

MPU 100 SERIES

100W Desk Top Switching Power Supplies For Medical Equipment.

Description:

The MPU100 series of AC/DC switching mode power supplies provide 100 Watts of continuous output power . All supplies are UL94V-1 min compliant, include IEC-320-C14 input for worldwide applications. 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) ,TUV/T-mark (EN 60601-1) and new CE requirements. All units are 100% burned in and tested.

Features:

- Wide Input Voltage 90 to 264 VAC,47 to 63 Hz
- IEC-320-C14 Input Inlet
- Single to Triple Output
- Output Voltage Available From 5VDC Thru 40VDC
- Optional Output Connector (See appendix)
- Input Surge Current, Over Voltage And Over Load protection
- Output Voltage Protection
- Ultra-low leakage current (under 0.1mA)
- Power Factor Correction
- Class I Insulation
- ON/OFF SWITCH
- 3 year warranty



Safety Approvals :



Electrical Characteristics:

| Sym. | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|-------|-------------------------------|--|------------------|------|------|------|
| Vin | Input Voltage | Operating Voltage | 90 | | 264 | VAC |
| Fin | Input Frequency | | 47 | | 63 | Hz |
| PFC | Power Factor Correction | Io=Full load, Vin=230 VAC | 0.95 | | 1 | |
| Wo | Output Power Range | Vin=90 to 264VAC | 0 | | 100 | 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=115 VAC | | | 1.25 | A |
| Iih | Input Current (High Line) | Io=Full load, Vin=230 VAC | | | 0.5 | A |
| Irl | Low Line Inrush Current | Io=Full load, 25°C ,Cool start, Vin=115VAC | | 12 | 15 | A |
| Irh | High Line Inrush Current | Io=Full load, 25°C ,Cool start, Vin=230VAC | | 26 | 30 | A |
| Eff | Efficiency | Io=Full Load, Vin=230VAC | 75 | 83 | 88 | % |
| 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 | Transient Response | Io=Full Load to Half Load, Vin=100VAC | | | 4 | mS |
| Thold | Hold-Up Time | Io=Full Load, Vin=110VAC | 16 | | | mS |
| Ts | Start Up Time | Io=Full Load, Vin=100VAC | 0.3 | 1.5 | 2 | S |
| * Vrn | Ripple & Noise (Peak to Peak) | Full Load, Vin=90VAC | | 0.5 | 1 | % |
| Ilk | Safety Ground Leakage Current | Io= Full Load, Vin=240VAC/60Hz | | | 0.1 | mA |
| Tc | Temperature Coefficient | All output | -0.04 | | 0.04 | %/°C |

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

Environmental :

| Sym. | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|-------|--|-----------------|------|------|------|------|
| Toper | Operating Temperature | | 0 | | 70 | °C |
| Tstg | Storage Temperature | | -40 | | 85 | °C |
| Hr | Relative Humidity | | 5 | | 95 | % |
| Pd | Derate linearly from 100% load at 50°C to 50% load at 70°C | | | | | |

Safety Specifications:

| Sym. | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|-------|--|------------------------|------|------|------|-------|
| Vps | Dielectric Withstanding Voltage for Primary to secondary | Primary to secondary | 5600 | | | VDC |
| Vpg | Dielectric Withstanding Voltage for Primary to Ground | Primary to ground | 2800 | | | VDC |
| Ri | Isolation Resistance | Test Voltage = 2100VDC | 50 | | | MΩ |
| CISPR | EMI requirements for CISPR-11 | Vin=220VAC | B | | | CLASS |
| FCC | EMI requirements for FCC PART-18 | Vin=110VAC | B | | | CLASS |

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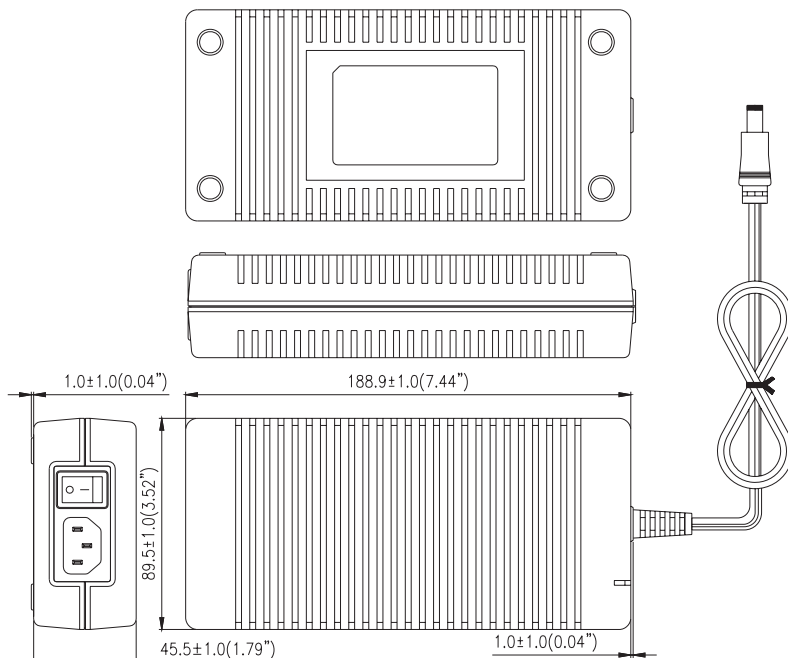
Output Voltage And Current Rating Chart (Single Output) :

| Model Number | Output Voltage | Output Current | Total Regulation | Maximum Output Power |
|--------------|----------------|-----------------|------------------|----------------------|
| MPU100-102 | 5 ~ 6 VDC | 14.00 ~ 11.67 A | 5% | 70W |
| MPU100-103 | 6 ~ 8 VDC | 13.33 ~ 10.00 A | 5% | 80W |
| MPU100-104 | 8 ~ 11 VDC | 11.25 ~ 8.20 A | 4% | 90W |
| MPU100-105 | 12 ~ 13 VDC | 8.33 ~ 7.70 A | 3% | 100W |
| MPU100-106 | 13 ~ 16 VDC | 7.70 ~ 6.30 A | 3% | 100W |
| MPU100-107 | 16 ~ 21 VDC | 6.30 ~ 4.80 A | 3% | 100W |
| MPU100-108 | 21 ~ 27 VDC | 4.80 ~ 3.70 A | 2% | 100W |
| MPU100-109 | 27 ~ 33 VDC | 3.70 ~ 3.00 A | 2% | 100W |
| MPU100-110 | 33 ~ 40 VDC | 3.00 ~ 2.50 A | 2% | 100W |

Output Voltage And Current Rating Chart (Multi Output) :

| Model Number | Output#1 | | | | Output#2 | | | | Output#3 | | | | Maximum Output Power |
|--------------|----------|-------|-------|--------|----------|-------|-------|--------|----------|-------|-------|--------|----------------------|
| | Vonom | Iomin | Iomax | Regmax | Vonom | Iomin | Iomax | Regmax | Vonom | Iomin | Iomax | Regmax | |
| MPU100-200 | +3.3V | 1.0A | 10A | 7% | +12V | 0.3A | 3A | 5% | | | | | 69W |
| MPU100-201 | +5V | 1.0A | 10A | 5% | +12V | 0.3A | 3A | 5% | | | | | 80W |
| MPU100-202 | +5V | 1.0A | 10A | 5% | +15V | 0.3A | 3A | 6% | | | | | 80W |
| MPU100-203 | +5V | 1.0A | 10A | 5% | +24V | 0.2A | 2A | 5% | | | | | 80W |
| MPU100-204 | +3.3V | 1.0A | 10A | 7% | +5V | 0.5A | 5A | 5% | | | | | 55W |
| MPU100-209 | +12V | 0.7A | 7A | 5% | | | | | -12V | 0A | 1A | 5% | 80W |
| MPU100-210 | +15V | 0.6A | 6A | 5% | | | | | -15V | 0A | 1A | 5% | 80W |
| MPU100-212 | +24V | 0.3A | 3A | 5% | | | | | -24V | 0A | 1A | 5% | 80W |
| MPU100-215 | +5V | 1.0A | 10A | 5% | | | | | -24V | 0A | 1A | 5% | 74W |
| MPU100-300 | +3.3V | 1.0A | 10A | 7% | +12V | 0.3A | 3A | 5% | -12V | 0A | 1A | 5% | 74W |
| MPU100-300-1 | +3.3V | 1.0A | 10A | 7% | +12V | 0.3A | 3A | 5% | +12V | 0A | 1A | 5% | 74W |
| MPU100-301 | +5V | 1.0A | 10A | 5% | +12V | 0.3A | 3A | 5% | -5V | 0A | 1A | 5% | 80W |
| MPU100-301-1 | +5V | 1.0A | 10A | 5% | +12V | 0.3A | 3A | 5% | +5V | 0A | 1A | 5% | 80W |
| MPU100-302 | +5V | 1.0A | 10A | 5% | +12V | 0.3A | 3A | 5% | -12V | 0A | 1A | 5% | 80W |
| MPU100-302-1 | +5V | 1.0A | 10A | 5% | +12V | 0.3A | 3A | 5% | +12V | 0A | 1A | 5% | 80W |
| MPU100-303 | +5V | 1.0A | 10A | 5% | +15V | 0.3A | 3A | 6% | -15V | 0A | 1A | 5% | 80W |
| MPU100-303-1 | +5V | 1.0A | 10A | 5% | +15V | 0.3A | 3A | 6% | +15V | 0A | 1A | 5% | 80W |
| MPU100-304 | +5V | 1.0A | 10A | 5% | +24V | 0.3A | 3A | 5% | -24V | 0A | 1A | 5% | 80W |
| MPU100-304-1 | +5V | 1.0A | 10A | 5% | +24V | 0.3A | 3A | 5% | +24V | 0A | 1A | 5% | 80W |
| MPU100-305 | +5V | 1.0A | 10A | 5% | +24V | 0.3A | 3A | 5% | -12V | 0A | 1A | 5% | 80W |
| MPU100-305-1 | +5V | 1.0A | 10A | 5% | +24V | 0.3A | 3A | 5% | +12V | 0A | 1A | 5% | 80W |
| MPU100-306 | +3.3V | 1.0A | 10A | 7% | +12V | 0.3A | 3A | 5% | -5V | 0A | 1A | 5% | 74W |
| MPU100-306-1 | +3.3V | 1.0A | 10A | 7% | +12V | 0.3A | 3A | 5% | +5V | 0A | 1A | 5% | 74W |
| MPU100-308 | +3.3V | 1.0A | 10A | 7% | +5V | 0.3A | 3A | 5% | -12V | 0A | 1A | 5% | 60W |
| MPU100-308-1 | +3.3V | 1.0A | 10A | 7% | +5V | 0.3A | 3A | 5% | +12V | 0A | 1A | 5% | 60W |

Mechanical Specifications:



Note:

1. Dimensions are shown in inches or mm.
2. Weight: 778-800gs approx.
3. Optional output connector:
See page Appendix.