

# MBU80 SERIES

## 80W Open Frame Switching Power Supplies For Medical Equipment.

### Description:

The MBU80 series of compact, open frame constructed, AC/DC switching mode power supplies provide 80 Watts of continuous output power. 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 60601-1:2<sup>nd</sup> Edition), TUV/T-mark (EN 60601-1:2<sup>nd</sup> Edition) and new CE requirements. All units are 100% burned in and tested.

### Features:

- Wide Operating Voltage 90 to 260 VAC, 47 to 63 Hz
- Internal EMI filter
- Single Output
- Input connector mates with Molex housing 09-50-3031 and Molex 2478 series crimp terminal
- Output connector mates with screw terminal (Terminal Block) (16-22AWG) or Molex housing 09-50-3121 and Molex 2478 series crimp terminal
- Input Surge Current, Over Voltage and Over Load protection
- Output Voltage Protection (Crowbar Design)
- Active Power Factor Correction
- Size: 3"x5"x1.1"
- Class I
- 3 year warranty



### Safety Approvals :



### Electrical Characteristics:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vin	Safety Approvals Input Voltage Range		100		240	VAC
	Operate Voltage Range		90		260	VAC
f <sub>in</sub>	Input Frequency		47		63	Hz
PF	Power Factor Correction	I <sub>o</sub> =Full load, V <sub>in</sub> =100~240VAC	0.95	0.97	1.0	
P <sub>o</sub>	Output Power Range	V <sub>in</sub> =90 to 260 VAC	0		80	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> =100VAC			1.2	A
I <sub>ih</sub>	Input Current (High Line)	I <sub>o</sub> =Full load, V <sub>in</sub> =240VAC			0.4	A
I <sub>rl</sub>	Low Line Inrush Current	I <sub>o</sub> =Full load, 25°C, Cool start, V <sub>in</sub> =115VAC		15	18	A
I <sub>rh</sub>	High Line Inrush Current	I <sub>o</sub> =Full load, 25°C, Cool start, V <sub>in</sub> =230VAC		30	34	A
E <sub>ff</sub>	Efficiency	I <sub>o</sub> =Full load, V <sub>in</sub> =230VAC	70	80	85	%
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>	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	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>p-p</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

### 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>o</sub>	Operating Humidity		0		95	%
H <sub>r</sub>	Storage Humidity		0		75	%
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
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			MΩ
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) :

Model Number	Output Voltage	Output Current	Total Regulation	Maximum Output Power
MBU80-102	5 VDC	14.00 A	5%	70W
MBU80-103	7 VDC	11.43 A	5%	80W
MBU80-104	9 VDC	8.89 A	4%	80W
MBU80-105	12 VDC	6.66 A	3%	80W
MBU80-106	15 VDC	5.33 A	3%	80W
MBU80-107	18 VDC	4.44 A	3%	80W
MBU80-108	24 VDC	3.33 A	2%	80W
MBU80-109	30 VDC	2.66 A	2%	80W
MBU80-110	36 VDC	2.22 A	2%	80W

### PIN CHART

PIN	1	2	3	4	5	6	7	8	9	10	11	12
MODEL	RTN	RTN	RTN	RTN	RTN	RTN	Vout	Vout	Vout	Vout	Vout	Vout
MBU80-1XX-12PIN	RTN	RTN	RTN	RTN	RTN	RTN	Vout	Vout	Vout	Vout	Vout	Vout

PIN	1	2	3	4	5	6
MODEL	RTN	RTN	RTN	Vout	Vout	Vout
MBU80-1XX-6PIN	RTN	RTN	RTN	Vout	Vout	Vout

### Mechanical Specifications :

