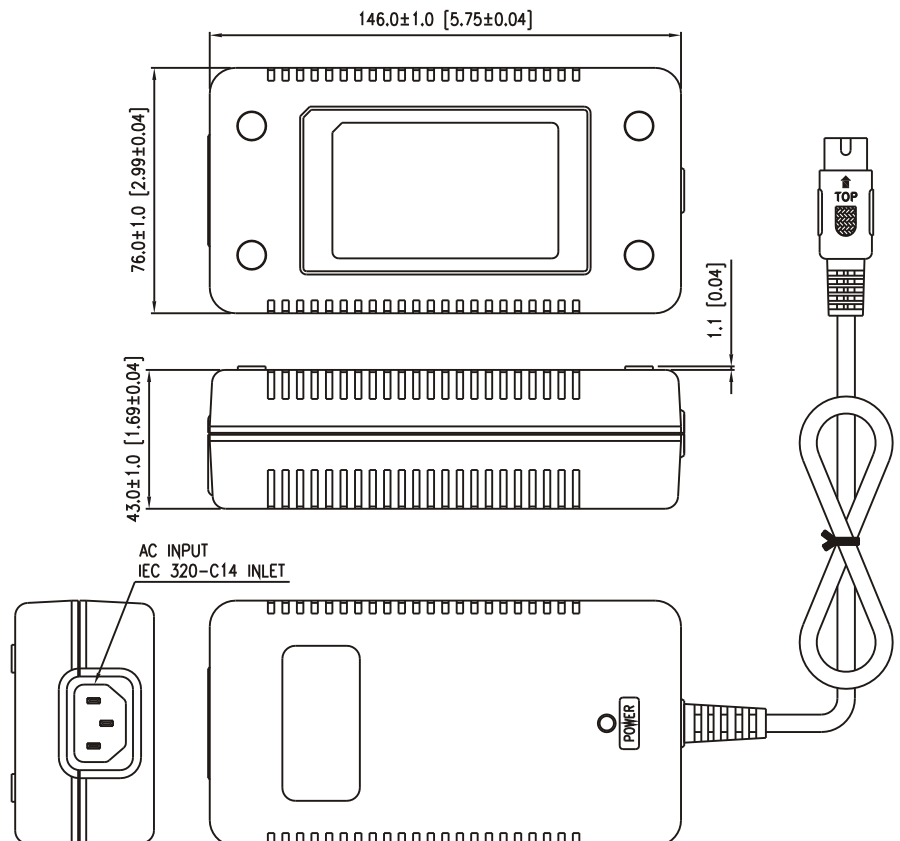
## Output Voltage And Current Rating Chart ( Multi Output ) :

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	0.15A	1.5A	6%					42W
MPU50-203	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%					42W
MPU50-204	+3.3V	0.5A	5A	7%	+5V	0.2A	2A	5%					26.5W
MPU50-209	+12V	0.3A	3A	5%					-12V	0A	1A	5%	42W
MPU50-210	+15V	0.2A	2A	5%					-15V	0.1A	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	0.3A	2.6A	5%					42W
MPU50-217	+10.5V	0.2A	2A	5%					-10.5V	0A	2A	5%	42W
MPU50-218	+5V	0.5A	5A	5%					-5V	0A	2A	5%	35W
MPU50-300	+3.3V	0.5A	5A	7%	+12V	0.4A	2A	5%	-12V	0.1A	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	0.1A	0.8A	5%	42W
MPU50-303	+5V	0.5A	5A	5%	+15V	0.4A	2A	6%	-15V	0.1A	0.8A	5%	42W
MPU50-304	+5V	0.5A	5A	5%	+24V	0.2A	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	0.4A	2A	5%	-5V	0.1A	0.8A	5%	42W

## Mechanical Specifications:

Note:

1. Dimensions are shown in mm.
2. Weight: 510-560gs approx.
3. Optional output connector:  
See page Appendix.



Data sheets are subject to change without notice, please check with our sales office before ordering