

## ■ Features

- 5"×3" compact size
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
- Suitable for BF application with appropriate system consideration
- 72W convection, 100W force air
- EMI class B for class I configuration
- Extremely low leakage current
- Protections: Short circuit / Overload / Over voltage
- Lifetime > 140K hours
- 3 years warranty

## ■ Applications

- Oral irrigator
- Hemodialysis machine
- Medical computer monitors
- Sleep apnea devices

## ■ GTIN CODE

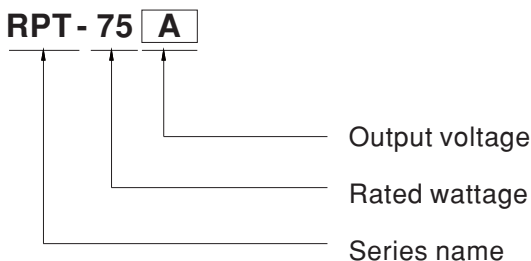
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## ■ Description

RPT-75 is a 72W highly reliable PCB type medical power supply with a high power density on the 5" by 3" footprint. It accepts 90~264VAC input and offers triple output voltages .

RPT-75 is able to be used for Class I system design. The extremely low leakage current is less than 150μA. In addition, it conforms to international medical regulations (2\*MOPP) and EMC BS EN/EN55011.

## ■ Model Encoding





## SPECIFICATION

| MODEL                     | RPT-75A   |   |                         | RPT-75B                  |                                 |   | RPT-75C  |                   |          |          |  |
|---------------------------|---|---|-------------------------|--------------------------|---------------------------------|---|--|-------------------|----------|----------|--|
| OUTPUT                    | OUTPUT NUMBER   | CH1   | CH2                     | CH3                      | CH1                             | CH2   | CH3  | CH1               | CH2      | CH3      |  |
|                           | DC VOLTAGE  | 5V  | 12V                     | -5V                      | 5V                              | 12V   | -12V   | 5V                | 15V      | -15V     |  |
|                           | RATED CURRENT   | 6A  | 3A                      | 0.5A                     | 6A                              | 3A  | 0.5A   | 6A                | 2.3A     | 0.5A     |  |
|                           | CURRENT RANGE   | 0.6 ~ 8A  | 0.2 ~ 4A                | 0.1 ~ 1A                 | 0.6 ~ 8A                        | 0.2 ~ 4A  | 0.1 ~ 1A   | 0.6 ~ 8A          | 0.1 ~ 3A | 0.1 ~ 1A |  |
|                           | RATED POWER   | 68.5W   |                         |                          | 72W                             |   |  | 72W               |          |          |  |
|                           | PEAK LOAD (23.5CFM)   | 93W   |                         |                          | 100W                            |   |  | 100W              |          |          |  |
|                           | RIPPLE & NOISE (max.) Note.2  | 80mVp-p   | 120mVp-p                | 80mVp-p                  | 80mVp-p                         | 120mVp-p  | 80mVp-p  | 80mVp-p           | 120mVp-p | 80mVp-p  |  |
|                           | VOLTAGE ADJ. RANGE  | CH1:4.75 ~ 5.5V   |                         |                          |                                 |   |  |                   |          |          |  |
|                           | VOLTAGE TOLERANCE Note.3  | ±2.0%   | ±6.0%                   | ±5.0%                    | ±2.0%                           | ±6.0%   | ±5.0%  | ±2.0%             | ±8.0%    | ±5.0%    |  |
|                           | LINE REGULATION   | ±0.5%   | ±1.0%                   | ±1.0%                    | ±0.5%                           | ±1.0%   | ±1.0%  | ±0.5%             | ±1.0%    | ±1.0%    |  |
|                           | LOAD REGULATION   | ±1.5%   | ±3.0%                   | ±1.0%                    | ±1.5%                           | ±3.0%   | ±1.0%  | ±1.5%             | ±3.0%    | ±1.0%    |  |
|                           | SETUP, RISE TIME  | 500ms, 30ms/230VAC  |                         |                          | 500ms, 30ms/115VAC at full load |   |  |                   |          |          |  |
| HOLD UP TIME (Typ.)       | 90ms/230VAC   |   |                         | 20ms/115VAC at full load |                                 |   |  |                   |          |          |  |
| INPUT                     | VOLTAGE RANGE   | 90 ~ 264VAC   |                         | 127 ~ 370VDC             |                                 |   |  |                   |          |          |  |
|                           | FREQUENCY RANGE   | 47 ~ 63Hz   |                         |                          |                                 |   |  |                   |          |          |  |
|                           | EFFICIENCY(Typ.)  | 76%   |                         |                          | 77%                             |   |  | 77%               |          |          |  |
|                           | AC CURRENT (Typ.)   | 1.5A/115VAC   |                         | 1A/230VAC                |                                 |   |  |                   |          |          |  |
|                           | INRUSH CURRENT (Typ.)   | COLD START 25A/115VAC   |                         | 50A/230VAC               |                                 |   |  |                   |          |          |  |
| LEAKAGE CURRENT Note.4    | Earth leakage current < 150 μA/264VAC , Touch current < 100 μA/264VAC |   |                         |                          |                                 |   |  |                   |          |          |  |
| PROTECTION                | OVERLOAD  | 140 ~ 180% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed   |                         |                          |                                 |   |  |                   |          |          |  |
|                           | OVER VOLTAGE  | Ch1: 5.7 ~ 6.8V<br>Protection type : Shut down o/p voltage, re-power on to recover  |                         |                          |                                 |   |  |                   |          |          |  |
| ENVIRONMENT               | WORKING TEMP.   | -20 ~ +70°C (Refer to "Derating Curve")   |                         |                          |                                 |   |  |                   |          |          |  |
|                           | WORKING HUMIDITY  | 20 ~ 90% RH non-condensing  |                         |                          |                                 |   |  |                   |          |          |  |
|                           | STORAGE TEMP., HUMIDITY   | -40 ~ +85°C, 10 ~ 95% RH non-condensing   |                         |                          |                                 |   |  |                   |          |          |  |
|                           | TEMP. COEFFICIENT   | ±0.03%/°C (0 ~ 45°C)  |                         |                          |                                 |   |  |                   |          |          |  |
|                           | VIBRATION   | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes   |                         |                          |                                 |   |  |                   |          |          |  |
| OPERATING ALTITUDE Note.5 | 3000 meters   |   |                         |                          |                                 |   |  |                   |          |          |  |
| SAFETY & EMC (Note 8)     | SAFETY STANDARDS  | IEC 60601-1:2005+A1+A2, TUV BS EN/ EN 60601-1:2006+A1+A12+A2, ANSI/AAMI ES60601-1:2005+A2 CAN/CSA C22.2 No. 60601-1:2014+A2, EAC TP TC 004 approved; Design refer to BS EN/EN60335-1 (by request) |                         |                          |                                 |   |  |                   |          |          |  |
|                           | ISOLATION LEVEL   | Primary-Secondary:2xMOPP, Primary-Earth:1xMOPP  |                         |                          |                                 |   |  |                   |          |          |  |
|                           | WITHSTAND VOLTAGE   | I/P-O/P:4KVAC   |                         | I/P-FG:2KVAC             |                                 | O/P-FG:1.5KVAC  |  |                   |          |          |  |
|                           | ISOLATION RESISTANCE  | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH  |                         |                          |                                 |   |  |                   |          |          |  |
|                           | EMC EMISSION  | Parameter   | Standard                |                          |                                 |   |  | Test Level / Note |          |          |  |
|                           |   | Conducted emission  | BS EN/EN55011 (CISPR11) |                          |                                 |   |  | Class B           |          |          |  |
|                           |   | Radiated emission   | BS EN/EN55011 (CISPR11) |                          |                                 |   |  | Class B           |          |          |  |
|                           |   | Harmonic current  | BS EN/EN61000-3-2       |                          |                                 |   |  | Class A           |          |          |  |
|                           | Voltage flicker   | BS EN/EN61000-3-3   |                         |                          |                                 |   | -----  |                   |          |          |  |
|                           | EMC IMMUNITY  | BS EN/EN55035,BS EN/EN60601-1-2   |                         |                          |                                 |   |  |                   |          |          |  |
| Parameter                 |   | Standard  |                         |                          |                                 |   | Test Level / Note  |                   |          |          |  |
| ESD                       |   | BS EN/EN61000-4-2   |                         |                          |                                 |   | Level 4, 15KV air ; Level 4, 8KV contact                             |                   |          |          |  |
| RF field susceptibility   |   | BS EN/EN61000-4-3   |                         |                          |                                 |   | Level 3, 10V/m( 80MHz~2.7GHz )<br>Table 9, 9~28V/m( 385MHz~5.78GHz ) |                   |          |          |  |
| EFT bursts                |   | BS EN/EN61000-4-4   |                         |                          |                                 |   | Level 3, 2KV   |                   |          |          |  |
| Surge susceptibility      |   | BS EN/EN61000-4-5   |                         |                          |                                 |   | Level 4, 4KV/Line-FG ; 2KV/Line-Line                                 |                   |          |          |  |
| Conducted susceptibility  |   | BS EN/EN61000-4-6   |                         |                          |                                 |   | Level 3, 10V   |                   |          |          |  |
| Magnetic field immunity   |   | BS EN/EN61000-4-8   |                         |                          |                                 |   | Level 4, 30A/m   |                   |          |          |  |
| Voltage dip, interruption | BS EN/EN61000-4-11  |   |                         |                          |                                 | 100% dip 1 periods, 30% dip 25 periods,<br>100% interruptions 250 periods |  |                   |          |          |  |
| OTHERS                    | MTBF  | 2305.8K hrs min. Telcordia SR-332 (Bellcore) ; 521.3K hrs min. MIL-HDBK-217F (25°C)   |                         |                          |                                 |   |  |                   |          |          |  |
|                           | DIMENSION (L*W*H)   | 127*76.2*31mm or 5" * 3" * 1.22" inch   |                         |                          |                                 |   |  |                   |          |          |  |
|                           | PACKING   | 0.25Kg; 63pcs/17.3Kg/1.28CUFT   |                         |                          |                                 |   |  |                   |          |          |  |

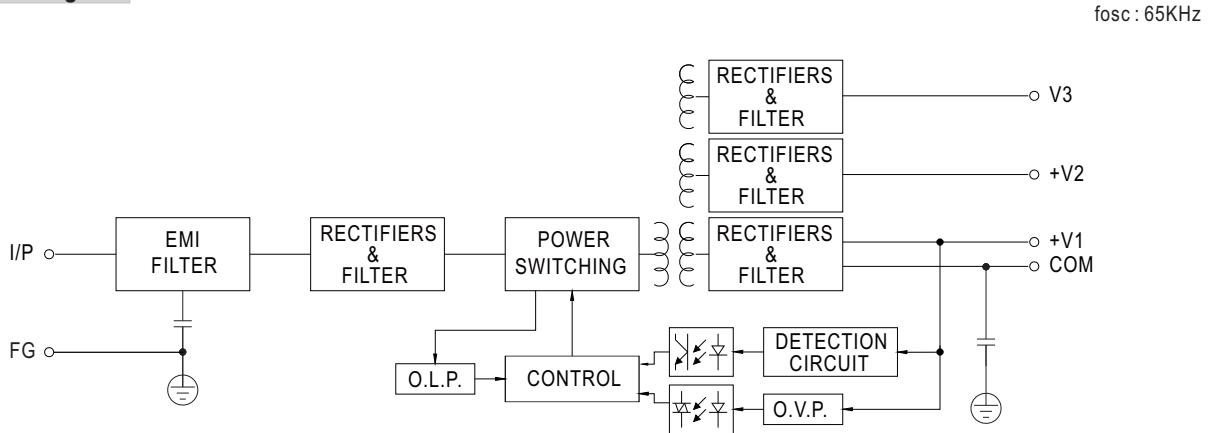
- NOTE**
- All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
  - Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μf & 47 μf parallel capacitor.
  - Tolerance : includes set up tolerance, line regulation and load regulation.
  - Touch current was measured from primary input to DC output.
  - The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).
  - Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.
  - Heat Sink HS1,HS2,HS3 can not be shorted.
  - The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm\*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on [https://www.meanwell.com/Upload/PDF/EMI\\_statement\\_en.pdf](https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) )
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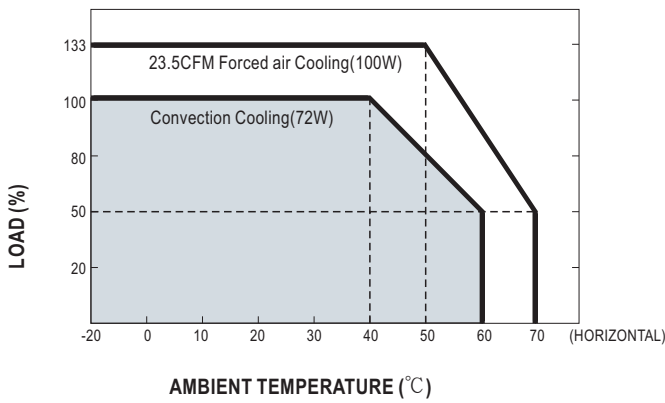
**SPECIFICATION**

| MODEL                     |   | RPT-75D  |                         |   | RPT-7503   |                   |          |  |
|---------------------------|---|--|-------------------------|---|--|-------------------|----------|--|
| OUTPUT                    | OUTPUT NUMBER   | CH1  | CH2                     | CH3   | CH1  | CH2               | CH3      |  |
|                           | DC VOLTAGE  | 5V   | 24V                     | 12V   | 3.3V   | 5V                | 12V      |  |
|                           | RATED CURRENT   | 5A   | 1.5A                    | 1A  | 6A   | 6A                | 1A       |  |
|                           | CURRENT RANGE   | 0.6 ~ 7A   | 0.1 ~ 2A                | 0.1 ~ 1A  | 0.7 ~ 7A   | 0 ~ 8A            | 0 ~ 1.5A |  |
|                           | RATED POWER   | 73W  |                         |   | 61.8W  |                   |          |  |
|                           | PEAK LOAD (23.5CFM)   | 95W  |                         |   | 81.1W  |                   |          |  |
|                           | RIPPLE & NOISE (max.) Note.2  | 80mVp-p  | 200mVp-p                | 120mVp-p  | 80mVp-p  | 120mVp-p          | 120mVp-p |  |
|                           | VOLTAGE ADJ. RANGE  | CH1:4.75 ~ 5.5V  |                         |   | -----  |                   |          |  |
|                           | VOLTAGE TOLERANCE Note.3  | ±2.0%  | ±8.0%                   | ±8.0%   | ±4.0%  | ±6.0%             | +10,-6%  |  |
|                           | LINE REGULATION   | ±0.5%  | ±1.0%                   | ±1.0%   | ±1.0%  | ±1.0%             | ±1.5%    |  |
|                           | LOAD REGULATION   | ±1.5%  | ±3.0%                   | ±3.0%   | +3,-4%   | +5,-4%            | ±6.0%    |  |
|                           | SETUP, RISE TIME  | 500ms, 30ms/230VAC    500ms, 30ms/115VAC at full load  |                         |   |  |                   |          |  |
| HOLD UP TIME (Typ.)       | 90ms/230VAC    20ms/115VAC at full load   |  |                         |   |  |                   |          |  |
| INPUT                     | VOLTAGE RANGE   | 90 ~ 264VAC    127 ~ 370VDC  |                         |   |  |                   |          |  |
|                           | FREQUENCY RANGE   | 47 ~ 63Hz  |                         |   |  |                   |          |  |
|                           | EFFICIENCY(Typ.)  | 79%  |                         |   | 74%  |                   |          |  |
|                           | AC CURRENT (Typ.)   | 1.5A/115VAC    1A/230VAC   |                         |   |  |                   |          |  |
|                           | INRUSH CURRENT (Typ.)   | COLD START 25A/115VAC    50A/230VAC  |                         |   |  |                   |          |  |
|                           | LEAKAGE CURRENT Note.4  | Earth leakage current < 150µA/264VAC , Touch current < 100µA/264VAC  |                         |   |  |                   |          |  |
| PROTECTION                | OVERLOAD  | 140 ~ 180% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed  |                         |   |  |                   |          |  |
|                           | OVER VOLTAGE  | Ch1: 5.7 ~ 6.8V  |                         |   | Ch1: 3.8 ~ 4.5V  |                   |          |  |
|                           |   | Protection type : Shut down o/p voltage, re-power on to recover  |                         |   |  |                   |          |  |
| ENVIRONMENT               | WORKING TEMP.   | -20 ~ +70°C (Refer to "Derating Curve")  |                         |   |  |                   |          |  |
|                           | WORKING HUMIDITY  | 20 ~ 90% RH non-condensing   |                         |   |  |                   |          |  |
|                           | STORAGE TEMP., HUMIDITY   | -40 ~ +85°C, 10 ~ 95% RH non-condensing  |                         |   |  |                   |          |  |
|                           | TEMP. COEFFICIENT   | ±0.03%/°C (0 ~ 45°C)   |                         |   |  |                   |          |  |
|                           | VIBRATION   | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes  |                         |   |  |                   |          |  |
|                           | OPERATING ALTITUDE Note.5   | 3000 meters  |                         |   |  |                   |          |  |
| SAFETY & EMC (Note 8)     | SAFETY STANDARDS  | IEC 60601-1:2005+A1+A2, TUV BS EN/ EN 60601-1:2006+A1+A12+A2, ANSI/AAMI ES60601-1:2005+A2<br>CAN/CSA C22.2 No. 60601-1:2014+A2, EAC TP TC 004 approved; Design refer to BS EN/EN60335-1 (by request) |                         |   |  |                   |          |  |
|                           | ISOLATION LEVEL   | Primary-Secondary:2xMOPP, Primary-Earth:1xMOPP   |                         |   |  |                   |          |  |
|                           | WITHSTAND VOLTAGE   | I/P-O/P:4KVAC    I/P-FG:2KVAC    O/P-FG:1.5KVAC  |                         |   |  |                   |          |  |
|                           | ISOLATION RESISTANCE  | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH   |                         |   |  |                   |          |  |
|                           | EMC EMISSION  | Parameter  | Standard                |   |  | Test Level / Note |          |  |
|                           |   | Conducted emission   | BS EN/EN55011 (CISPR11) |   |  | Class B           |          |  |
|                           |   | Radiated emission  | BS EN/EN55011 (CISPR11) |   |  | Class B           |          |  |
|                           |   | Harmonic current   | BS EN/EN61000-3-2       |   |  | Class A           |          |  |
|                           | Voltage flicker   | BS EN/EN61000-3-3  |                         |   | -----  |                   |          |  |
|                           | EMC IMMUNITY  | BS EN/EN55035,BS EN/EN60601-1-2  |                         |   |  |                   |          |  |
|                           |   | Parameter  | Standard                |   |  | Test Level / Note |          |  |
| ESD                       |   | BS EN/EN61000-4-2  |                         |   | Level 4, 15KV air ; Level 4, 8KV contact                             |                   |          |  |
| RF field susceptibility   |   | BS EN/EN61000-4-3  |                         |   | Level 3, 10V/m( 80MHz~2.7GHz )<br>Table 9, 9~28V/m( 385MHz~5.78GHz ) |                   |          |  |
| EFT bursts                |   | BS EN/EN61000-4-4  |                         |   | Level 3, 2KV   |                   |          |  |
| Surge susceptibility      |   | BS EN/EN61000-4-5  |                         |   | Level 4, 4KV/Line-FG ; 2KV/Line-Line                                 |                   |          |  |
| Conducted susceptibility  |   | BS EN/EN61000-4-6  |                         |   | Level 3, 10V   |                   |          |  |
| Magnetic field immunity   |   | BS EN/EN61000-4-8  |                         |   | Level 4, 30A/m   |                   |          |  |
| Voltage dip, interruption | BS EN/EN61000-4-11  |  |                         | 100% dip 1 periods, 30% dip 25 periods,<br>100% interruptions 250 periods |  |                   |          |  |
| OTHERS                    | MTBF  | 2305.8K hrs min.    Telcordia SR-332 (Bellcore) ; 521.3K hrs min.    MIL-HDBK-217F (25°C)  |                         |   |  |                   |          |  |
|                           | DIMENSION (L*W*H)   | 127*76.2*31mm or 5" * 3" *1.22" inch   |                         |   |  |                   |          |  |
|                           | PACKING   | 0.25Kg; 63pcs/17.3Kg/1.28CUFT  |                         |   |  |                   |          |  |
| NOTE                      | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf &amp; 47µf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Touch current was measured from primary input to DC output.</p> <p>5. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>6. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.</p> <p>7. Heat Sink HS1,HS2,HS3 can not be shorted.</p> <p>8. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."<br/>(as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a>)</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p> |  |                         |   |  |                   |          |  |

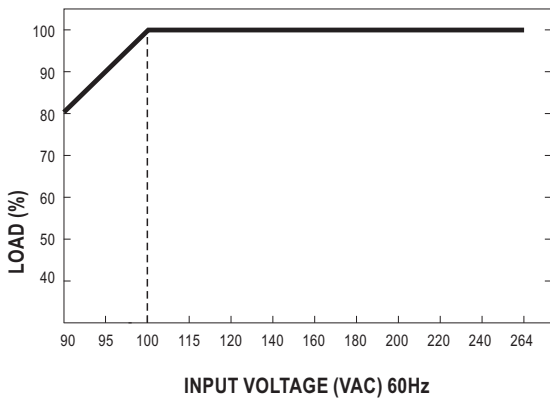
■ Block Diagram



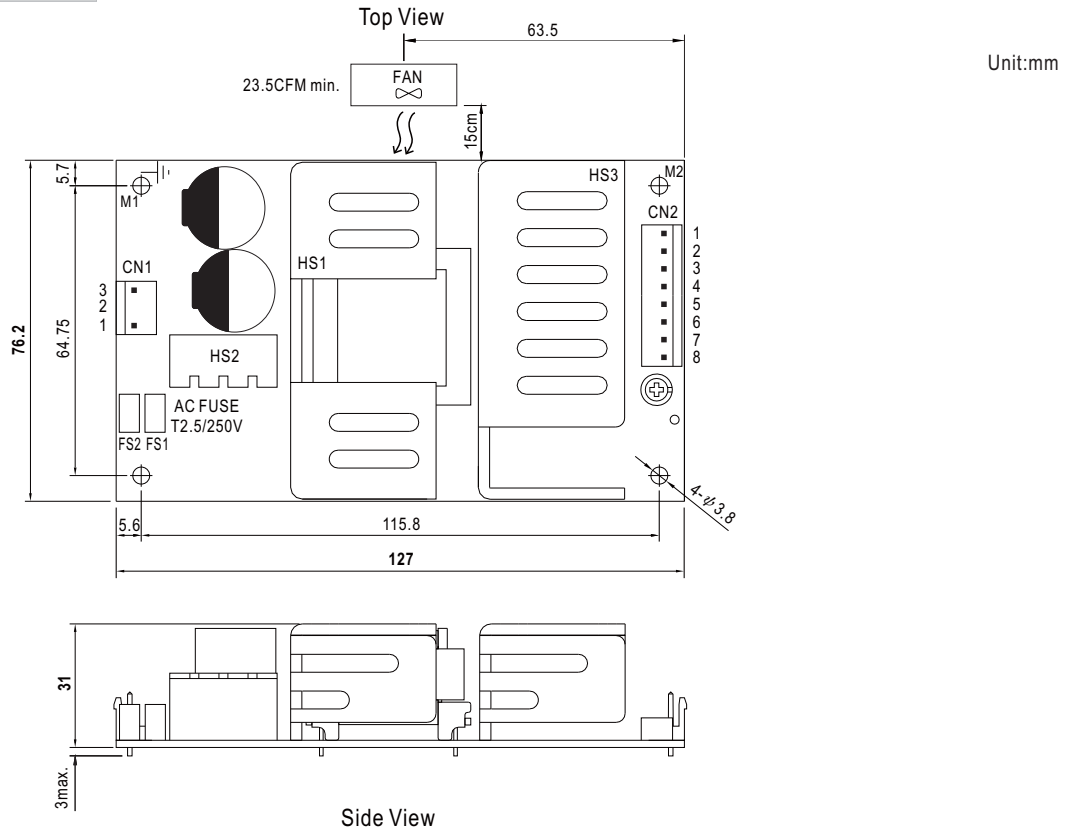
■ Derating Curve



■ Output Derating VS Input Voltage



**Mechanical Specification**



AC Input Connector (CN1) : JST B3P-VH or equivalent

| Pin No. | Assignment | Mating Housing        | Terminal                       |
|---------|------------|-----------------------|--------------------------------|
| 1       | AC/N       | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 2       | No Pin     |                       |                                |
| 3       | AC/L       |                       |                                |

DC Output Connector (CN2) : JST B8P-VH or equivalent

| Pin No. | Assignment | Mating Housing        | Terminal                       |
|---------|------------|-----------------------|--------------------------------|
| 1,2     | V1         | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 3,4,5   | COM        |                       |                                |
| 6,7     | V2         |                       |                                |
| 8       | V3         |                       |                                |

⊕ : Grounding Required

- ⚠ 1.HS1,HS2,HS3 cannot be shorted.
- 2.M1 is safety ground. For better EMC performance,Please secure an electrical connection between M1,M2 and chassis grounding.

**Installation Manual**

Please refer to : <http://www.meanwell.com/manual.html>