



■ Features :

- Universal AC input / Full range
- Low leakage current <200uA
- Protections: Short circuit / Overload / Over voltage
- Ultra-miniature size, light weight
- Cooling by free air convection
- UL60601-1/IEC60601-1/EN60601-1 medical safety approved
- No load power consumption<0.75W
- 100% full load burn-in test
- Fixed switching frequency at 90KHz
- High reliability
- 3 years warranty

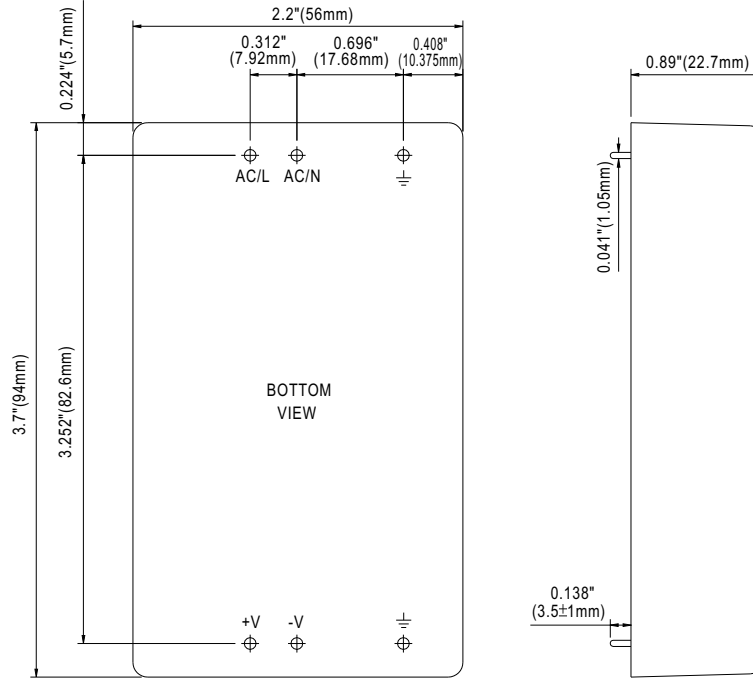


SPECIFICATION

| MODEL                 | PM-20-3.3                                 | PM-20-5  | PM-20-12     | PM-20-15     | PM-20-24       |              |
|-----------------------|---|--|--------------|--------------|----------------|--------------|
| OUTPUT                | DC VOLTAGE                                | 3.3V   | 5V           | 12V          | 15V            | 24V          |
|                       | RATED CURRENT                             | 4.5A   | 4.4A         | 1.8A         | 1.4A           | 0.92A        |
|                       | CURRENT RANGE                             | 0 ~ 4.5A   | 0 ~ 4.4A     | 0 ~ 1.8A     | 0 ~ 1.4A       | 0 ~ 0.92A    |
|                       | RATED POWER                               | 14.85W   | 22W          | 21.6W        | 21W            | 22.08W       |
|                       | RIPPLE & NOISE (max.) Note.2              | 80mVp-p  | 80mVp-p      | 150mVp-p     | 150mVp-p       | 240mVp-p     |
|                       | VOLTAGE TOLERANCE Note.3                  | ±3.0%  | ±2.0%        | ±2.0%        | ±2.0%          | ±2.0%        |
|                       | LINE REGULATION                           | ±1.0%  | ±1.0%        | ±0.5%        | ±0.5%          | ±0.5%        |
|                       | LOAD REGULATION                           | ±1.5%  | ±1.5%        | ±1.0%        | ±1.0%          | ±0.5%        |
|                       | SETUP, RISE TIME                          | 500ms, 20ms/230VAC      500ms, 20ms/115VAC at full load  |              |              |                |              |
| HOLD UP TIME (Typ.)   | 50ms/230VAC      16ms/115VAC at full load |  |              |              |                |              |
| INPUT                 | VOLTAGE RANGE                             | 85 ~ 264VAC      120 ~ 370VDC  |              |              |                |              |
|                       | FREQUENCY RANGE                           | 47 ~ 440Hz   |              |              |                |              |
|                       | EFFICIENCY (Typ.)                         | 71%  | 75%          | 81%          | 83%            | 84%          |
|                       | AC CURRENT (Typ.)                         | 0.6A/115VAC      0.4A/230VAC   |              |              |                |              |
|                       | INRUSH CURRENT (Typ.)                     | COLD START 30A/115VAC      65A/230VAC  |              |              |                |              |
| LEAKAGE CURRENT       | <200uA / 240VAC                           |  |              |              |                |              |
| PROTECTION            | OVERLOAD                                  | Above 105% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed  |              |              |                |              |
|                       | OVER VOLTAGE                              | 3.8 ~ 4.46V  | 5.75 ~ 6.75V | 13.8 ~ 16.2V | 17.25 ~ 20.25V | 27.6 ~ 32.4V |
| ENVIRONMENT           | WORKING TEMP.                             | -20 ~ +60°C (Refer to output load derating curve)  |              |              |                |              |
|                       | WORKING HUMIDITY                          | 20 ~ 90% RH non-condensing   |              |              |                |              |
|                       | STORAGE TEMP., HUMIDITY                   | -40 ~ +85°C, 10 ~ 95% RH   |              |              |                |              |
|                       | TEMP. COEFFICIENT                         | ±0.03%/°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                          | UL60601-1, TUV EN60601-1, IEC60601-1 approved  |              |              |                |              |
|                       | WITHSTAND VOLTAGE                         | I/P-O/P:4KVAC    I/P-FG:1.5KVAC    O/P-FG:1.5KVAC  |              |              |                |              |
|                       | ISOLATION RESISTANCE                      | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH   |              |              |                |              |
|                       | EMI CONDUCTION & RADIATION                | Compliance to EN55011(CISPR11),EN55022 (CISPR22) Class B   |              |              |                |              |
|                       | HARMONIC CURRENT                          | Compliance to EN61000-3-2, -3  |              |              |                |              |
| OTHERS                | EMS IMMUNITY                              | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, EN60601-1-2, EN61204-3, medical level, criteria A   |              |              |                |              |
|                       | MTBF                                      | 487.8Khrs min.    MIL-HDBK-217F (25°C)   |              |              |                |              |
|                       | DIMENSION                                 | 94*56*22.7mm (L*W*H)   |              |              |                |              |
| NOTE                  | PACKING                                   | 0.18Kg; 90pcs/17.2Kg/0.97CUFT  |              |              |                |              |
|                       |   | <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 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>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.</p> |              |              |                |              |

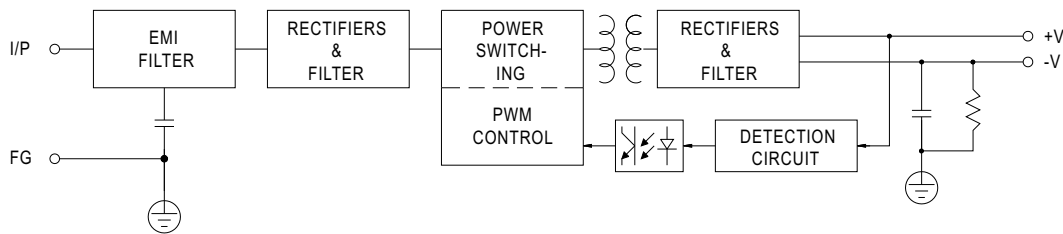
■ Mechanical Specification

Case No. 951A Unit:inch(mm)

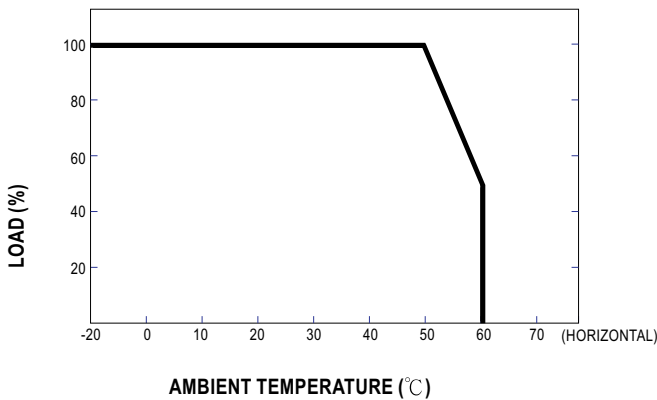


■ Block Diagram

fosc : 90KHz



■ Derating Curve



■ Output Derating VS Input Voltage

