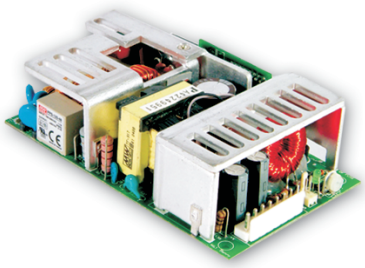
MEAN WELL

125W Single Output with PFC Function

# PPS-125 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage
- PWM control and regulated
- High power density 6.117W/inch$^3$
- Built-in remote sense function
- LED indicator for power on
- 100% full load burn-in test
- 125W with 18CFM FAN
- 5"x3" compact size
- 3 years warranty

## SPECIFICATION

| MODEL | | PPS-125-3.3 | PPS-125-5 | PPS-125-12 | PPS-125-13.5 | PPS-125-15 | PPS-125-24 | PPS-125-27 | PPS-125-48 |
|---|---|---|---|---|---|---|---|---|---|
| OUTPUT | DC VOLTAGE | 3.3V | 5V | 12V | 13.5V | 15V | 24V | 27V | 48V |
| | RATED CURRENT | 20A | 20A | 8.5A | 7.5A | 6.7A | 4.2A | 3.8A | 2.1A |
| | CURRENT RANGE (convection) | 0 ~ 20A | 0 ~ 20A | 0 ~ 8.5A | 0 ~ 7.5A | 0 ~ 6.7A | 0 ~ 4.2A | 0 ~ 3.8A | 0 ~ 2.1A |
| | CURRENT RANGE (18CFM FAN) | 0 ~ 25A | 0 ~ 25A | 0 ~ 10.5A | 0 ~ 9.3A | 0 ~ 8.4A | 0 ~ 5.2A | 0 ~ 4.6A | 0 ~ 2.6A |
| | RATED POWER (convection) | 66W | 100W | 102W | 101.25W | 100.5W | 100.8W | 102.6W | 100.8W |
| | RATED POWER (18CFM FAN) | 82.5W | 125W | 126W | 125.55W | 126W | 124.8W | 124.2W | 124.8W |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 100mVp-p | 100mVp-p | 100mVp-p | 100mVp-p | 150mVp-p | 150mVp-p | 250mVp-p |
| | VOLTAGE ADJ. RANGE | 3.13 ~ 3.46V | 4.75 ~ 5.25V | 11.40 ~ 12.60V | 12.82 ~ 14.17V | 14.25 ~ 15.75V | 22.80 ~ 25.20V | 25.65 ~ 28.35V | 45.60 ~ 50.40V |
| | VOLTAGE TOLERANCE Note.3 | ±2.0% | ±2.0% | ±2.0% | ±2.0% | ±2.0% | ±1.0% | ±1.0% | ±1.0% |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| | LOAD REGULATION | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% |
| | SETUP, RISE TIME | 1000ms, 30ms/230VAC 2000ms, 30ms/115VAC at full load | | | | | | | |
| | HOLD UP TIME (Typ.) | 24ms/230VAC 24ms/115VAC at full load | | | | | | | |
| INPUT | VOLTAGE RANGE | 90 ~ 264VAC 127 ~ 370VDC | | | | | | | |
| | FREQUENCY RANGE | 47~63Hz | | | | | | | |
| | POWER FACTOR (Typ.) | PF>0.93/230VAC PF>0.98/115VAC at full load | | | | | | | |
| | EFFICIENCY (Typ.) | 70% | 79% | 80% | 80% | 80% | 83% | 83% | 84% |
| | AC CURRENT (Typ.) 115VAC | 1.2A | 1.7A | | | | | | |
| | AC CURRENT (Typ.) 230VAC | 0.6A | 0.75A | | | | | | |
| | INRUSH CURRENT (Typ.) | COLD START 24A/230VAC | | | | | | | |
| | LEAKAGE CURRENT | <2mA / 240VAC | | | | | | | |
| PROTECTION | OVERLOAD | 130 ~ 160% rated output power | | | | | | | |
| | | Protection type : Fold back current limiting, recovers automatically after fault condition is removed | | | | | | | |
| | OVER VOLTAGE | 3.63 ~ 4.45V | 5.5 ~ 6.75V | 13.8 ~ 16.2V | 15.5 ~ 20.25V | 17.25 ~ 20.25V | 27.6 ~ 32.4V | 31.05 ~ 36.45V | 57.6 ~ 67.2V |
| | | Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | | | |
| ENVIRONMENT | WORKING TEMP. | -20 ~ +70℃ (Refer to output load derating curve) | | | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85℃, 10 ~ 95% RH | | | | | | | |
| | TEMP. COEFFICIENT | ±0.05%/℃ (0 ~ 50℃) | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | | | | | | |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS | UL60950-1, TUV EN60950-1 approved | | | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC | | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC | | | | | | | |
| | EMI CONDUCTION & RADIATION | Compliance to EN55022 (CISPR22) Class B | | | | | | | |
| | HARMONIC CURRENT | Compliance to EN61000-3-2,-3 | | | | | | | |
| | EMS IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A | | | | | | | |
| OTHERS | MTBF | 111.7Khrs min. MIL-HDBK-217F (25℃) | | | | | | | |
| | DIMENSION | 127*76.2*34.6mm (L*W*H) | | | | | | | |
| | PACKING | 0.37Kg; 36pcs/14.3Kg/0.79CUFT | | | | | | | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>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.<br>5. Heat Sink HS1,HS2 & HS3 can not be shorted. | | | | | | | | |

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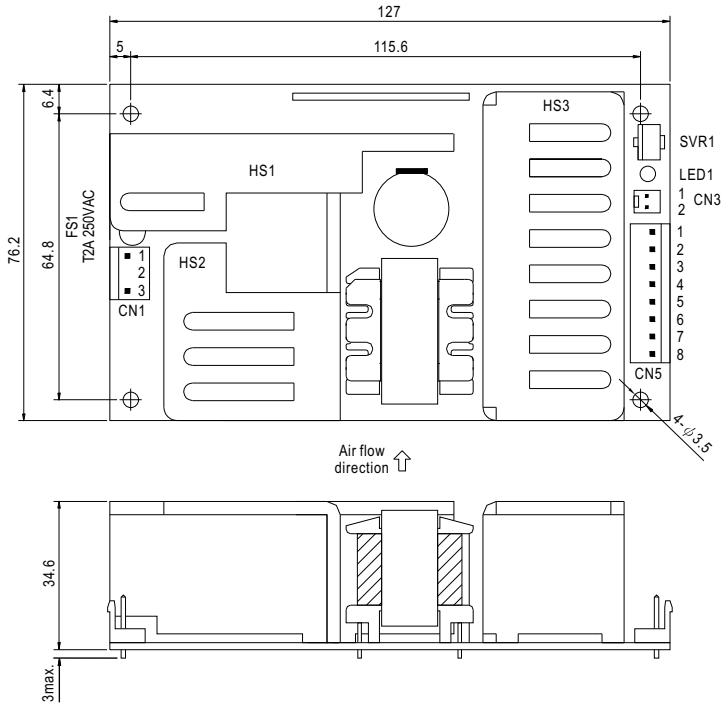
## ■ Mechanical Specification

Unit:mm




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

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

DC Output Connector (CN5) : JST B8P-VH or equivalent

| Pin No. | Assignment | Mating Housing | Terminal |
|---|---|---|---|
| 1~4 | -V | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 5~8 | +V | | |

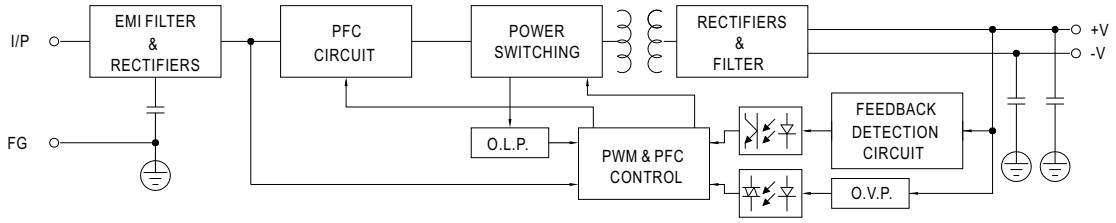
Remote Sense(CN3) : Molex 5045-02 or equivalent

| Pin No. | Assignment | Mating Housing | Terminal |
|---|---|---|---|
| 1 | RS+ | Molex 5051 or equivalent | Molex 4809 or equivalent |
| 2 | RS- | | |

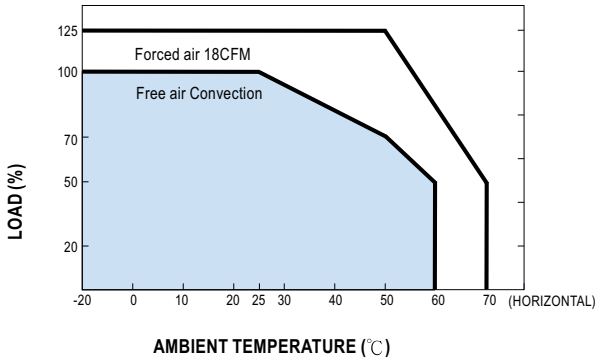
⚠ HS1, HS2 & HS3 can not be shorted

## ■ Block Diagram

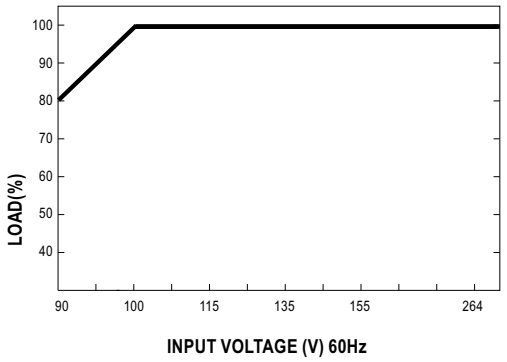
fosc : 100KHz




## ■ Derating Curve




## ■ Output Derating VS Input Voltage

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