# MPU63 SERIES

## 63W  Desk Top Switching Power Supplies For Medical Equipment.

### Description:

The MPU63 series of AC/DC switching mode power supplies provide 63 Watts of continuous output power.  All supplies are UL94V-1 min compliant. 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$^{nd}$Edition) ,TUV/T-mark (EN 60601-1:2$^{nd}$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
- IEC-320-C14 Input Inlet
- Single Output
- Optional Output Connector (See appendix)
- Input Surge Current, Over Voltage And Over Load protection
- Output Voltage Protection(Crowbar Design)
- Energy Star 2.0, Efficiency level V
- Class I
- 3 year  warranty

### Safety  Approvals :

Agree to apply for the PSE if order on hand

### 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 264VAC | 0 | | 63 | 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 | | | 1.62 | A |
| Iih | Input Current (High Line) | Io=Full load, Vin=230 VAC | | | 0.72 | A |
| Irl | Low Line Inrush Current | Io=Full load, 25°C ,Cool start, Vin= 115VAC | | 28 | 38 | A |
| Irh | High Line Inrush Current | Io=Full load, 25°C ,Cool start, Vin= 230VAC | | 45 | 55 | A |
| Eff | Efficiency | Io=Full  Load, Vin=230VAC | 77 | 85 | 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 | Time of 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 | 2 | S |
| Vp-p | Ripple & Noise (Peak to Peak) | Full Load, Vin=100VAC | | 0.5 | 1 | % |
| Ilk | Safety Ground Leakage Current | Io= Full Load,Vin=240VAC | | | 0.1 | mA |
| Pno | No-Load Power Consumption | No load,Vin=230VAC | 0.3 | 0.4 | 0.5 | W |
| 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 | 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 ① | Maximum Output Power |
|--------------|----------------|----------------|--------------------|----------------------|
| MPU63-102 | 5  VDC | 9.00 A | 7% | 45W |
| MPU63-103 | 7  VDC | 7.85 A | 7% | 55W |
| MPU63-104 | 9  VDC | 6.44 A | 5% | 58W |
| ✳ MPU63-105 | 12  VDC | 5.25 A | 5% | 63W |
| ✳ MPU63-106 | 15  VDC | 4.20 A | 5% | 63W |
| ✳ MPU63-107 | 18  VDC | 3.50 A | 5% | 63W |
| ✳ MPU63-108 | 24  VDC | 2.62 A | 3% | 63W |
| ✳ MPU63-109 | 30  VDC | 2.10 A | 3% | 63W |
| ✳ MPU63-110 | 36  VDC | 1.75 A | 3% | 63W |

MPU63-103~109 had been approved by PSE.

Mark " ✳ " means approved by CEC level V and the output cable must be using as below.

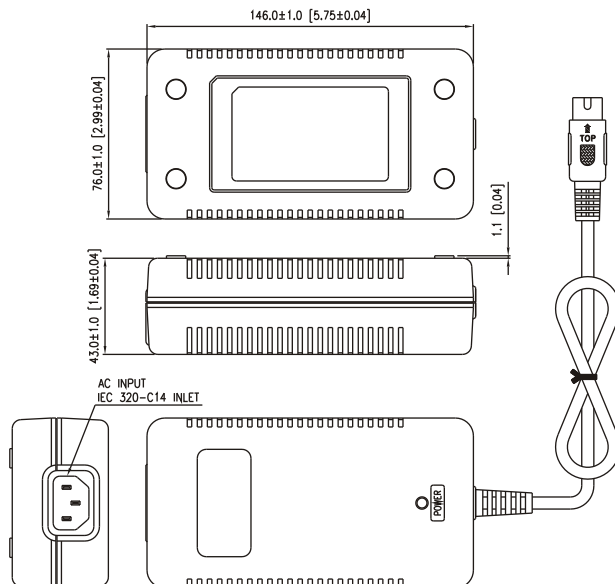① MPU63-102~103 are required to use AWG#16 / 5C / 4FT output cable.

MPU63-104~105 are required to use AWG#16 /2C/ 4FT output cable.

MPU63-106~107 are required to use AWG#16 /2C/ 4FT output cable.

MPU63-108~110 are required to use AWG#18 /2C/ 6FT output cable.

The regulation and efficiency  will be changed by modified output cable.

## Mechanical Specifications:



Note:
1. Dimensions are shown in inches or mm.
2. Weight: 510-560gs approx.
3. Optional output connector:
   See page Appendix.