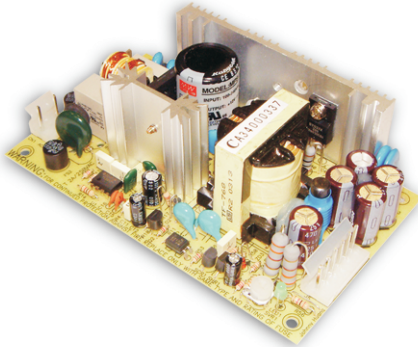




65W Single Output Medical Type

**MPS-65** series

Authorized Distributor: Total Power International, Inc Toll Free: 877-646-0900(US) www.total-power.com



■ Features :

- Universal AC input / Full range
- Low leakage current  $\leq 0.3\text{mA}$
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 45KHz
- 3 years warranty

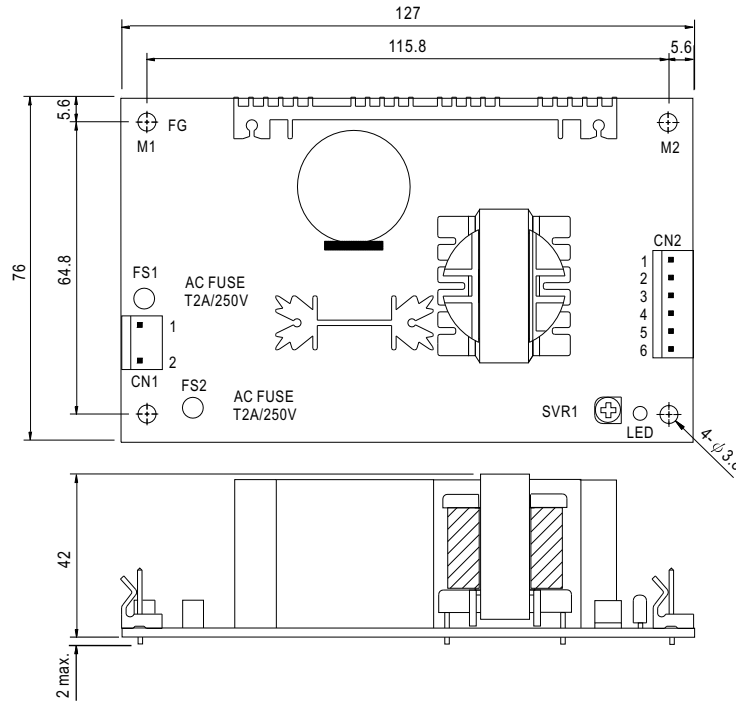


**SPECIFICATION**

| MODEL                 | MPS-65-3.3  | MPS-65-5   | MPS-65-7.5                      | MPS-65-12    | MPS-65-13.5    | MPS-65-15     | MPS-65-24      | MPS-65-27      | MPS-65-48    |              |  |
|-----------------------|---|--|---------------------------------|--------------|----------------|---------------|----------------|----------------|--------------|--------------|--|
| OUTPUT                | DC VOLTAGE  | 3.3V   | 5V                              | 7.5V         | 12V            | 13.5V         | 15V            | 24V            | 27V          | 48V          |  |
|                       | RATED CURRENT   | 12A  | 12A                             | 8A           | 5.2A           | 4.7A          | 4.2A           | 2.7A           | 2.4A         | 1.35A        |  |
|                       | CURRENT RANGE   | 0 ~ 15.2A  | 0 ~ 13.8A                       | 0 ~ 9.6A     | 0 ~ 6A         | 0 ~ 5.4A      | 0 ~ 4.8A       | 0 ~ 3A         | 0 ~ 2.7A     | 0 ~ 1.5A     |  |
|                       | RATED POWER   | 39.6W  | 60W                             | 60W          | 62.4W          | 63.5W         | 63W            | 64.8W          | 64.8W        | 64.8W        |  |
|                       | OUTPUT POWER (max.)   | 72W(+3.3V:50W;+5V:69W)with 18CFM min. Forced air convection                              |                                 |              |                |               |                |                |              |              |  |
|                       | RIPPLE & NOISE (max.) Note.2  | 80mVp-p  | 100mVp-p                        | 100mVp-p     | 100mVp-p       | 100mVp-p      | 100mVp-p       | 100mVp-p       | 100mVp-p     | 100mVp-p     |  |
|                       | VOLTAGE ADJ. RANGE  | 2.97 ~ 3.63V   | 4.5 ~ 5.5V                      | 6.75 ~ 8.25V | 10.8 ~ 13.2V   | 12.2 ~ 14.85V | 13.5 ~ 16.5V   | 21.6 ~ 26.4V   | 24.3 ~ 29.7V | 43.2 ~ 52.8V |  |
|                       | VOLTAGE TOLERANCE Note.3  | $\pm 3.0\%$  | $\pm 3.0\%$                     | $\pm 3.0\%$  | $\pm 2.0\%$    | $\pm 2.0\%$   | $\pm 2.0\%$    | $\pm 2.0\%$    | $\pm 2.0\%$  | $\pm 2.0\%$  |  |
|                       | LINE REGULATION   | $\pm 1.0\%$  | $\pm 1.0\%$                     | $\pm 1.0\%$  | $\pm 1.0\%$    | $\pm 1.0\%$   | $\pm 1.0\%$    | $\pm 1.0\%$    | $\pm 1.0\%$  | $\pm 1.0\%$  |  |
|                       | LOAD REGULATION   | $\pm 3.0\%$  | $\pm 3.0\%$                     | $\pm 3.0\%$  | $\pm 2.0\%$    | $\pm 2.0\%$   | $\pm 2.0\%$    | $\pm 2.0\%$    | $\pm 2.0\%$  | $\pm 2.0\%$  |  |
| SETUP, RISE TIME      | 800ms, 30ms/230VAC  |  | 800ms, 30ms/115VAC at full load |              |                |               |                |                |              |              |  |
| HOLD UP TIME (Typ.)   | 50ms/230VAC   |  | 16ms/115VAC at full load        |              |                |               |                |                |              |              |  |
| INPUT                 | VOLTAGE RANGE   | 90 ~ 264VAC  |                                 | 127 ~ 370VDC |                |               |                |                |              |              |  |
|                       | FREQUENCY RANGE   | 47 ~ 440Hz   |                                 |              |                |               |                |                |              |              |  |
|                       | EFFICIENCY(Typ.)  | 66%  | 74%                             | 76%          | 77%            | 78%           | 79%            | 80%            | 80%          | 80%          |  |
|                       | AC CURRENT (Typ.)   | 1.6A/115VAC  |                                 | 0.9A/230VAC  |                |               |                |                |              |              |  |
|                       | INRUSH CURRENT (Typ.)   | COLD START 15A/115VAC  |                                 | 30A/230VAC   |                |               |                |                |              |              |  |
|                       | LEAKAGE CURRENT   | <0.3mA / 264VAC  |                                 |              |                |               |                |                |              |              |  |
| PROTECTION            | OVERLOAD  | 73 ~ 105W (3.3V:51 ~ 75W)(5V:70 ~ 105W) rated output power                               |                                 |              |                |               |                |                |              |              |  |
|                       |   | Protection type : Hiccup mode, recovers automatically after fault condition is removed   |                                 |              |                |               |                |                |              |              |  |
|                       | OVER VOLTAGE  | 3.8 ~ 4.46V  | 5.75 ~ 6.75V                    | 8.63 ~ 10.1V | 13.8 ~ 16.2V   | 15.5 ~ 18.2V  | 17.25 ~ 20.25V | 27.6 ~ 32.4V   | 31 ~ 36.45V  | 55.2 ~ 64.8V |  |
|                       | Protection type : Hiccup mode, recovers automatically after fault condition is removed  |  |                                 |              |                |               |                |                |              |              |  |
| ENVIRONMENT           | WORKING TEMP.   | -10 ~ +60°C (Refer to output load derating curve)  |                                 |              |                |               |                |                |              |              |  |
|                       | WORKING HUMIDITY  | 20 ~ 90% RH non-condensing   |                                 |              |                |               |                |                |              |              |  |
|                       | STORAGE TEMP., HUMIDITY   | -20 ~ +85°C, 10 ~ 95% RH   |                                 |              |                |               |                |                |              |              |  |
|                       | TEMP. COEFFICIENT   | $\pm 0.04\%/^{\circ}\text{C}$ (0 ~ 50°C)   |                                 |              |                |               |                |                |              |              |  |
|                       | VIBRATION   | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                  |                                 |              |                |               |                |                |              |              |  |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS  | UL2601-1, TUV EN60601-1, IEC60601-1 approved   |                                 |              |                |               |                |                |              |              |  |
|                       | WITHSTAND VOLTAGE   | I/P-O/P:4KVAC  |                                 |              | I/P-FG:1.5KVAC |               |                | O/P-FG:0.5KVAC |              |              |  |
|                       | ISOLATION RESISTANCE  | I/P-O/P, I/P-FG:100M Ohms/500VDC   |                                 |              |                |               |                |                |              |              |  |
|                       | EMI CONDUCTION & RADIATION  | Compliance to EN55011 (CISPR11) Class B  |                                 |              |                |               |                |                |              |              |  |
|                       | HARMONIC CURRENT  | Compliance to EN61000-3-2,-3   |                                 |              |                |               |                |                |              |              |  |
|                       | EMS IMMUNITY  | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN60601-1-2, medical level, criteria A |                                 |              |                |               |                |                |              |              |  |
| OTHERS                | MTBF  | 359.7Khrs min. MIL-HDBK-217F (25°C)  |                                 |              |                |               |                |                |              |              |  |
|                       | DIMENSION   | 127*76*42mm (L*W*H)  |                                 |              |                |               |                |                |              |              |  |
|                       | PACKING   | 0.23Kg; 54pcs/14.6Kg/1.35CUFT  |                                 |              |                |               |                |                |              |              |  |
| NOTE                  | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> <li>5. Mounting holes M1 and M2 should be grounded for EMI purposes.</li> </ol> |  |                                 |              |                |               |                |                |              |              |  |

■ Mechanical Specification

Unit:mm



AC Input Connector (CN1) : Molex 5277-02 or equivalent

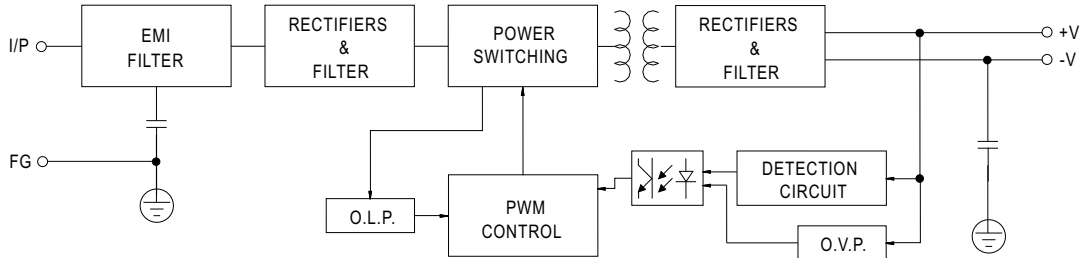
| Pin No. | Assignment | Mating Housing           | Terminal                 |
|---------|------------|--------------------------|--------------------------|
| 1       | AC/L       | Molex 5195 or equivalent | Molex 5194 or equivalent |
| 2       | AC/N       |                          |                          |

DC Output Connector (CN2) : Molex 5273-06 or equivalent

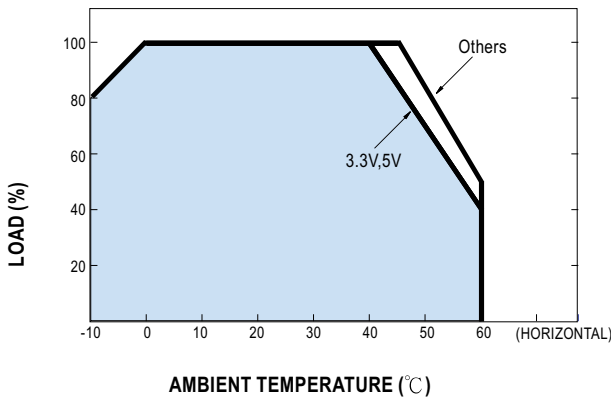
| Pin No. | Assignment | Mating Housing           | Terminal                 |
|---------|------------|--------------------------|--------------------------|
| 1,2,3   | +V         | Molex 5195 or equivalent | Molex 5194 or equivalent |
| 4,5,6   | -V         |                          |                          |

■ Block Diagram

fosc : 45KHz



■ Derating Curve



■ Static Characteristics

