

MBU30 SERIES

30W Open Frame Switching Power Supplies For Medical Equipment.

Description:

The MBU30 series of compact, open frame constructed, AC/DC switching mode power supplies provide 30 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) ,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
- 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 09-50-3061 and Molex 2478 series crimp terminal
- Input Surge Current, Over Voltage and Over Load protection
- Output Voltage Protection(Crowbar Design)
- Size: 2"x4"
- 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 | | 264 | VAC |
| fin | Input Frequency | | 47 | | 63 | Hz |
| Po | Output Power Range | Vin=90 to 264 VAC | 0 | | 30 | 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 | | | 0.7 | A |
| Iih | Input Current (High Line) | Io=Full load, Vin=230VAC | 0.3 | | 0.5 | A |
| Irl | Low Line Inrush Current | Io=Full load, 25°C,Cool start, Vin=115VAC | | 15 | 18 | A |
| Irh | High Line Inrush Current | Io=Full load, 25°C,Cool start, Vin=230VAC | | 21 | 25 | A |
| Eff | Efficiency | Io=Full load, Vin=230VAC | 70 | 80 | 85 | % |
| 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 | 10 | 12 | | mS |
| Ts | Start Up Time | Io=Full load, Vin=100VAC | 0.3 | 1 | 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 | 0.3 | mA |
| TC | Temperature Coefficient | All output | -0.04 | | 0.04 | %/°C |

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 | | | | | |

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Safety Specifications:

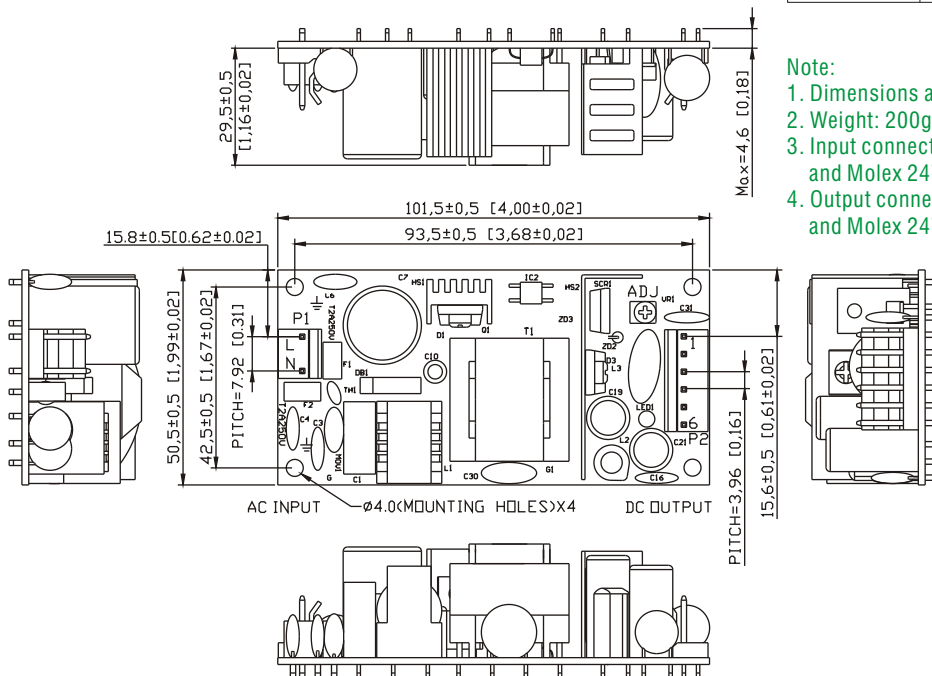
| Sym. | Parameter | Test Conditions ① | Min. | Typ. | Max. | Unit |
|-------|--|----------------------|------|------|------|-------|
| Vps | Dielectric Withstanding Voltage for Primary to secondary | Primary to secondary | 5656 | | | VDC |
| Vpg | Dielectric Withstanding Voltage for Primary to Ground | 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 |

① Recommend to be used on the metal chassis.

Output Voltage And Current Rating Chart (Single Output) :

| Model Number | Output Voltage | Output Current | Total Regulation | Maximum Output Power |
|--------------|----------------|----------------|------------------|----------------------|
| MBU30-102 | 5 VDC | 6.00 A | 5% | 30W |
| MBU30-103 | 7 VDC | 4.28 A | 5% | 30W |
| MBU30-104 | 9 VDC | 3.33 A | 5% | 30W |
| MBU30-105 | 12 VDC | 2.50 A | 5% | 30W |
| MBU30-106 | 15 VDC | 2.00 A | 5% | 30W |
| MBU30-107 | 18 VDC | 1.66 A | 5% | 30W |
| MBU30-108 | 24 VDC | 1.25 A | 5% | 30W |
| MBU30-109 | 30 VDC | 1.00 A | 5% | 30W |
| MBU30-110 | 36 VDC | 0.83 A | 3% | 30W |

Mechanical Specifications :



PIN CHART

| | PIN 1 | 2 | 3 | 4 | 5 | 6 |
|-----------|-------|-----|-----|------|------|------|
| MODEL | RTN | RTN | RTN | Vout | Vout | Vout |
| MBU30-1XX | RTN | RTN | RTN | Vout | Vout | Vout |

Note:

1. Dimensions are shown in inches or mm.
2. Weight: 200gs approx.
3. Input connector mates with Molex housing 09-50-3031 and Molex 2478 series crimp terminal.
4. Output connector mates with Molex housing 09-50-3061 and Molex 2478 series crimp terminal.