



■ Features

- Universal AC input / Full range (Withstand 300VAC surge input for 5 seconds)
- Built-in active PFC function
- High efficiency up to 91%
- Design against rain splash
- Protections: Short circuit / Overload / Over voltage/ Over temperature
- Cooling by free air convection
- LED indicator for power on
- Low cost, high reliability
- 100% full load burn-in test
- 3 years warranty

■ Applications

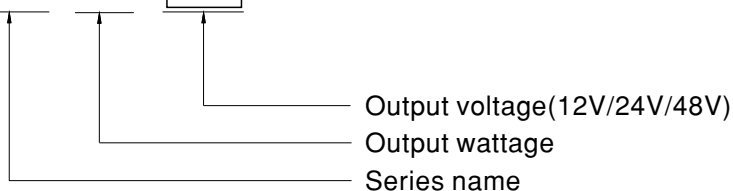
- LED strip lighting
- LED channel letters
- LED moving sign

■ Description

ERPF-400 series is a 400W single output enclosed type AC/DC power supply with the active PFC design. It adopts an aluminum case and the interior is semi-potted, protecting the internal electronic components from rain splash and dust. With the complete protection functions, ERPF-400 is suitable for the applications such as outdoor LED channel letters, billboard, commercial signs, etc.

■ Model Encoding

ERPF - 400 - 24



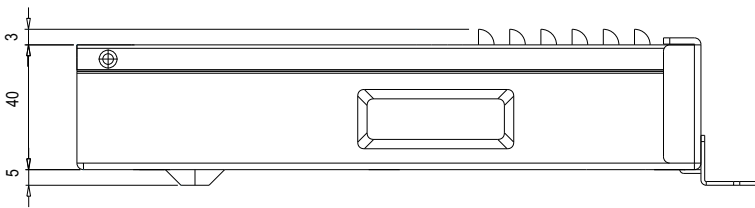
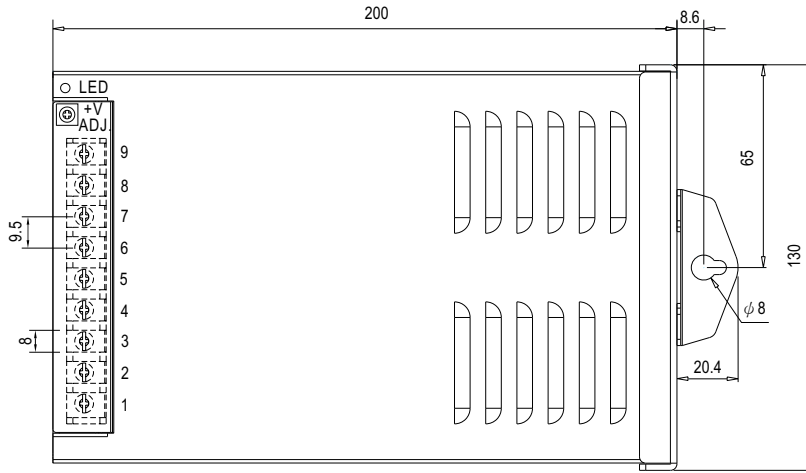


SPECIFICATION

| MODEL | ERPF-400-12 | ERPF-400-24 | ERPF-400-48 | |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|
| OUTPUT | DC VOLTAGE | 12V | 24V | 48V |
| | RATED CURRENT | 30A | 16.7A | 8.3A |
| | CURRENT RANGE <small>Note.5</small> | 0 ~ 30A | 0 ~ 16.7A | 0 ~ 8.3A |
| | RATED POWER | 360W | 400.8W | 398.4W |
| | RIPPLE & NOISE (max.) <small>Note.2</small> | 150mVp-p | 150mVp-p | 240mVp-p |
| | VOLTAGE ADJ. RANGE | 10.8 ~ 13.2V | 21.6 ~ 26.4V | 43.2 ~ 52.8V |
| | VOLTAGE TOLERANCE <small>Note.3</small> | ±1.0% | ±1.0% | ±1.0% |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% |
| | LOAD REGULATION | ±0.5% | ±0.5% | ±0.5% |
| | SETUP, RISE TIME | 2000ms, 100ms/230VAC; 3000ms, 100ms/115VAC at full load | | |
| HOLD UP TIME (Typ.) | 10ms/230VAC; 10ms/115VAC at full load | | | |
| INPUT | VOLTAGE RANGE <small>Note.4</small> | 90 ~ 264VAC 127 ~ 370VDC | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | |
| | POWER FACTOR (Typ.) | PF≥0.95/230VAC, PF≥0.98/115VAC | | |
| | EFFICIENCY (Typ.) | 89% | 90% | 91% |
| | AC CURRENT (Typ.) | 2.5A/230VAC 3A/115VAC | | |
| | INRUSH CURRENT (Typ.) | cold start 45A/115VAC, 90A/230VAC | | |
| | LEAKAGE CURRENT | <1mA / 240VAC | | |
| PROTECTION | OVER LOAD | 105 ~ 135% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed | | |
| | SHORT CIRCUIT | Protection type : Constant current limiting, recovers automatically after fault condition is removed | | |
| | OVER VOLTAGE | 13.8 ~ 16.2V | 27.6 ~ 32.4V | 55.2 ~ 64.8V |
| | OVER TEMPERATURE | Shut down O/P voltage, recovers automatically after temperature goes down | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +60°C (Refer to output load derating curve) | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | |
| | STORAGE TEMP., HUMIDITY | -30 ~ +85°C, 10 ~ 95% RH | | |
| | TEMP. COEFFICIENT | ±0.1%/°C (0 ~ 35°C) | | |
| | VIBRATION | 10 ~ 500Hz, 3G 10min./1cycle, 60min. each along X, Y, Z axes | | |
| SAFETY & EMC <small>(Note.6)</small> | SAFETY STANDARDS | CCC GB4943.1-2011 approved | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC / 25°C / 70% RH | | |
| | EMC EMISSION | Compliance to EN55022 (CISPR22) class A, GB9254 classA, GB17625.1; EN61000-3-2 | | |
| | EMC IMMUNITY | Compliance to EN61000-4-5;light industry level,criteria A | | |
| OTHERS | MTBF | 233.422Khrs min. MIL-HDBK-217F (25°C) | | |
| | DIMENSION | 220.4*130*48mm (L*W*H) | | |
| | PACKING | 1.1Kg; 9pcs / 11Kg / 0.63CUFT | | |
| 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 & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Derating may be needed under low input voltages. Please check the static characteristics for more details.</p> <p>5. Please refer to "Static Characteristics".</p> <p>6. 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 450mm*450mm 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 http://www.meanwell.com).</p> | | | |

Mechanical Specification

Case No.230 Unit:mm

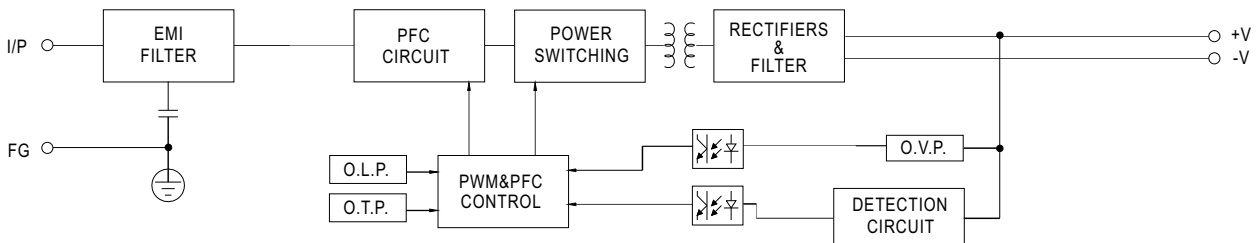


Terminal Pin No. assignment :

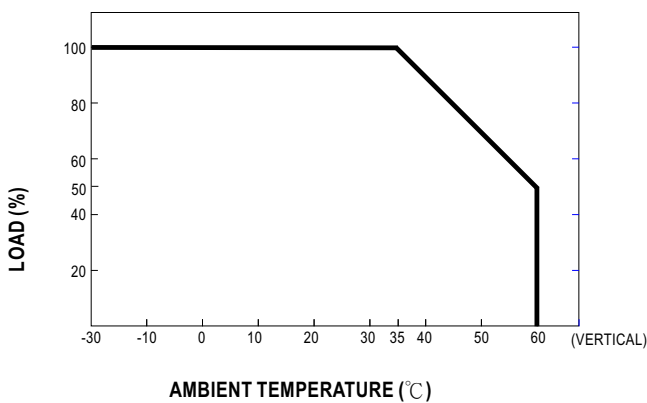
| Pin No. | Assignment | Pin No. | Assignment | Max mounting torque |
|---------|------------|---------|--------------|---------------------|
| 1 | AC/L | 4~6 | DC OUTPUT +V | 8Kgf-cm |
| 2 | AC/N | 7~9 | DC OUTPUT -V | |
| 3 | FG ≐ | | | |

Block Diagram

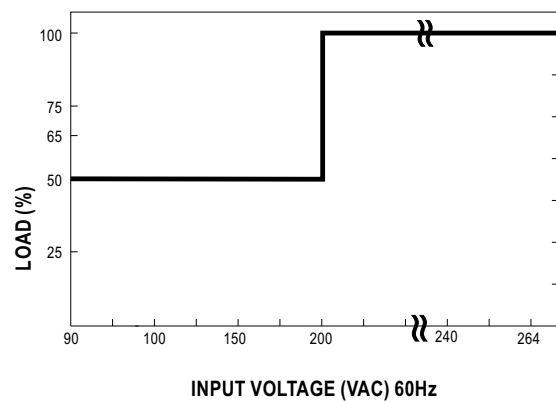
fosc : 80KHz



Derating Curve

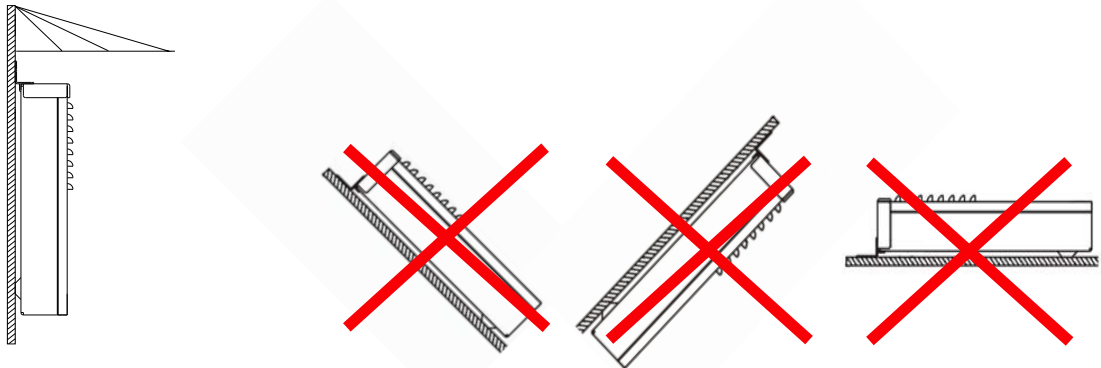


Static Characteristics



■ Installation

1. ERPF-400 is designed for outdoor application and should be installed in the place with shelter.
2. ERPF-400 should be installed in an upright position, leaning forward, backward or lay flat are not allowed



Correct installation method

Faulty installation methods

3. For heat dissipation, at least 20cm installation distance around the PSU should be kept, shown as below:

