

TPMPU51 SERIES

**50W Desk Top Type
Medical Power Supplies**

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 page appendix)
- Over Voltage and Over Load protection
- Class I
- ANSI/AAMI ES 60601-1: 2005(UL/cUL 3rd Edition)
EN 60601-1:2006 (TUV/T-mark 3rd Edition)
- Input to Output : 2MOPP
- 3 year warranty



Electrical Characteristics:

Vin	Safety Approvals Input Voltage Range		100~240VAC
	Operate Voltage Range		90~264VAC
f _{in}	Input Frequency		47~63Hz
P _o	Output Power Range		See rating chart
V _o	Output Voltage Range		See rating chart
I _o	Output Current Range		See rating chart
I _l	Input Current (Low Line)	I _o =Full load, Vin=100VAC	0.91~1.04A
	Input Current (High Line)	I _o =Full load, Vin=240VAC	0.43~0.53A
I _r	Low Line Inrush Current	I _o =Full load, 25°C, Cool start, Vin=115VAC	35A (max.)
	High Line Inrush Current	I _o =Full load, 25°C, Cool start, Vin=230VAC	70A (max.)
Eff	Efficiency	I _o =Full Load, Vin=230VAC	75~88%
REG-i	Line Regulation	I _o =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%
T _{tr}	Time of Transient Response	I _o =Full Load to Half Load, Vin=100VAC	4mS (max.)
T _h	Hold-Up Time	I _o =Full Load, Vin=110VAC	16mS (min.)
T _s	Start Up Time	I _o =Full Load, Vin=100VAC	0.3~2S
V _{p-p}	Ripple & Noise(Peak to Peak)	Full Load, Vin=90VAC	1% (max.)
I _{lk}	Safety Ground Leakage Current	Vin=240VAC/60Hz	0.25mA (typ.)
TC	Temperature Coefficient	All output	±0.04%/°C
OA	Operating Altitude		Up to 3000m
P _{no}	No-Load Power Consumption	No load, Vin=230VAC	See rating chart
V _{ps}	Dielectric Withstanding Voltage	Primary to secondary	6321VDC (min.)
V _{pg}	Dielectric Withstanding Voltage for Primary to PE	Primary to PE	2121VDC (min.)
R _{is}	Isolation Resistance	Test Voltage=500VDC	50MΩ (min.)

Note: The Ripple & Noise which is under 3.3VDC at 2% max.

Environmental

T _o	Operating Temperature	See derating curve
T _s	Storage Temperature	-40~85°C
H _o	Operating Humidity	0~95%
H _r	Storage Humidity	0~95%
MTBF	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F	0.1M Hrs (min.)
Pd	Derate linearly from 100% load at 50°C to 50% load at 70°C	

Application:

- Blood Pressure system
- Portable medical devices
- ECG machine

Safety Approvals:



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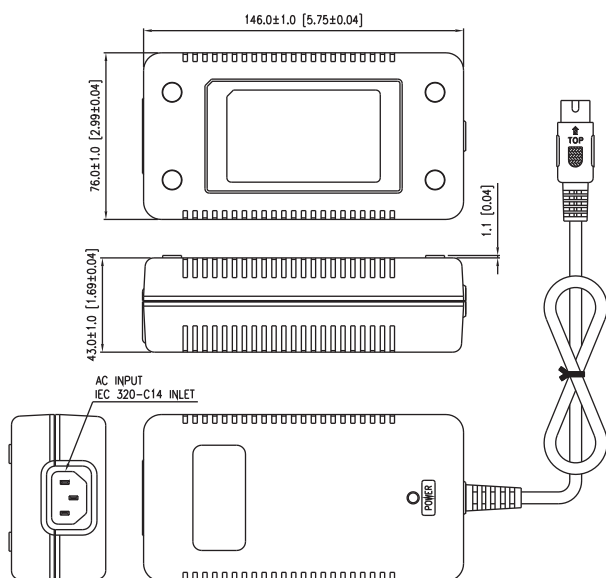
Output Voltage And Current Rating Chart (Single Output) :

Model Number	Output Voltage	Output Current	Total Regulation	Max. Output Power	Pno (max.)
TPMPU51-101	3 ~ 5 VDC	10.0 ~ 8.00 A	5%	40W	2W
TPMPU51-102	5 ~ 6 VDC	8.00 ~ 6.66 A	5%	40W	2W
TPMPU51-103	6 ~ 8 VDC	7.00 ~ 5.25 A	5%	42W	3W
TPMPU51-104	8 ~ 11 VDC	5.63 ~ 4.00 A	4%	45W	3W
TPMPU51-105	11 ~ 13 VDC	4.00 ~ 3.46 A	3%	45W	3W
TPMPU51-106	13 ~ 16 VDC	3.46 ~ 2.81 A	3%	45W	3W
TPMPU51-107	16 ~ 21 VDC	3.12 ~ 2.38 A	3%	50W	3W
TPMPU51-108	21 ~ 27 VDC	2.30 ~ 1.85 A	2%	50W	4W
TPMPU51-109	27 ~ 33 VDC	1.85 ~ 1.51 A	2%	50W	4W
TPMPU51-110	33 ~ 40 VDC	1.51 ~ 1.25 A	2%	50W	5W
TPMPU51-111	40 ~ 50 VDC	1.25 ~ 1.00 A	2%	50W	6W

Output Voltage And Current Rating Chart (Multi Output) :

Model Number	Output #1				Output #2				Output #3				Max. Output Power	Pno(max.)
	Vonon	Iomin	Iomax	Regmax	Vonon	Iomin	Iomax	Regmax	Vonon	Iomin	Iomax	Regmax		
TPMPU51-200	+3.3V	0.5A	5A	7%	+12V	0.2A	2A	5%					40W	4W
TPMPU51-201	+5V	0.5A	5A	5%	+12V	0.2A	2A	5%					42W	4W
TPMPU51-202	+5V	0.5A	5A	5%	+15V	0.15A	1.5A	6%					42W	4W
TPMPU51-203	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%					42W	4W
TPMPU51-204	+3.3V	0.5A	5A	7%	+5V	0.2A	2A	5%					26.5W	3W
TPMPU51-209	+12V	0.3A	3A	5%					-12V	0A	1A	5%	42W	4W
TPMPU51-210	+15V	0.2A	2A	5%					-15V	0.1A	1A	5%	42W	4W
TPMPU51-300	+3.3V	0.5A	5A	7%	+12V	0.4A	2A	5%	-12V	0.1A	0.8A	5%	42W	5W
TPMPU51-301	+5V	0.5A	5A	5%	+12V	0.2A	2A	5%	-5V	0A	0.8A	5%	42W	4W
TPMPU51-302	+5V	0.5A	5A	5%	+12V	0.2A	2A	5%	-12V	0.1A	0.8A	5%	42W	4W
TPMPU51-303	+5V	0.5A	5A	5%	+15V	0.4A	2A	6%	-15V	0.1A	0.8A	5%	42W	4W
TPMPU51-304	+5V	0.5A	5A	5%	+24V	0.2A	1A	5%	-24V	0A	0.5A	5%	42W	6W
TPMPU51-305	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%	-12V	0A	0.8A	5%	42W	5W
TPMPU51-306	+3.3V	0.5A	5A	7%	+12V	0.4A	2A	5%	-5V	0.1A	0.8A	5%	42W	5W

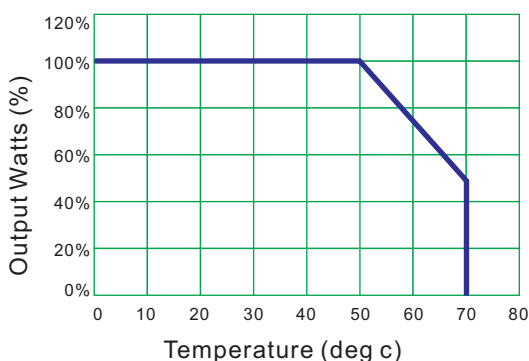
Mechanical Specifications:



Note:

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

Derating Curve :



1. Operating Temperature: 0 to 70°C
2. Derate linearly from 100% load at 50°C to 50% load at 70°C

