



## 1000W Front End Power System

# RCP-1000 series

### Dimension

| L    | * | W   | * | H         |      |
|------|---|-----|---|-----------|------|
| 295  | * | 127 | * | 41 (1U)   | mm   |
| 11.6 | * | 5   | * | 1.61 (1U) | inch |

User's Manual



UL62368-1



BS EN/EN62368-1



TPTC004



IEC62368-1



## Features

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 89%
- Forced air cooling by built-in DC fan
- Output voltage programmable
- Built-in OR-ing diode, support hot swap (hot plug)
- Active current sharing up to 3000W for one 19" rack shelf
- Built-in I<sup>2</sup>C interface (RCP-1000-C models only)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Optional conformal coating
- 5 years warranty

## Description

RCP-1000 is a 1KW single output rack mountable front end AC/DC power supply. This series operates for 90~264VAC input voltage and offers the models with the DC output mostly demanded from the industry. Each model is cooled by the built-in DC fan with fan speed control, working for the temperature up to 60°C. RCP-1000 provides vast design flexibility by equipping various built-in functions such as the output programming, active current sharing (up to 8000W via three 19" rack shelves, RCP-1U), remote control, auxiliary power, alarm signal, etc.

## Model Encoding / Order Information

RCP - 1000 - 24 □

Interface option  
Output voltage  
Output wattage  
Series name

{ Blank: Standard model, without I<sup>2</sup>C interface  
C : Standard model, with I<sup>2</sup>C interface

※ Note: 19" rack shelf, RCP-1U, available. Details available on <http://www.meanwell.com/>

## Applications

- Industrial automation
- Distributed power architecture system
- Wireless/telecommunication solution
- Redundant power system
- Electric vehicle charger system
- Constant current source system

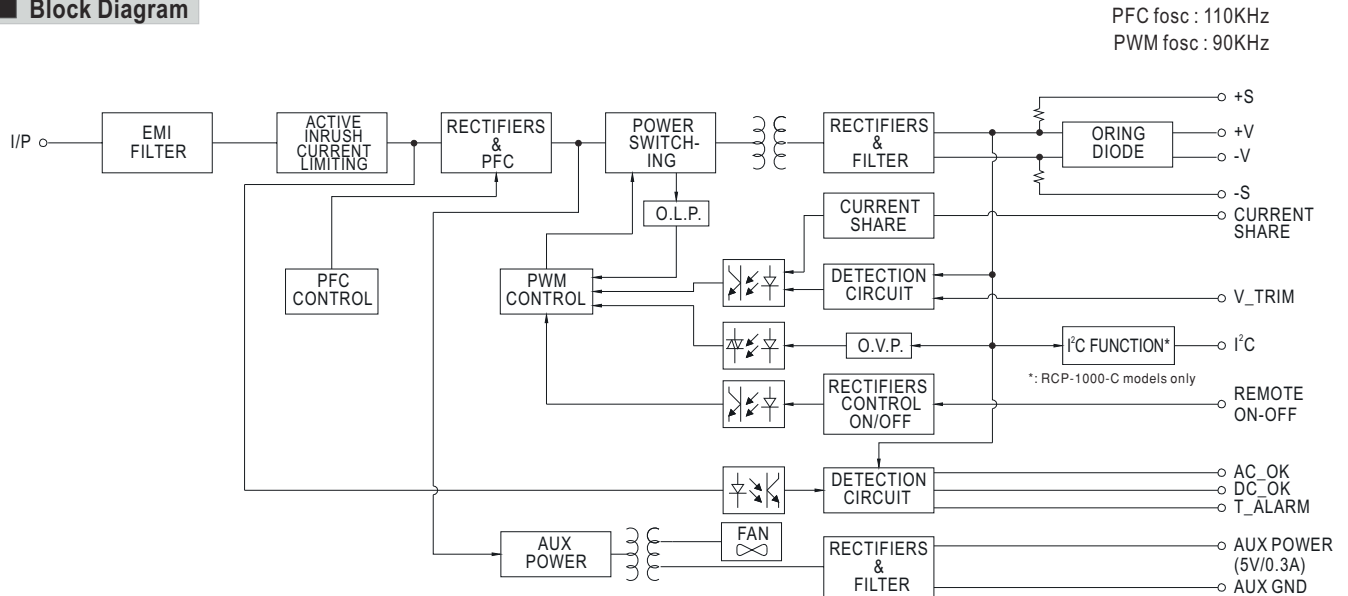
## GTIN CODE

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

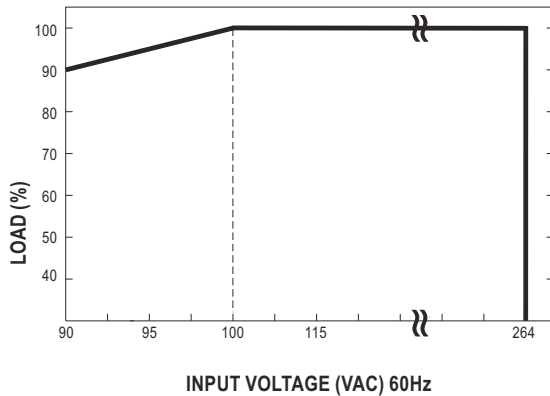
# SPECIFICATION

| MODEL                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | RCP-1000-12                                                                                                                           |                         | RCP-1000-24                                                              |                                                  | RCP-1000-48               |  |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------|--------------------------------------------------|---------------------------|--|
| OUTPUT                                  | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 12V                                                                                                                                   |                         | 24V                                                                      |                                                  | 48V                       |  |
|                                         | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 60A                                                                                                                                   |                         | 40A                                                                      |                                                  | 21A                       |  |
|                                         | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0 ~ 60A                                                                                                                               |                         | 0 ~ 40A                                                                  |                                                  | 0 ~ 21A                   |  |
|                                         | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 720W                                                                                                                                  |                         | 960W                                                                     |                                                  | 1008W                     |  |
|                                         | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 150mVp-p                                                                                                                              |                         | 200mVp-p                                                                 |                                                  | 300mVp-p                  |  |
|                                         | VOLTAGE ADJ. RANGE(SVR)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 11.6 ~ 12.4V                                                                                                                          |                         | 23.2 ~ 24.8V                                                             |                                                  | 46.3 ~ 49.7V              |  |
|                                         | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1000ms, 60ms/230VAC at full load                                                                                                      |                         |                                                                          |                                                  |                           |  |
| HOLD UP TIME (Typ.)                     | 16ms/230VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                       |                         |                                                                          |                                                  |                           |  |
| INPUT                                   | VOLTAGE RANGE <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 90 ~ 264VAC    127 ~ 370VDC                                                                                                           |                         |                                                                          |                                                  |                           |  |
|                                         | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 47 ~ 63Hz                                                                                                                             |                         |                                                                          |                                                  |                           |  |
|                                         | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 81%                                                                                                                                   |                         | 87%                                                                      |                                                  | 89%                       |  |
|                                         | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8.5A/115VAC    4.5A/230VAC                                                                                                            |                         | 10.5A/115VAC    5.5A/230VAC                                              |                                                  | 11A/115VAC    5.5A/230VAC |  |
|                                         | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | COLD START 50A                                                                                                                        |                         |                                                                          |                                                  |                           |  |
|                                         | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <1.1mA / 230VAC                                                                                                                       |                         |                                                                          |                                                  |                           |  |
| PROTECTION                              | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 105 ~ 125% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed |                         |                                                                          |                                                  |                           |  |
|                                         | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 13.2 ~ 16.2V                                                                                                                          |                         | 26.4 ~ 32.4V                                                             |                                                  | 52.8 ~ 64.8V              |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Protection type : Shut down o/p voltage, re-power on to recover                                                                       |                         |                                                                          |                                                  |                           |  |
|                                         | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Shut down o/p voltage, recovers automatically after temperature goes down                                                             |                         |                                                                          |                                                  |                           |  |
| FUNCTION                                | AUXILIARY POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5V @ 0.3A                                                                                                                             |                         |                                                                          |                                                  |                           |  |
|                                         | REMOTE ON-OFF CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | By electrical signal or dry contact    ON:short    OFF:open                                                                           |                         |                                                                          |                                                  |                           |  |
|                                         | REMOTE SENSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Compensate voltage drop on the load wiring up to 0.5V                                                                                 |                         |                                                                          |                                                  |                           |  |
|                                         | OUTPUT VOLTAGE PROGRAMMABLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Adjustment of output voltage is allowable to 90 ~ 110% of nominal output voltage. Please refer to the Function Manual.                |                         |                                                                          |                                                  |                           |  |
|                                         | DC OK SIGNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | The isolated TTL signal out, Please refer to the Installation Manual                                                                  |                         |                                                                          |                                                  |                           |  |
|                                         | AC OK SIGNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | The isolated TTL signal out, Please refer to the Installation Manual                                                                  |                         |                                                                          |                                                  |                           |  |
|                                         | OVER TEMP WARNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Logic " High" for over temperature warning, Please refer to the Installation Manual, isolated signal                                  |                         |                                                                          |                                                  |                           |  |
| ENVIRONMENT                             | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -20 ~ +60°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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ± 0.02%/°C (0 ~ 50°C)                                                                                                                 |                         |                                                                          |                                                  |                           |  |
|                                         | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                                          |                         |                                                                          |                                                  |                           |  |
| SAFETY & EMC<br><small>(Note 5)</small> | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | UL62368-1, CSA C22.2 No. 62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved                                                         |                         |                                                                          |                                                  |                           |  |
|                                         | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | I/P-O/P:3KVAC    I/P-FG:2KVAC    O/P-FG:0.7KVDC                                                                                       |                         |                                                                          |                                                  |                           |  |
|                                         | 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                                                                                                                             | BS EN/EN55032 (CISPR32) |                                                                          | Class B                                          |                           |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Radiated                                                                                                                              | BS EN/EN55032 (CISPR32) |                                                                          | Class B                                          |                           |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Harmonic Current                                                                                                                      | BS EN/EN61000-3-2       |                                                                          | -----                                            |                           |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Voltage Flicker                                                                                                                       | BS EN/EN61000-3-3       |                                                                          | -----                                            |                           |  |
|                                         | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | BS EN/EN55024, BS EN/EN61000-6-2                                                                                                      |                         |                                                                          |                                                  |                           |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Parameter                                                                                                                             | Standard                |                                                                          | Test Level / Note                                |                           |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ESD                                                                                                                                   | BS EN/EN61000-4-2       |                                                                          | Level 3, 8KV air ; Level 2, 4KV contact          |                           |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Radiated                                                                                                                              | BS EN/EN61000-4-3       |                                                                          | Level 3                                          |                           |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EFT / Burst                                                                                                                           | BS EN/EN61000-4-4       |                                                                          | Level 3                                          |                           |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Surge                                                                                                                                 | BS EN/EN61000-4-5       |                                                                          | Level 4, 4KV/Line-Earth ; Level 3, 2KV/Line-Line |                           |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Conducted                                                                                                                             | BS EN/EN61000-4-6       |                                                                          | Level 3                                          |                           |  |
| Magnetic Field                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | BS EN/EN61000-4-8                                                                                                                     |                         | Level 4                                                                  |                                                  |                           |  |
| Voltage Dips and Interruptions          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | BS EN/EN61000-4-11                                                                                                                    |                         | >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods |                                                  |                           |  |
| OTHERS                                  | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 840.8K hrs min.    Telcordia SR-332 (Bellcore) ; 107.4K hrs min.    MIL-HDBK-217F (25°C)                                              |                         |                                                                          |                                                  |                           |  |
|                                         | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 295*127*41mm (L*W*H)                                                                                                                  |                         |                                                                          |                                                  |                           |  |
|                                         | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.93Kg; 6pcs/12.6Kg/1.04CUFT                                                                                                          |                         |                                                                          |                                                  |                           |  |
| NOTE                                    | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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. Derating may be needed under low input voltages. Please check the derating curve for more details.<br>5. 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 720mm*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 <a href="http://www.meanwell.com">http://www.meanwell.com</a> )<br>6. 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).<br>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |                                                                                                                                       |                         |                                                                          |                                                  |                           |  |

## Block Diagram

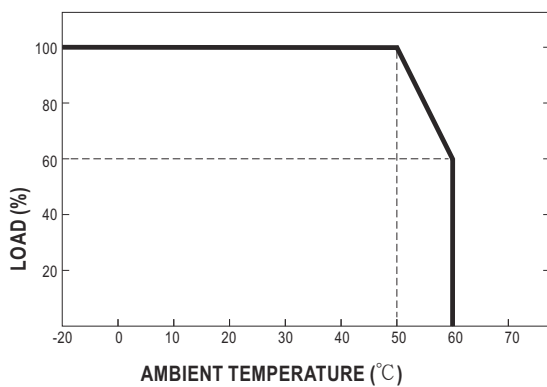


## Static Characteristics

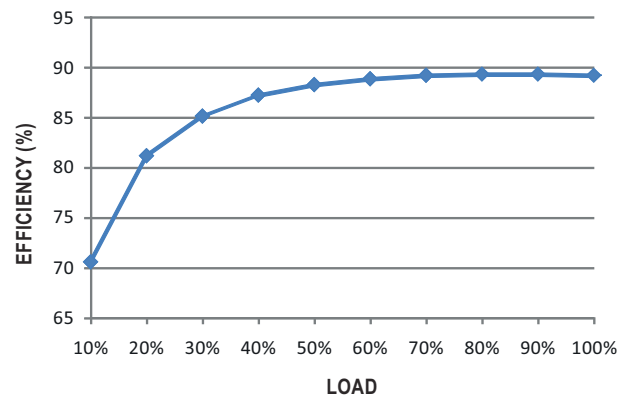


| INPUT \ MODEL | 12V         | 24V         | 48V             |
|---------------|-------------|-------------|-----------------|
| 180~264VAC    | 720W<br>60A | 960W<br>40A | 1008W<br>21A    |
| 115VAC        | 720W<br>60A | 960W<br>40A | 1008W<br>21A    |
| 100VAC        | 720W<br>60A | 960W<br>40A | 1008W<br>21A    |
| 90VAC         | 648W<br>54A | 864W<br>36A | 907.2W<br>18.9A |

## Derating Curve



## Efficiency vs Load (48V Model)



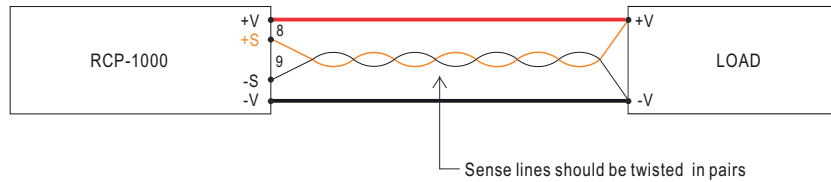
© The curve above is measured at 230VAC.

## Function Manual

### 1. Voltage Drop Compensation

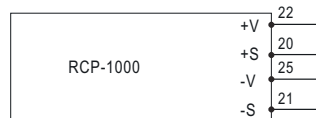
#### 1.1 Remote Sense

The remote sense compensates voltage drop on the load wiring up to 0.5V.



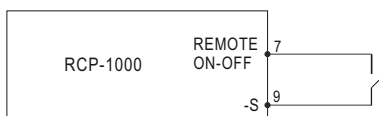
#### 1.2 Local Sense

※ The +S, -S have to be connected to the +V, -V, respectively, as the following diagram, in order to get the correct output voltage if Remote Sense is not used.

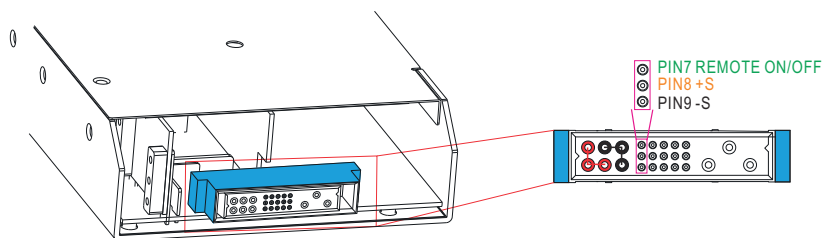


### 2. Remote ON/OFF Control

The power supply can be turned ON/OFF together or separately by using the "Remote ON-OFF" function.

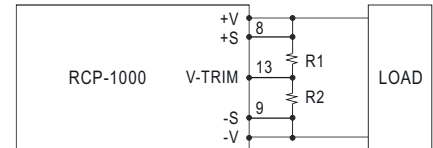
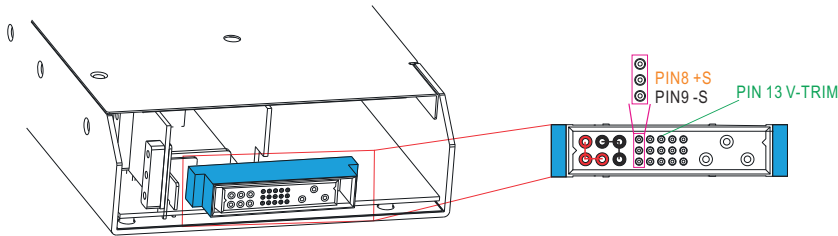


| Between Remote ON-OFF and -S | Power Supply Status |
|------------------------------|---------------------|
| Switch Short                 | ON                  |
| Switch Open                  | OFF                 |



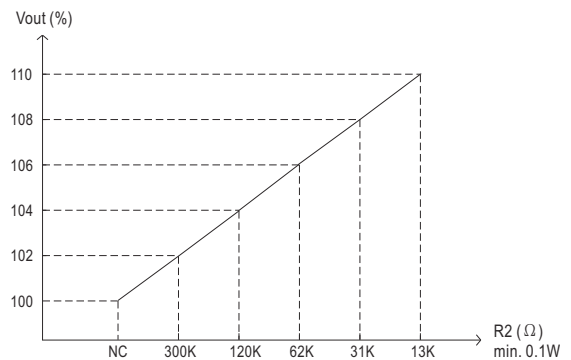
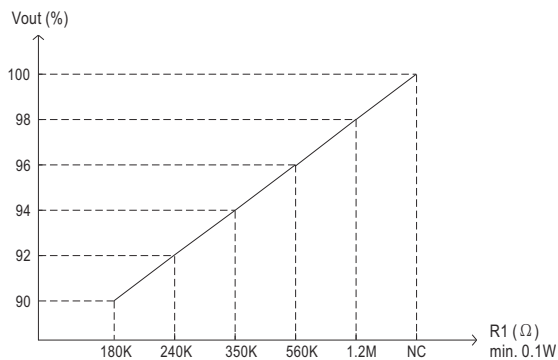
### 3. Output Voltage Programming (or, PV / remote voltage programming / remote adjust / margin programming / dynamic voltage trim)

※ In addition to the adjustment via the built-in potentiometer, the output voltage can be trimmed to 90~110% of the nominal voltage by applying EXTERNAL RESISTANCE.

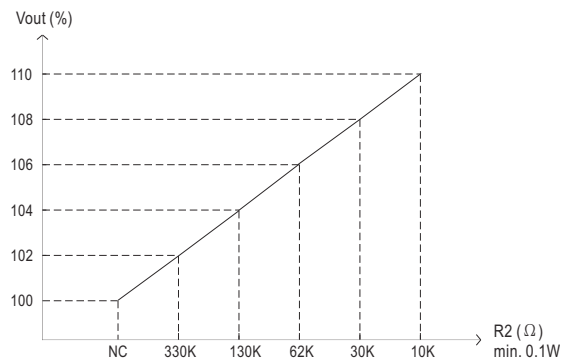
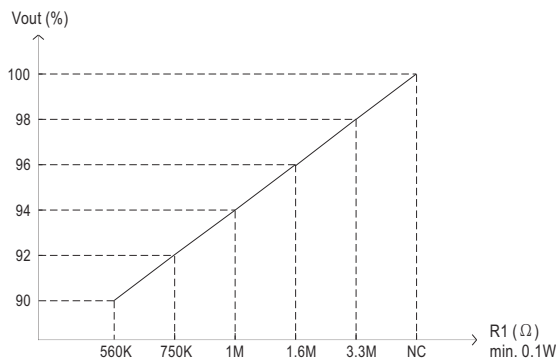


◎ +S & +V, -S & -V also need to be connected on CN501

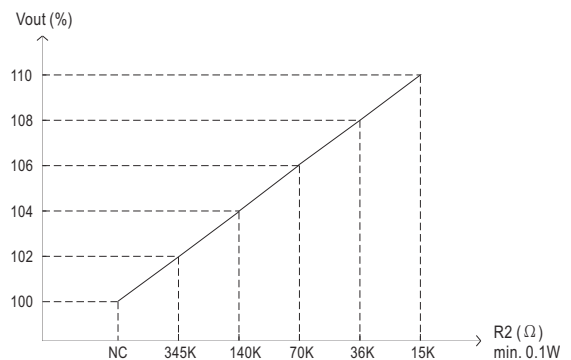
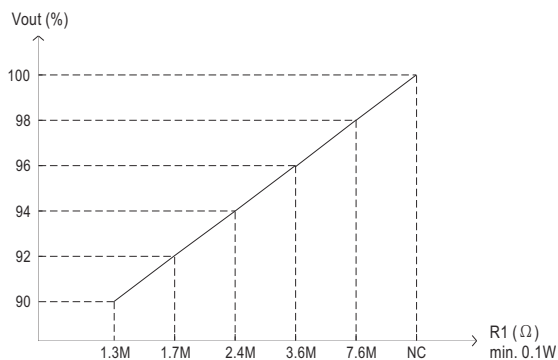
#### 3.1 RCP-1000-12



#### 3.2 RCP-1000-24



#### 3.3 RCP-1000-48

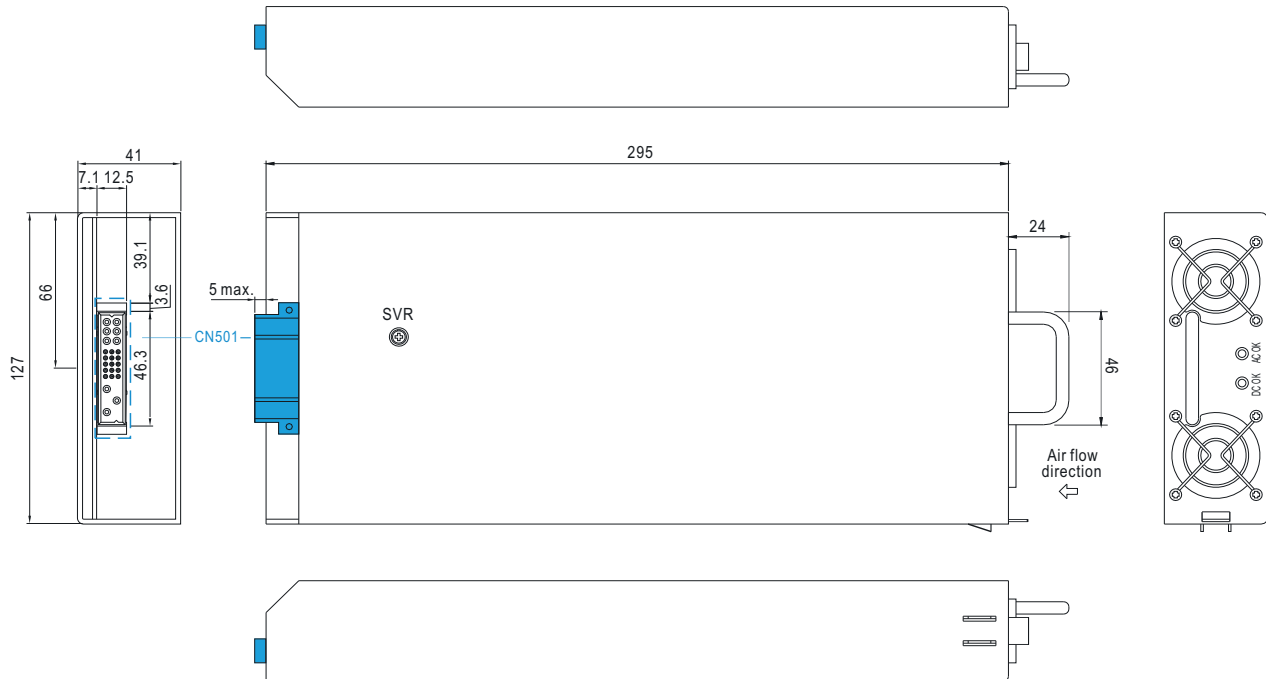


### 4. I<sup>2</sup>C Bus Interface

※ For the details of I<sup>2</sup>C bus used on RCP-1000-C models, please refer to the Installation Manual.

## Mechanical Specification

Case No. 952A Unit:mm

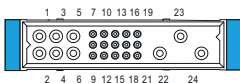


### ※ LED Status Indicators & Corresponding Signal at Function Pins

| Function | LED  | Description                                                                              | * Signal   | PSU Output |
|----------|------|------------------------------------------------------------------------------------------|------------|------------|
| AC-OK    | ON   | When input voltage $\geq 82V \pm 4V$                                                     | 0 ~ 0.5V   | ON         |
| AC-NG    | OFF  | When input voltage $\leq 82V \pm 4V$                                                     | 4.5 ~ 5.5V | OFF        |
| DC-OK    | ON   | When output voltage $\geq 80\% \pm 5\%$ of Vo rated.                                     | 0 ~ 0.5V   | ON         |
| DC-NG    | OFF  | When output voltage $\leq 80\% \pm 5\%$ of Vo rated.                                     | 4.5 ~ 5.5V | ON         |
| T-OK     | ---- | When the internal temperature (TSW1 & TSW2 short) is within safe limit                   | 0 ~ 0.5V   | ON         |
| T-ALARM  | ---- | When the internal temperature (TSW1 or TSW2 open) exceeds the limit of temperature alarm | 4.5 ~ 5.5V | OFF        |

\*Signal between function pin and "-V".

### ※ Input / Output Connector Pin No. Assignment(CN501) : Postronic PCB24W9M400A1



Mating Housing Postronic PCB24W9M400A1

| Pin No.  | Function     | Description                                                                                                                                                                                            |
|----------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1,2,4    | +V(signal)   | Positive output voltage.                                                                                                                                                                               |
| 3,5,6    | -V(signal)   | Negative output voltage.                                                                                                                                                                               |
| 7        | RemoteON-OFF | Each unit can separately turn the output on and off by electrical or dry contact . Short: ON, Open:OFF.                                                                                                |
| 8        | +S           | Positive sensing for Remote Sense.                                                                                                                                                                     |
| 9        | -S           | Negative sensing for Remote Sense.                                                                                                                                                                     |
| 10       | AC-OK        | Low : When input voltage is $\geq 82V_{rms} \pm 4V$ . (Note.1)<br>High : When input voltage in $\leq 82V_{rms} \pm 4V$ .                                                                               |
| 11       | DC-OK        | High : When Vout $\leq 80\% \pm 5\%$ .<br>Low : When Vout $\geq 80\% \pm 5\%$ (Note.1)                                                                                                                 |
| 12       | CS           | Current sharing signal.<br>When units are connected in parallel, the CS pins of the units should be connected to allow current balance between units.                                                  |
| 13       | V-TRIM       | Connection for output voltage programming.                                                                                                                                                             |
| 14       | T-ALARM      | High : When the internal temperature is within safe limit. (Note.1)<br>Low : 10°C below the thermal shut down limit.                                                                                   |
| 15       | +5V-AUX      | Auxiliary voltage output, 4.3~5.3V, referenced to GND-AUX(pin 7).<br>The maximum load current is 0.3A. This output has the built-in "Oring diodes" and is not controlled by the remote ON/OFF control. |
| 16       | GND-AUX      | Auxiliary voltage output GND.<br>The signal return is isolated from the output terminals (+V & -V).                                                                                                    |
| 17       | SCL          | Serial clock used on RCP-1000-C models. Refer to the Instruction Manual. (Note.1)                                                                                                                      |
| 18       | SDA          | Serial data used on the RCP-1000-C models. Refer to the Instruction Manual. (Note.1)                                                                                                                   |
| 19,20,21 | A0,A1,A2     | I <sup>2</sup> C interface address lines used on RCP-1000-C models. Refer to the Instruction Manual.                                                                                                   |
| 22       | FG           | AC Ground connection.                                                                                                                                                                                  |
| 23       | AC/L         | AC Line connection.                                                                                                                                                                                    |
| 24       | AC/N         | AC Neutral connection.                                                                                                                                                                                 |

Note1: Non-isolated signal, referenced to the output terminal -V.