

MBU151 SERIES

150W Open Frame Switching Power Supplies For Medical Equipment.

Description:

The MBU151 series of compact, open frame constructed, AC/DC switching mode power supplies provide 150 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 60601-1:2nd Edition) and new CE requirements. All units are 100% burned in and tested.

Features:

- Wide Operating Voltage 100 to 240 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 Molex housing 09-50-3081 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"x1.44"
- Class I
- 3 year warranty



Safety Approvals :



Electrical Characteristics:

| Sym. | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|------------------|-------------------------------|--|------------------|-------|------|------|
| V _{in} | Input Voltage | Operating Voltage | 100 | | 240 | VAC |
| f _{in} | Input Frequency | | 47 | | 63 | Hz |
| PF | Power Factor Correction | I _o =Full load, V _{in} =100~240VAC | 0.95 | 0.97 | 1.0 | |
| P _o | Output Power Range | V _{in} =100 to 240 VAC | 0 | | 150 | W |
| V _o | Output Voltage Range | | See rating Chart | | | V |
| I _o | Output Current Range | | See rating Chart | | | A |
| I _{il} | Input Current (Low Line) | I _o =Full load, V _{in} =115VAC | | | 2 | A |
| I _{ih} | Input Current (High Line) | I _o =Full load, V _{in} =230VAC | | | 1.2 | A |
| I _{rl} | Low Line Inrush Current | I _o =Full load, 25°C, Cool start, V _{in} =115VAC | | 28 | 31 | A |
| I _{rh} | High Line Inrush Current | I _o =Full load, 25°C, Cool start, V _{in} =230VAC | | 57 | 63 | A |
| Eff | Efficiency | I _o =Full load, V _{in} =230VAC | 82 | 85 | 87 | % |
| REG-i | Line Regulation | I _o =Full load | | 0.5 | 1 | % |
| REG-o | Load Regulation | V _{in} =230VAC | | 3 | 5 | % |
| 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, V _{in} =100VAC | | | 4 | mS |
| Thold | Hold-Up Time | I _o =Full load, V _{in} =110VAC | 20 | | | mS |
| T _s | Start Up Time | I _o =Full load, V _{in} =100VAC | | | 2 | S |
| V _{p-p} | Ripple & Noise (Peak to Peak) | Full load, V _{in} =90VAC | | 0.5 | 1 | % |
| I _{lk} | Safety Ground Leakage Current | I _o =Full load, V _{in} =240VAC | | 0.075 | 0.1 | mA |
| TC | Temperature Coefficient | All output | -0.04 | | 0.04 | %/°C |

Environmental :

| Sym. | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|-------------------|---|-----------------|------|------|------|------|
| T _{oper} | Operating Temperature | | 0 | 50 | 70 | °C |
| T _{stg} | 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 |
| Pd | Derate linearly from 100% load at 50°C to 50% load at 70°C | | | | | |

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|-------|--|----------------------|------|------|------|-------|
| 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 |
|--------------|----------------|----------------|------------------|----------------------|
| MBU151-105 | 12 VDC | 12.50 A | 5 % | 150W |
| MBU151-108 | 24 VDC | 6.25 A | 3 % | 150W |

Mechanical Specifications :

PIN CHART

| PIN MODEL | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------|------|------|------|------|-----|-----|-----|-----|
| MBU151-1XX | Vout | Vout | Vout | Vout | RTN | RTN | RTN | RTN |

