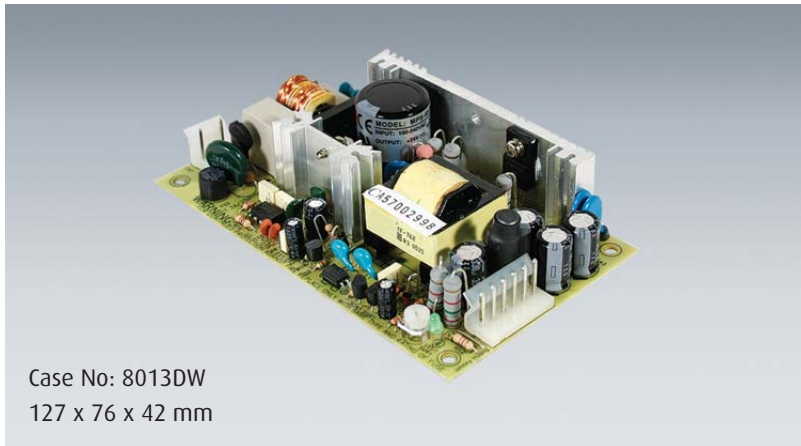


# MPT-65 Series

## 65W Triple Output Medical Type Power Supply



Case No: 8013DW  
127 x 76 x 42 mm

### Features

- Universal AC input/ Full range
- Low leakage current <250µA
- Protections: Short circuit, Overload and Over voltage
- Cooling by free air convection
- 100% Full load burn-in test
- Fixed switching frequency at 45KHz



### Specification

|                  |                             |   |                |        |         |                |        |         |                |        |
|------------------|-----------------------------|---|----------------|--------|---------|----------------|--------|---------|----------------|--------|
| INPUT            | <b>Voltage</b>              | 90V ~ 264VAC universal full range or 127V ~ 370VDC.   |                |        |         |                |        |         |                |        |
|                  | <b>Frequency</b>            | 47 ----- 440 Hz   |                |        |         |                |        |         |                |        |
|                  | <b>Current</b>              | <1.6A@115VAC; 1A@230VAC full load   |                |        |         |                |        |         |                |        |
|                  | <b>Inrush Current</b>       | <20A@115VAC, 40A@230VAC Cold start  |                |        |         |                |        |         |                |        |
|                  | <b>Leakage Current</b>      | Earth leakage current <250µA/264VAC, Touch leakage current <60µA/264VAC                     |                |        |         |                |        |         |                |        |
| OUTPUT           | <b>MODEL No.</b>            | MPT-65A   |                |        | MPT-65B |                |        | MPT-65C |                |        |
|                  | <b>Channel</b>              | CH1   | CH2            | CH3    | CH1     | CH2            | CH3    | CH1     | CH2            | CH3    |
|                  | <b>Voltage</b>              | 5V  | 12V            | -5V    | 5V      | 12V            | -12V   | 5V      | 15V            | -15V   |
|                  | <b>Rated Current</b>        | 5.5A  | 2.5A           | 0.5A   | 5.5A    | 2.5A           | 0.5A   | 5.5A    | 2A             | 0.5A   |
|                  | <b>Current Range</b>        | 0.4~7A  | 0.2~3.2A       | 0~0.7A | 0.4~7A  | 0.2~3.2A       | 0~0.7A | 0.4~7A  | 0.2~2.6A       | 0~0.7A |
|                  | <b>Output Tolerance</b>     | ± 4%  | +10,-7%        | ± 5%   | ± 4%    | +10,-7%        | ± 5%   | ± 4%    | +10,-7%        | ± 5%   |
|                  | <b>Line Regulation</b>      | ± 1%  | ± 2%           | ± 1%   | ± 1%    | ± 2%           | ± 1%   | ± 1%    | ± 2%           | ± 1%   |
|                  | <b>Load Regulation</b>      | ± 3%  | ± 4%           | ± 1%   | ± 3%    | ± 4%           | ± 1%   | ± 3%    | ± 4%           | ± 1%   |
|                  | <b>Ripple Noise MAX.</b>    | 60mV  | 120mV          | 60mV   | 60mV    | 120mV          | 100mV  | 60mV    | 180mV          | 100mV  |
|                  | <b>Efficiency (TYP.)</b>    | 74%   |                |        | 74%     |                |        | 74%     |                |        |
|                  | <b>Rated Power</b>          | 60W   |                |        | 63.5W   |                |        | 65W     |                |        |
|                  | <b>Output Power (Max.)</b>  | 72W with 18CFM min. Forced air convection   |                |        |         |                |        |         |                |        |
|                  | PROTECTION                  | <b>Over Voltage</b>   | CH1:5.75~6.75V |        |         | CH1:5.75~6.75V |        |         | CH1:5.75~6.75V |        |
|                  |                             | Hiccup mode, recovers automatically after fault condition is removed                        |                |        |         |                |        |         |                |        |
| <b>Over Load</b> |                             | 73~95W output power<br>Hiccup mode, recovers automatically after fault condition is removed |                |        |         |                |        |         |                |        |
| ELEC. CHAR.      | <b>Rise Time</b>            | <20mS @ 115~230VAC at full load   |                |        |         |                |        |         |                |        |
|                  | <b>Hold up Time</b>         | >80mS @ 230VAC; 12mS @ 115VAC at full load  |                |        |         |                |        |         |                |        |
|                  | <b>Setup Time</b>           | <0.8 Sec @ 115~230VAC at full load  |                |        |         |                |        |         |                |        |
| ENVIRONMENT      | <b>Temperature</b>          | Operating: -10 ~ +55°C ; Storage: -20~ +85°C  |                |        |         |                |        |         |                |        |
|                  | <b>Humidity</b>             | Operating: 20% ~ 90% RH (non condensing); Storage: 10% ~ 95% RH                             |                |        |         |                |        |         |                |        |
| SAFETY           | <b>Withstand Voltage</b>    | I/P-O/P4KVAC; I/P-FG:2KVAC; O/P-FG:0.5KVAC  |                |        |         |                |        |         |                |        |
|                  | <b>Isolation Resistance</b> | I/P-O/P, I/P-FG 100MΩ/500VDC  |                |        |         |                |        |         |                |        |
|                  | <b>Safety Standard</b>      | ANSI/AAMI ES60601-1, TUV EN60601-1, IEC60601-1 Approved                                     |                |        |         |                |        |         |                |        |
| EMC              | <b>EMI</b>                  | EN55011 (CISPR11) Class B, EN61000-3-2,3  |                |        |         |                |        |         |                |        |
|                  | <b>EMS</b>                  | EN61000-4-2,3,4,5,6,8,11; EN60601-1-2 Medical level, criteria A                             |                |        |         |                |        |         |                |        |
| OTHERS           | <b>Cooling</b>              | Cooling by free air convection  |                |        |         |                |        |         |                |        |
|                  | <b>M.T.B.F.</b>             | 275.1K hrs min. MIL-HDBK-217F (°C)  |                |        |         |                |        |         |                |        |
|                  | <b>Packing</b>              | 0.27Kg; 54pcs/16.8Kg/1.35 CUFT  |                |        |         |                |        |         |                |        |

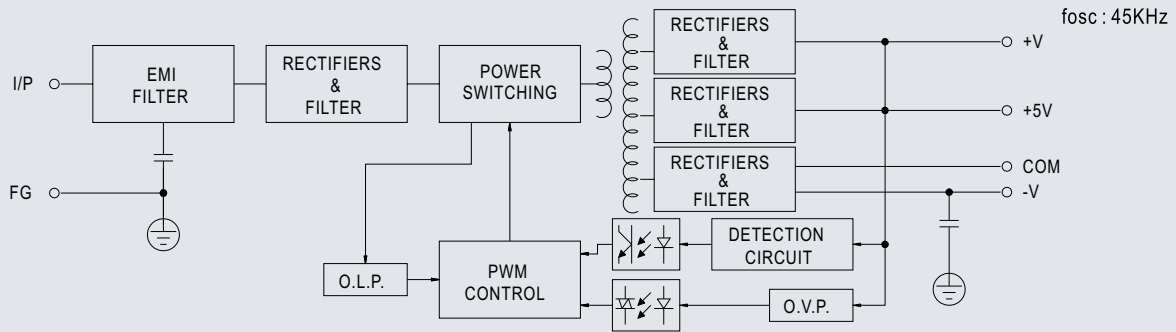
- 1 All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature
- 2 Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf & 47µf parallel capacitor
- 3 Tolerance: includes set up tolerance, line regulation and load regulation
- 4 The power supply is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives
- 5 Mounting holes M1 and M2 should be grounded for EMI purposes
- 6 Heat sink HS1, HS2 can not be shorted
- 7 Touch current was measured from primary input to DC output

# MPT-65 Series

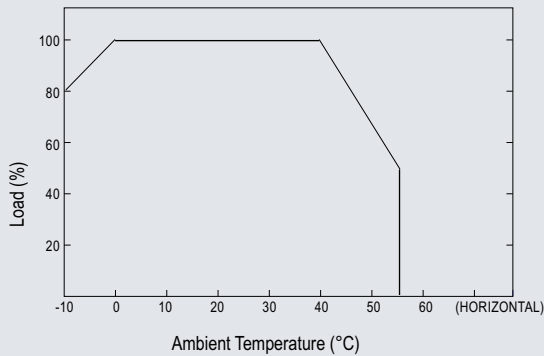
65W Triple Output Medical Type Power Supply



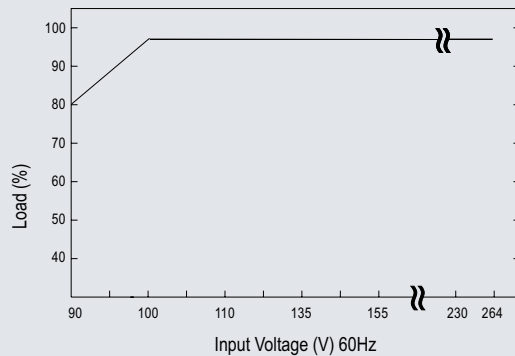
## Block Diagram



## De-Rating Curve



## Static Characteristics



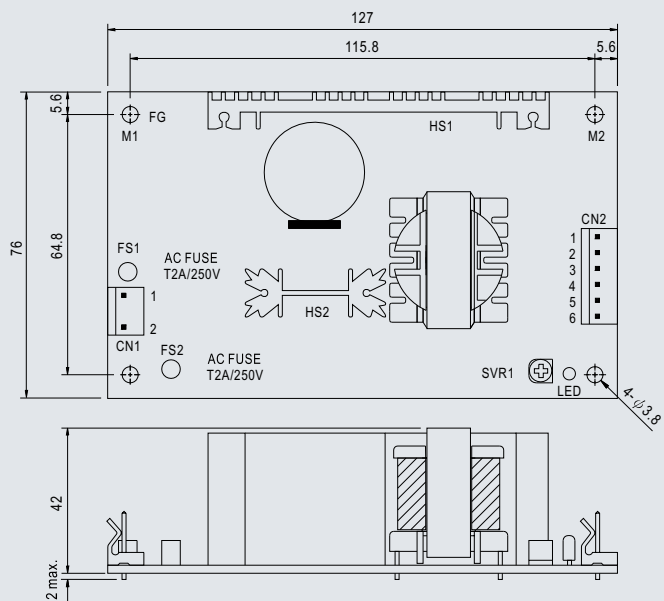
## Dimensions

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

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

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

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



⚠ HS1, HS2 can not be shorted