# 200W Single Output Switching Power Supply

# ERP-200 series

User's Manual
Click Me



IS 13252(Part 1)/
IEC 60950-1
R-41070483

## Features

- AC input 180~264VAC
- Withstand 300VAC surge input for 5 seconds
- 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 decoration/signage
- LED channel letters
- LED display

## GTIN CODE

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

## Description

ERP-200 series is a 200W single output enclosed type AC/DC power supply . 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, ERP-200 is suitable for the applications such as outdoor LED channel letters, commercial display, etc.

## Model Encoding

**ERP - 200 - 12**

- 12 — Output Voltage(12V/24V)
- 200 — Rated wattage
- ERP — Series name



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MEAN WELL

# 200W Single Output Switching Power Supply ERP-200 series

**SPECIFICATION**

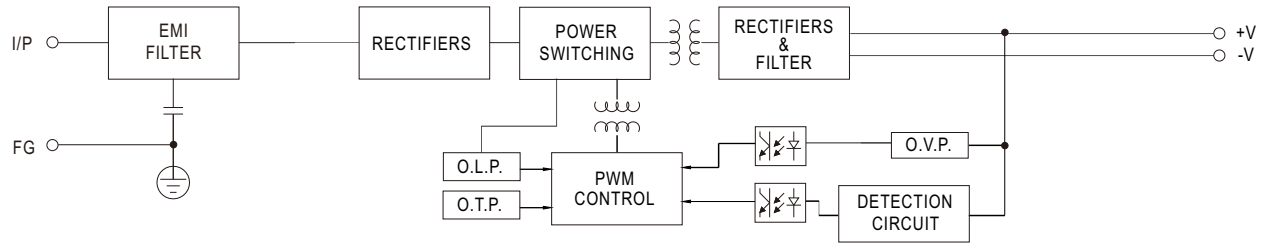
| MODEL | | ERP-200-12 | ERP-200-24 |
|---|---|---|---|
| OUTPUT | DC VOLTAGE | 12V | 24V |
| | RATED CURRENT | 16.8A | 8.33A |
| | CURRENT RANGE | 0~16.8A | 0~8.33A |
| | RATED POWER | 200.4W | 199.92W |
| | RIPPLE & NOISE (max.) Note.2 | 150mVp-p | 150mVp-p |
| | VOLTAGE ADJ. RANGE | 10.8 ~ 13.2V | 21.6 ~ 26.4V |
| | VOLTAGE TOLERANCE Note.3 | ±1.0% | ±1.0% |
| | LINE REGULATION | ±0.5% | ±0.5% |
| | LOAD REGULATION | ±0.5% | ±0.5% |
| | SETUP, RISE TIME | 1500ms, 200ms/230VAC | |
| | HOLD UP TIME (Typ.) | 20ms/230VAC | |
| INPUT | VOLTAGE RANGE | 180 ~ 264VAC 254 ~ 370VDC | |
| | FREQUENCY RANGE | 47 ~ 63Hz | |
| | EFFICIENCY (Typ.) | 87% | 89% |
| | AC CURRENT (Typ.) | 4A/230VAC | |
| | INRUSH CURRENT (Typ.) | 90A/230VAC | |
| | LEAKAGE CURRENT | <1mA / 240VAC | |
| PROTECTION | SHORT CIRCUIT | Hiccup mode, recovers automatically after fault condition is removed | |
| | OVER LOAD | 110 ~ 140% rated output power | |
| | | Protection type : Constant current limiting, recovers automatically after fault condition is removed | |
| | OVER VOLTAGE | 13.8 ~ 16.2V | 27.6 ~ 32.4V |
| | | Protection type : Hiccup mode, recovers automatically after fault condition is removed | |
| | OVER TEMPERATURE | Shut down O/P voltage, recovers automatically after temperature goes down | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +60℃ (Refer to output load derating curve) | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | |
| | STORAGE TEMP., HUMIDITY | -30 ~ +85℃, 10 ~ 95% RH | |
| | TEMP. COEFFICIENT | ±0.05%/℃ (0 ~ 50℃) | |
| | VIBRATION | 10 ~ 500Hz, 3G 10min./1cycle, 60min. each along X, Y, Z axes | |
| SAFETY & EMC | SAFETY STANDARDS | IEC/BS EN/EN 62368-1,GB 4943.1,EAC TP TC 004,IS13252(Part1) 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℃/ 70% RH | |
| | EMC EMISSION | Refer to BS EN/EN55022 (CISPR22) class A, EAC TP TC 020 | |
| | EMC IMMUNITY | Refer to BS EN/EN55035, BS EN/EN61000-4-5;light industry level, EAC TP TC 020 | |
| OTHERS | MTBF | 2233.7K hrs min. Telcordia SR-332 (Bellcore) 262.9Khrs min. MIL-HDBK-217F (25℃) | |
| | DIMENSION | 200*120*40mm (L*W*H) | |
| | PACKING | 0.86Kg; 12 pcs/10.89Kg/0.58CUFT | |
| 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>※ Product Liability Disclaimer：For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx | | |



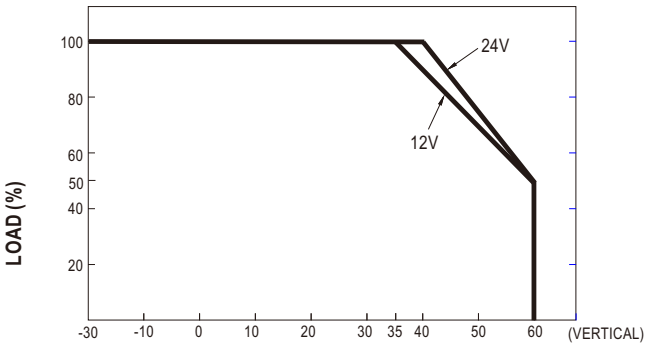
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## ■ Block Diagram

fosc : 90KHz

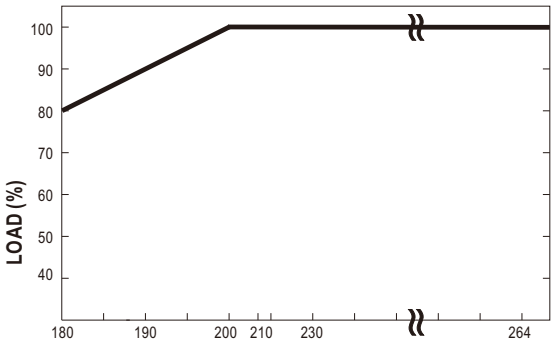



## ■ Derating Curve




AMBIENT TEMPERATURE (℃)

## ■ Static Characteristics



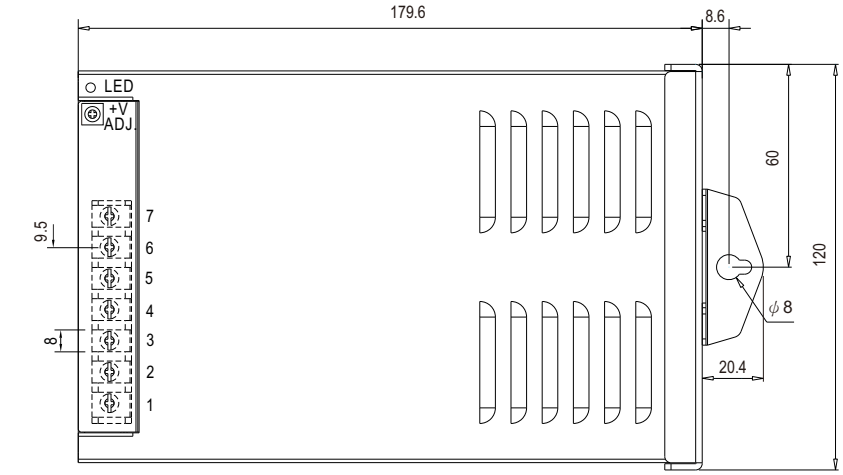

INPUT VOLTAGE (VAC) 60Hz

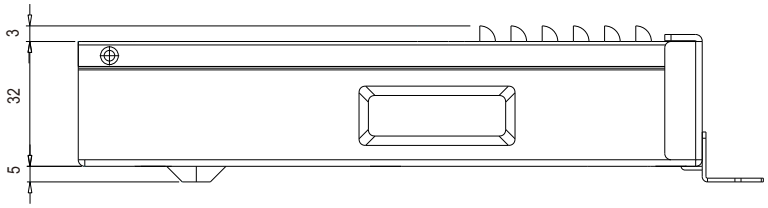


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## ■ Mechanical Specification

Case No.273 Unit:mm Tolerance:±1




Terminal Pin No. assignment :

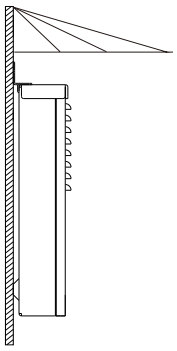
| Pin No. | Assignment | Pin No. | Assignment |
|---|---|---|---|
| 1 | AC/L | 4~5 | DC OUTPUT -V |
| 2 | AC/N | 6~7 | DC OUTPUT +V |
| 3 | FG ⏚ | | |



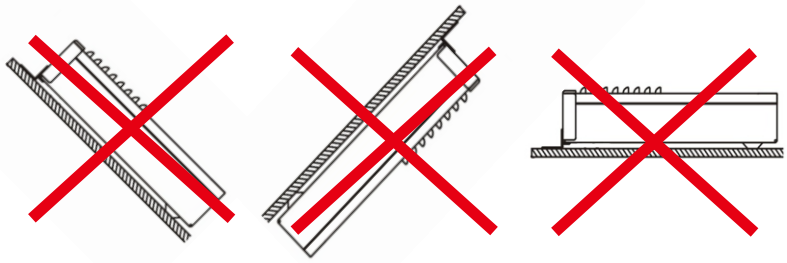
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## ■ Installation

1.ERP-200 is designed for outdoor application and should be installed in the place with shelter.
2.ERP-200 should be installed in an upright position, leaning forward, backward or lay flat are not allowed

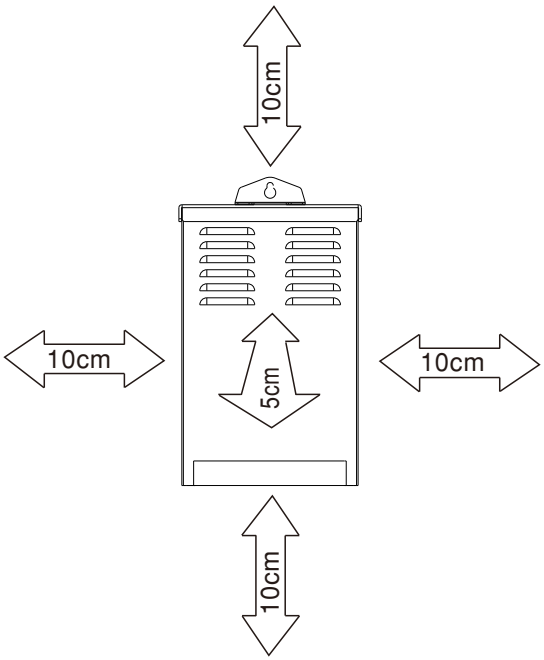


Correct installation method



Faulty installation methods

3.For heat dissipation, at least 10cm installation distance around the PSU should be kept, shown as below:






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