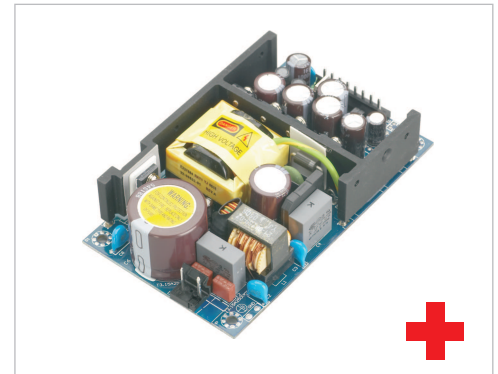


# TPMBU61 SERIES

63W Open Frame Type  
Medical Power Supplies

## Features:

- Wide Operating Voltage 90 to 264 VAC, 47 to 63 Hz
- Internal EMI filter
- Single to Quad Output
- Size: 3"x5"x1.1"
- Power Fail Detect (Optional)
- Class I
- 3 year warranty



## Electrical Characteristics:

Vin	Safety Approvals Input Voltage Range		100~240VAC
	Operate Voltage Range		90~264VAC
fin	Input Frequency		47~63Hz
Po	Output Power Range		See rating chart
Vo	Output Voltage Range		See rating chart
Io	Output Current Range		See rating chart
Iil	Input Current (Low Line)	Io=Full load, Vin=100VAC	1.6A
	Input Current (High Line)	Io=Full load, Vin=240VAC	0.8A
Ir	Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=115VAC	35A (max.)
	High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=230VAC	70A (max.)
Eff	Efficiency	Io=Full Load, Vin=230VAC	70~85%
REG-i	Line Regulation	Io=Full Load	0.5~1%
REG-o	Load Regulation	Vin=230VAC	3~6%
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	4mS (max.)
Th	Hold-Up Time	Io=Full Load, Vin=110VAC	16mS (min.)
Ts	Start Up Time	Io=Full Load, Vin=100VAC	0.3~2S
Vp-p	Ripple & Noise(Peak to Peak)	Full Load, Vin=90VAC	1% (max.)
Ilk	Safety Ground Leakage Current	Vin=240VAC/60Hz	0.25mA (typ.)
TC	Temperature Coefficient	All output	±0.04%/°C
OA	Operating Altitude		Up to 3000m
Pno	No-Load Power Consumption	No load, Vin=230VAC	See rating chart
Vps	Dielectric Withstanding Voltage	Primary to secondary	6290VDC (min.)
Vpg	Dielectric Withstanding Voltage for Primary to PE	Primary to PE	2121VDC (min.)
Ris	Isolation Resistance	Test Voltage=500VDC	50MΩ (min.)

**Note:** The Ripple & Noise which is under 3.3VDC at 2% max  
The range of OCP is set between 110-150% of total output power .

## Environmental

To	Operating Temperature	See derating curve
Ts	Storage Temperature	-40~85°C
Ho	Operating Humidity	0~95%
Hr	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:

- Medical Touch Panel PC
- Patient Monitoring System
- Ultrasound System

## Safety Approvals:

cUL<sup>®</sup> US CBCE



# TPMBU61 SERIES

63W Open Frame Type  
Medical Power Supplies

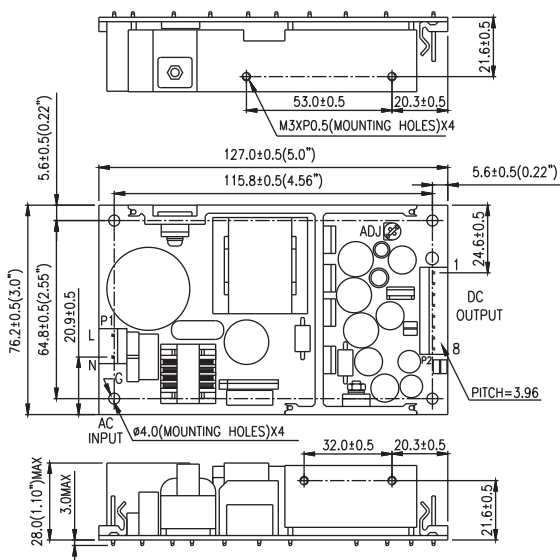
## Output Voltage And Current Rating Chart ( Single Output ) :

Model Number	Output Voltage	Output Current	Total Regulation	Max. Output Power	Pno (max.)
TPMBU61-101	3 ~ 5 VDC	16.66 ~ 10.0 A	5%	50W	3W
TPMBU61-102	5 ~ 6 VDC	11.00 ~ 9.16 A	5%	55W	3W
TPMBU61-103	6 ~ 8 VDC	10.00 ~ 7.50 A	5%	60W	3W
TPMBU61-104	8 ~ 11 VDC	7.87 ~ 5.72 A	3%	63W	3W
TPMBU61-105	11 ~ 13 VDC	5.72 ~ 4.84 A	3%	63W	4W
TPMBU61-105-1	11 ~ 13 VDC	4.09 ~ 3.46 A	3%	45W	4W
TPMBU61-106	13 ~ 16 VDC	4.84 ~ 3.93 A	3%	63W	4W
TPMBU61-107	16 ~ 21 VDC	3.93 ~ 3.00 A	3%	63W	4W
TPMBU61-108	21 ~ 27 VDC	3.00 ~ 2.33 A	2%	63W	5W
TPMBU61-109	27 ~ 33 VDC	2.33 ~ 1.90 A	2%	63W	5W
TPMBU61-110	33 ~ 40 VDC	1.90 ~ 1.57 A	2%	63W	6W

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

Model Number	Output #1				Output #2				Output #3				Output #4				Max. Output Power	Pno (max.)
	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax		
TPMBU61-200	+3.3V	1.4A	7A	6%	+12V	0.6A	3A	5%									59.1W	4W
TPMBU61-201	+5V	0.7A	7A	5%	+12V	0.3A	3A	5%									63W	4W
TPMBU61-202	+5V	0.7A	7A	5%	+15V	0.3A	3A	5%									63W	4W
TPMBU61-203	+5V	0.7A	7A	5%	+24V	0.4A	2A	5%									63W	4W
TPMBU61-204	+3.3V	1.4A	7A	6%	+5V	0.5A	5A	5%									48.1W	3W
TPMBU61-215	+5V	0.7A	7A	5%					-24V	0.2A	2A	5%					63W	4W
TPMBU61-300	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%					63W	4W
TPMBU61-300-1	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%					63W	4W
TPMBU61-301	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-5V	0A	0.8A	5%					63W	4W
TPMBU61-301-1	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+5V	0A	0.8A	5%					63W	4W
TPMBU61-302	+5V	0.6A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%					63W	4W
TPMBU61-302-1	+5V	0.6A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%					63W	4W
TPMBU61-303	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%					63W	4W
TPMBU61-303-1	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%					63W	4W
TPMBU61-305	+5V	1.2A	6A	5%	+24V	0.4A	2A	5%	-12V	0A	0.8A	5%					63W	5W
TPMBU61-305-1	+5V	1.2A	6A	5%	+24V	0.4A	2A	5%	+12V	0A	0.8A	5%					63W	5W
TPMBU61-306	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	-5V	0A	0.8A	5%					59.8W	4W
TPMBU61-306-1	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	+5V	0A	0.8A	5%					59.8W	4W
TPMBU61-308	+3.3V	0.5A	5A	6%	+5V	0.5A	5A	5%	-12V	0A	1A	5%					53.5W	3W
TPMBU61-308-1	+3.3V	0.5A	5A	6%	+5V	0.5A	5A	5%	+12V	0A	1A	5%					53.5W	3W
TPMBU61-400	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	4W
TPMBU61-400-1	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	4W
TPMBU61-400-2	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	4W
TPMBU61-400-3	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	4W
TPMBU61-401	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	4W
TPMBU61-401-1	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	4W
TPMBU61-401-2	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	4W
TPMBU61-401-3	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	4W
TPMBU61-402	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-12V	0A	0.8A	5%	63W	4W
TPMBU61-402-1	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+12V	0A	0.8A	5%	63W	4W
TPMBU61-402-2	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-12V	0A	0.8A	5%	63W	4W
TPMBU61-402-3	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+12V	0A	0.8A	5%	63W	4W
TPMBU61-403	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-24V	0A	0.8A	5%	63W	4W
TPMBU61-403-1	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+24V	0A	0.8A	5%	63W	4W
TPMBU61-403-2	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-24V	0A	0.8A	5%	63W	4W
TPMBU61-403-3	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+24V	0A	0.8A	5%	63W	4W
TPMBU61-404	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	4W
TPMBU61-404-1	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	4W
TPMBU61-404-2	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	4W
TPMBU61-404-3	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	4W

## Mechanical Specifications :

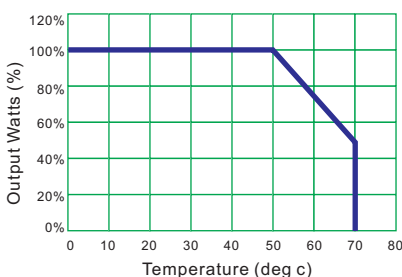


## PIN CHART

PIN MODEL	1	2	3	4	5	6	7	8 (Optional)
MBU61-1XX	OUT	OUT	OUT	RTN	RTN	RTN	RTN	PFD
MBU61-2XX	Vo2	Vo1	Vo1	COM	COM	N/C	N/C	PFD
MBU61-215	N/C	Vo1	Vo1	COM	COM	Vo3	N/C	PFD
MBU61-3XX	Vo2	Vo1	Vo1	COM	COM	Vo3	N/C	PFD
MBU61-4XX	Vo2	Vo1	Vo1	COM	COM	Vo3	Vo4	PFD

Note: Vo1:Output#1 Vo2:Output#2 Vo3:Output#3 Vo4:Output#4

## Derating Curve :



Note:  
1. Dimensions are shown in inches or mm.  
2. Weight: 300gs approx.  
3. Input connector mates with Molex housing 09-50-3031 and Molex 2478 series crimp terminal.  
4. Output connector mates with Molex housing 09-50-3081 and Molex 2478 series crimp terminal.

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

