



1000W Power Supply with Single Output

**RSP-1000** series

Dimension

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

User's Manual



## Features

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 90%
- Forced air cooling by built-in DC fan
- Output voltage programmable
- Active current sharing up to 4000W (3+1)
- Built-in remote ON-OFF control / remote sense / auxiliary power / DC OK signal
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Optional conformal coating
- 5 years warranty

## Applications

- Factory control or automation apparatus
- Test and measurement instrument
- Laser related machine
- Burn-in facility
- RF application

## Description

RSP-1000 is a 1KW single output enclosed type AC/DC power supply with 1U low profile. 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 fan with fan speed control, working for the temperature up to 60°C. Moreover, RSP-1000 provides vast design flexibility by equipping various built-in functions such as the output programming, active current sharing, remote ON-OFF control, auxiliary power, etc.

## Model Encoding / Order Information

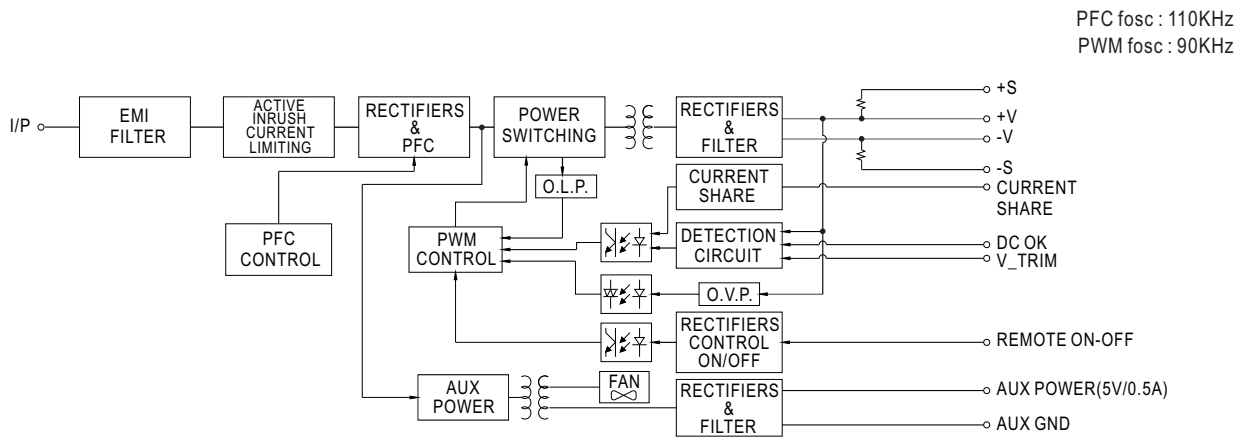
**RSP - 1000 - 24**

Output voltage (12V/15V/24V/27V/48V)  
Output wattage  
Series name

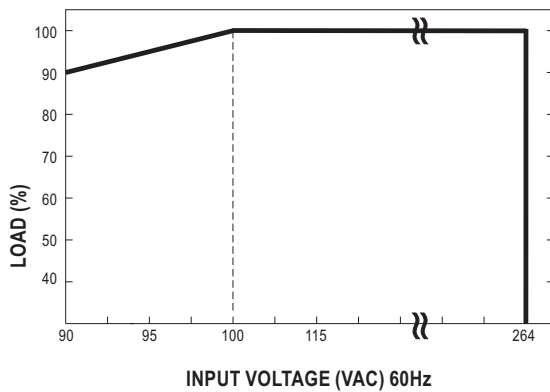
# SPECIFICATION

| MODEL                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | RSP-1000-12                                                                                                                                                      | RSP-1000-15                                                                              | RSP-1000-24  | RSP-1000-27 | RSP-1000-48                                                              |  |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------|-------------|--------------------------------------------------------------------------|--|
| OUTPUT                   | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 12V                                                                                                                                                              | 15V                                                                                      | 24V          | 27V         | 48V                                                                      |  |
|                          | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 60A                                                                                                                                                              | 50A                                                                                      | 40A          | 37A         | 21A                                                                      |  |
|                          | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0 ~ 60A                                                                                                                                                          | 0 ~ 50A                                                                                  | 0 ~ 40A      | 0 ~ 37A     | 0 ~ 21A                                                                  |  |
|                          | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 720W                                                                                                                                                             | 750W                                                                                     | 960W         | 999W        | 1008W                                                                    |  |
|                          | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 150mVp-p                                                                                                                                                         | 150mVp-p                                                                                 | 150mVp-p     | 150mVp-p    | 150mVp-p                                                                 |  |
|                          | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10 ~ 13.5V                                                                                                                                                       | 13.5 ~ 16.5V                                                                             | 20 ~ 26.4V   | 24 ~ 30V    | 43 ~ 55V                                                                 |  |
|                          | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ± 1.0%                                                                                                                                                           | ± 1.0%                                                                                   | ± 1.0%       | ± 1.0%      | ± 1.0%                                                                   |  |
|                          | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ± 0.5%                                                                                                                                                           | ± 0.5%                                                                                   | ± 0.5%       | ± 0.5%      | ± 0.5%                                                                   |  |
|                          | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ± 0.5%                                                                                                                                                           | ± 0.5%                                                                                   | ± 0.5%       | ± 0.5%      | ± 0.5%                                                                   |  |
|                          | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 300ms, 50ms at full load                                                                                                                                         |                                                                                          |              |             |                                                                          |  |
| HOLD UP TIME (Typ.)      | 16ms/230VAC    16ms/115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                  |                                                                                          |              |             |                                                                          |  |
| INPUT                    | VOLTAGE RANGE <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 90 ~ 264VAC    127 ~ 370VDC                                                                                                                                      |                                                                                          |              |             |                                                                          |  |
|                          | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 47 ~ 63Hz                                                                                                                                                        |                                                                                          |              |             |                                                                          |  |
|                          | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.95/230VAC    0.98/115VAC at full load                                                                                                                          |                                                                                          |              |             |                                                                          |  |
|                          | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 83%                                                                                                                                                              | 85%                                                                                      | 88%          | 88%         | 90%                                                                      |  |
|                          | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 12A/115VAC    6A/230VAC                                                                                                                                          |                                                                                          |              |             |                                                                          |  |
|                          | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 25A/115VAC    40A/230VAC                                                                                                                                         |                                                                                          |              |             |                                                                          |  |
| LEAKAGE CURRENT          | <2.0mA / 240VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                  |                                                                                          |              |             |                                                                          |  |
| PROTECTION               | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 105 ~ 125% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed                            |                                                                                          |              |             |                                                                          |  |
|                          | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 13.8 ~ 16.8V                                                                                                                                                     | 17 ~ 20.5V                                                                               | 27.6 ~ 32.4V | 31 ~ 36.5V  | 56.6 ~ 66.2V                                                             |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 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                 | OUTPUT VOLTAGE PROGRAMMABLE(PV)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Adjustment of output voltage is allowable to 40 ~ 110% of nominal output voltage. Please refer to the Function Manual.                                           |                                                                                          |              |             |                                                                          |  |
|                          | CURRENT SHARING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Up to 4000W or (3+1) units. Please refer to the Function Manual.                                                                                                 |                                                                                          |              |             |                                                                          |  |
|                          | AUXILIARY POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5V @ 0.5A (+5%, -8%)                                                                                                                                             |                                                                                          |              |             |                                                                          |  |
|                          | REMOTE ON-OFF CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Power ON : short    Power OFF : open. Please refer to the Function Manual.                                                                                       |                                                                                          |              |             |                                                                          |  |
|                          | REMOTE SENSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Compensate voltage drop on the load wiring up to 0.5V. Please refer to the Function Manual.                                                                      |                                                                                          |              |             |                                                                          |  |
|                          | DC OK SIGNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | The TTL signal out, PSU turn on = 0 ~ 1V ; PSU turn off = 3.3 ~ 5.6V. Please refer to the Function Manual.                                                       |                                                                                          |              |             |                                                                          |  |
| ENVIRONMENT              | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -20 ~ +60℃ (Refer to "Derating Curve")                                                                                                                           |                                                                                          |              |             |                                                                          |  |
|                          | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20 ~ 90% RH non-condensing                                                                                                                                       |                                                                                          |              |             |                                                                          |  |
|                          | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -40 ~ +85℃, 10 ~ 95% RH non-condensing                                                                                                                           |                                                                                          |              |             |                                                                          |  |
|                          | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ± 0.02%/℃ (0 ~ 50℃)                                                                                                                                              |                                                                                          |              |             |                                                                          |  |
|                          | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                                                                     |                                                                                          |              |             |                                                                          |  |
| SAFETY & EMC<br>(Note 5) | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | UL62368-1, CSA C22.2 No. 62368-1, TUV BS EN/EN62368-1, CCC GB4943.1, BSMI CNS14336-1, AS/NZS62368.1, IS13252(Part1):2010/IEC60950-1:2005, EAC TP TC 004 approved |                                                                                          |              |             |                                                                          |  |
|                          | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | I/P-O/P:3KVAC    I/P-FG:2KVAC    O/P-FG:0.5KVAC                                                                                                                  |                                                                                          |              |             |                                                                          |  |
|                          | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH                                                                                                        |                                                                                          |              |             |                                                                          |  |
|                          | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Parameter                                                                                                                                                        | Standard                                                                                 |              |             | Test Level / Note                                                        |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Conducted                                                                                                                                                        | BS EN/EN55032 (CISPR32)                                                                  |              |             | Class B                                                                  |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Radiated                                                                                                                                                         | BS EN/EN55032 (CISPR32)                                                                  |              |             | Class A                                                                  |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Harmonic Current                                                                                                                                                 | BS EN/EN61000-3-2                                                                        |              |             | -----                                                                    |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Voltage Flicker                                                                                                                                                  | BS EN/EN61000-3-3                                                                        |              |             | -----                                                                    |  |
|                          | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | BS EN/EN55024, BS EN/EN61000-6-2, CCC GB17625.1, GB/T9254, BSMI CNS13438                                                                                         |                                                                                          |              |             |                                                                          |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 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                                                                                                                                                             | 313.1K hrs min.    Telcordia SR-332 (Bellcore) ; 116.75K hrs min.    MIL-HDBK-217F (25℃) |              |             |                                                                          |  |
| DIMENSION                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 295*127*41mm (L*W*H)                                                                                                                                             |                                                                                          |              |             |                                                                          |  |
| PACKING                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.95Kg; 6pcs/12.7Kg/1.15CUFT                                                                                                                                     |                                                                                          |              |             |                                                                          |  |
| NOTE                     | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. 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 360mm*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℃/1000m with fanless models and of 5℃/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

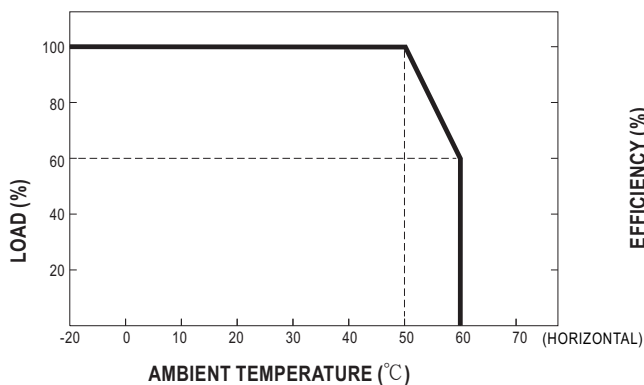


## Static Characteristics

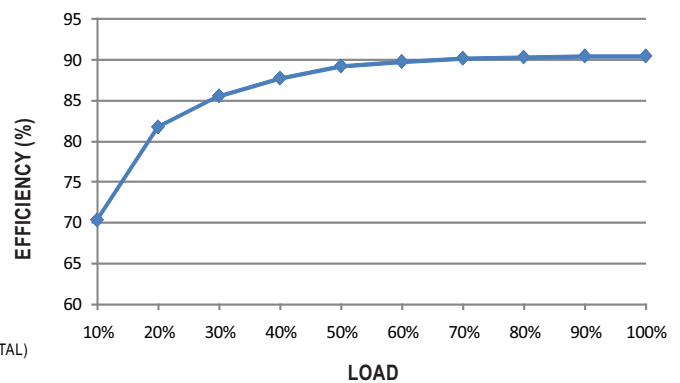


| MODEL      | 12V         | 15V         | 24V         | 27V             | 48V             |
|------------|-------------|-------------|-------------|-----------------|-----------------|
| 100~264VAC | 720W<br>60A | 750W<br>50A | 960W<br>40A | 999W<br>37A     | 1008W<br>21A    |
| 90VAC      | 648W<br>54A | 675W<br>45A | 864W<br>36A | 899.1W<br>33.3A | 907.2W<br>18.9A |

## Derating Curve



## Efficiency vs Load (48V Model)

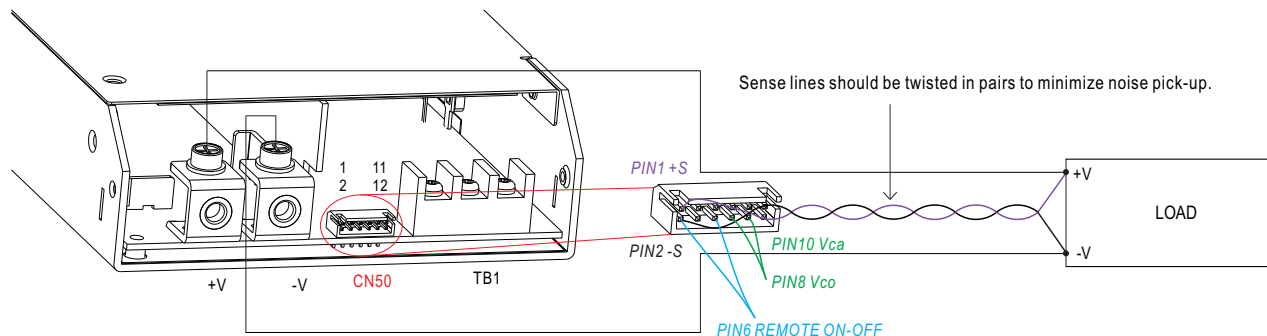


※ The curve above is measured at 230VAC.

## Function Manual

### 1.Remote Sense

※ The Remote Sense compensates voltage drop on the load wiring up to 0.5V



- The +S signal should be connected to the positive terminal of the load whereas -S signal to the negative terminal.
- This configuration is based on the assumption the Output Voltage Programming is not activated and power supply is ON.

Fig 1.1

### 2.Remote ON-OFF Control

※ The power supply can be turned ON-OFF individually or along with other units by using the "Remote ON-OFF" function.

| Between Remote ON-OFF (pin6) and -S(pin2) | Power Supply Status |
|-------------------------------------------|---------------------|
| Switch Short                              | ON                  |
| Switch Open                               | OFF                 |

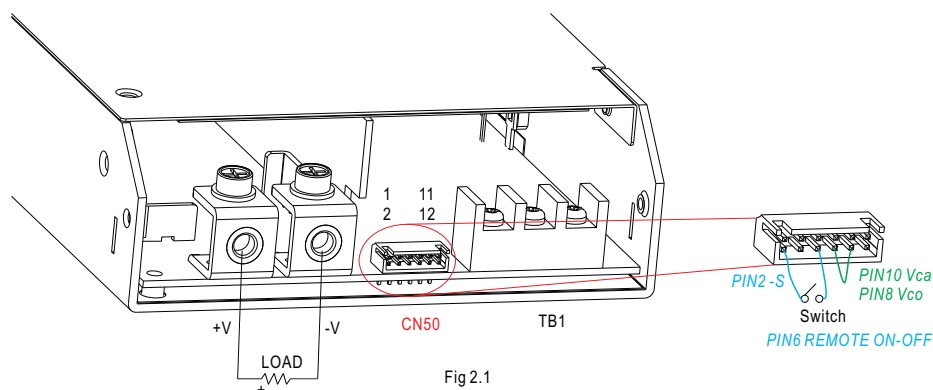


Fig 2.1

- The power supply is shipped, by factory default, with Remote ON-OFF(pin6) and -S(pin2) shorted by connector.
- When multiple power supplies need to turn ON/OFF simultaneously by Remote ON-OFF control, -S & -V, as well as +S & +V, on each power supply should be connected.

### 3.DC\_OK signal

※ "DC\_OK" is an open collector signal. It indicates the output status of the power supply. It can operate in two ways : One is sinking current from external TTL signal ; the other is sending out a TTL voltage signal.

○ **Sinking current from external TTL signal:** The maximum sink current is 10mA and the maximum external voltage is 5.6V.

○ **Sending out TTL voltage signal :**

| Between DC- OK(pin5) and GND(pin11&12) | Output Status |
|----------------------------------------|---------------|
| 0 ~ 1V                                 | ON            |
| 3.3 ~ 5.6V                             | OFF           |

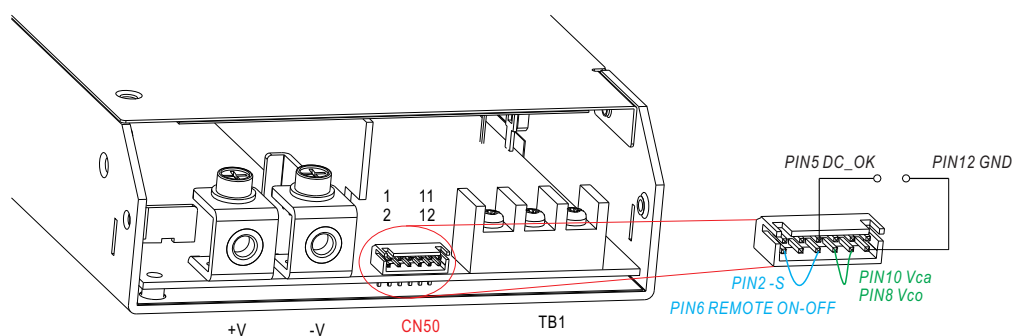
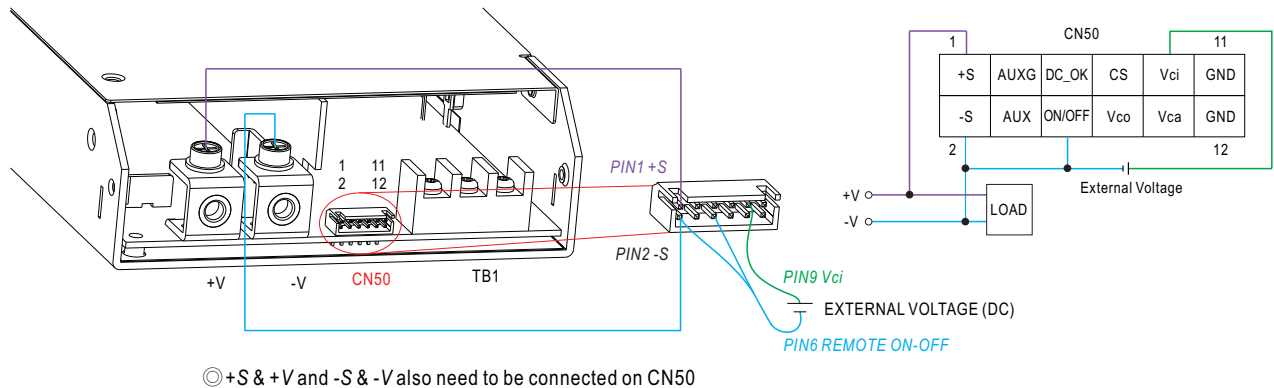


Fig 3.1

#### 4. 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 40~110% of the nominal voltage by applying either an EXTERNAL VOLTAGE or an EXTERNAL RESISTANCE.

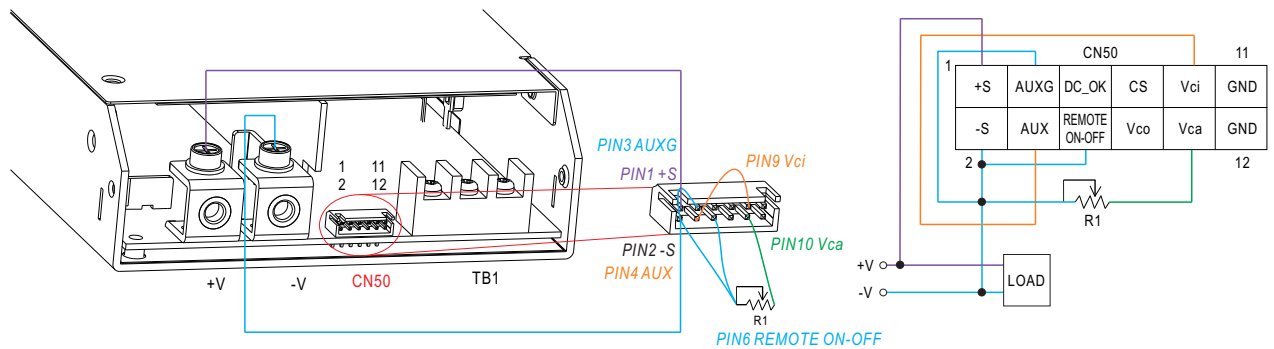
(1)Applying EXTERNAL VOLTAGE between "Vci"(pin9) and "-S"(pin2) as shown in Fig4.1



◎ +S & +V and -S & -V also need to be connected on CN50

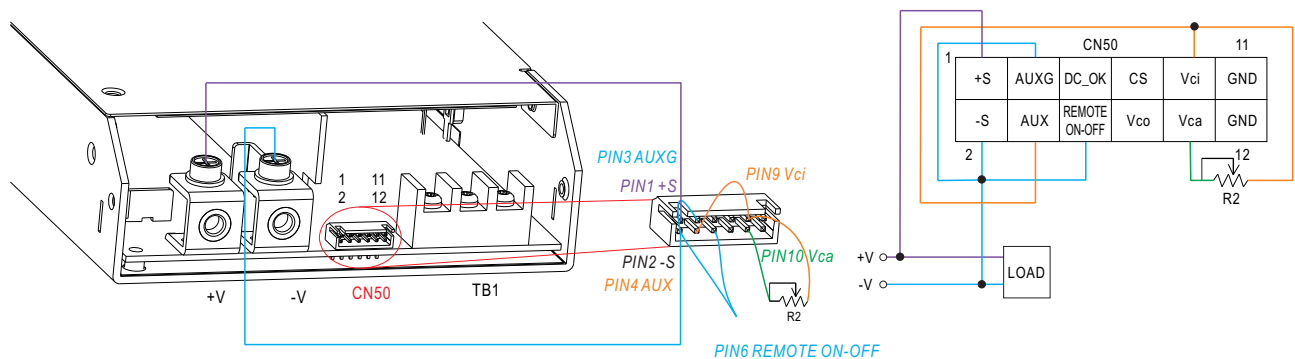
(2)Applying EXTERANL RESISTANCE as shown in Fig4.2 & Fig 4.3

(A) Output voltage goes down

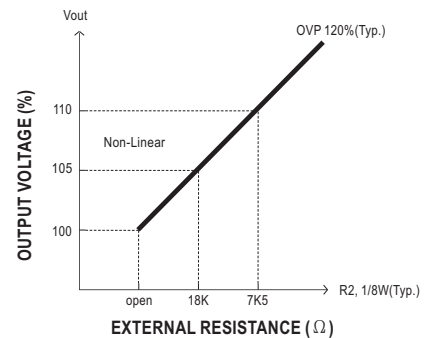
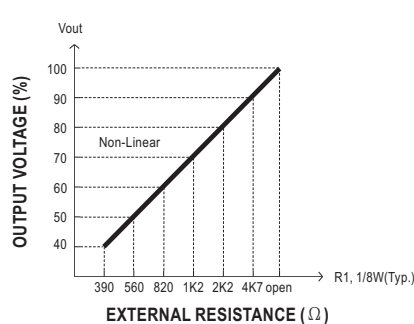
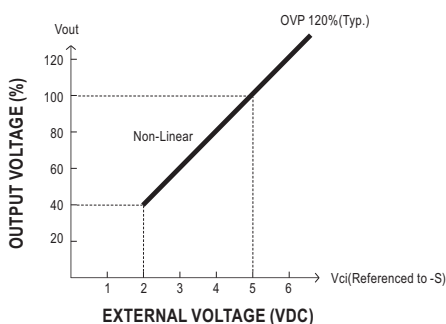


◎ +S & +V and -S & -V also need to be connected on CN50.

(B)Output voltage goes up



◎ +S & +V and -S & -V also need to be connected on CN50.



※ Caution: By factory default, the Output Voltage Programming is not activated, and Vco (pin8) and Vca(pin10) are shorted by connector. Whenever this function is not needed to activate, as assumed in other sections' diagrams, please keep Vco(pin8) and Vca(pin10) shorted ; other wise, the

### 5. Current Sharing with Remote Sense

RSP-1000 has the built-in active current sharing function and can be connected in parallel, up to 4 units, to provide higher output power as exhibited below :

- ※ The power supplies should be paralleled using short and large diameter wiring and then connected to the load.
- ※ Difference of output voltages among parallel units should be less than 0.2V.
- ※ The total output current must not exceed the value determined by the following equation:  
Maximum output current at parallel operation = (Rated current per unit) × (Number of unit) × 0.9
- ※ When the total output current is less than 5% of the total rated current, or say (5% of Rated current per unit) × (Number of unit) the current shared among units may not be fully balanced.

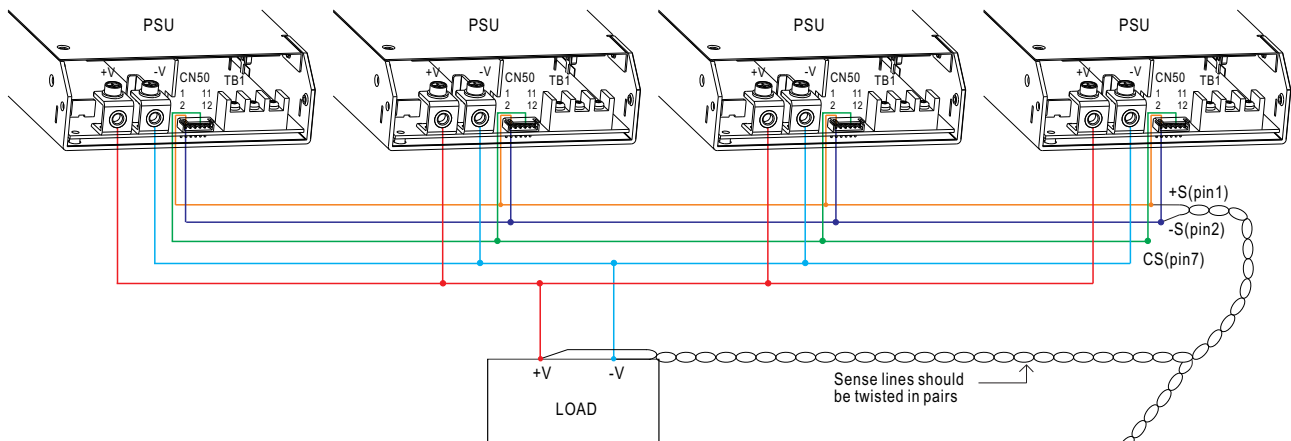
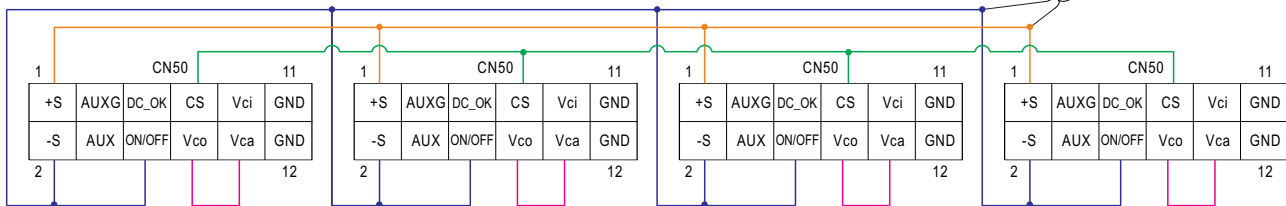


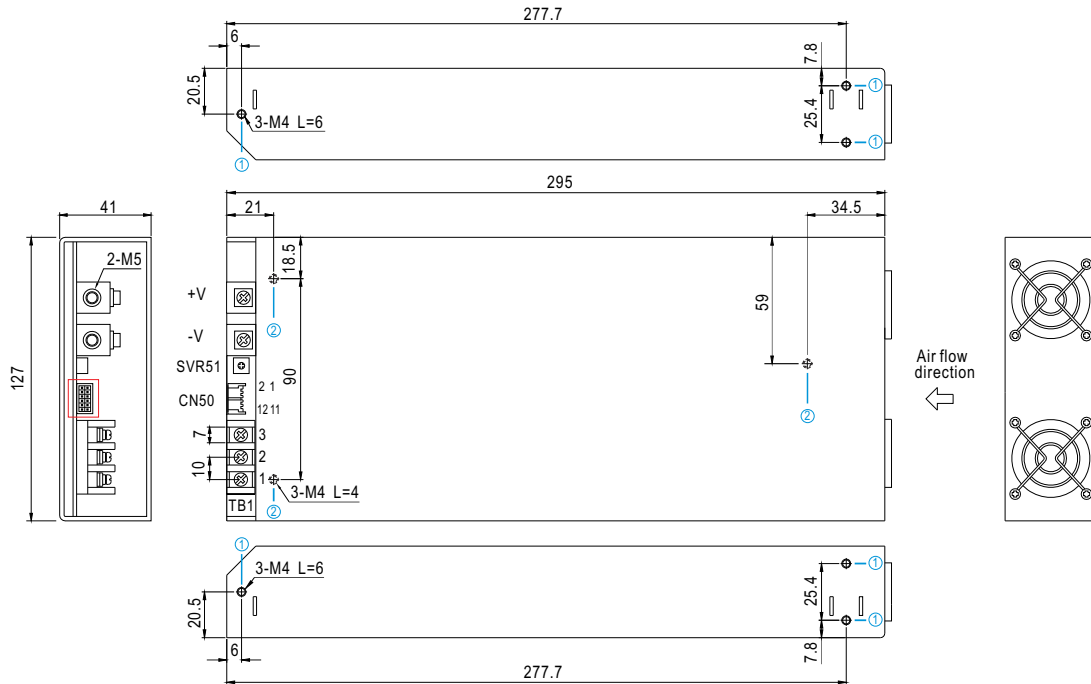
Fig 5.1



© +S, -S and CS are connected mutually in parallel.

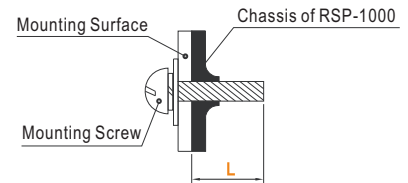
## Mechanical Specification

Case No. 952B Unit:mm

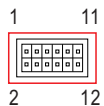


### ※ Mounting Instruction

| Hole No. | Recommended Screw Size | MAX. Penetration Depth L | Recommended mounting torque |
|----------|------------------------|--------------------------|-----------------------------|
| ①        | M4                     | 6mm                      | 7~11Kgf-cm                  |
| ②        | M4                     | 4mm                      | 7~11Kgf-cm                  |



### ※Control Pin No. Assignment (CN50) : HRS DF11-12DP-2DS or equivalent



|                |                             |
|----------------|-----------------------------|
| Mating Housing | HRS DF11-12DS or equivalent |
| Terminal       | HRS DF11-12SC or equivalent |

| Pin No. | Function      | Description                                                                                                                                                                                        |
|---------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | +S            | Positive sensing for remote sense.                                                                                                                                                                 |
| 2       | -S            | Negative sensing for remote sense.                                                                                                                                                                 |
| 3       | G-AUX         | Auxiliary voltage output ground. The signal return is isolated from the output terminals (+V & -V).                                                                                                |
| 4       | 5V-AUX        | Auxiliary voltage output, 4.6~5.25V, referenced to pin 3(G-AUX). The maximum load current is 0.5A. This output has the built-in oring diodes and is not controlled by the "remote ON/OFF control". |
| 5       | DC_OK         | Open collector signal, referenced to pin11,12(GND). Low when PSU turns on. The maximum sink current is 10mA and the maximum external voltage is 5.6V.                                              |
| 6       | Remote ON-OFF | Turns the output on and off by electrical or dry contact between pin 6 (Remote ON-OFF) and pin 2 (-S). Short: Power ON, Open: Power OFF.                                                           |
| 7       | CS            | Current sharing signal. When units are connected in parallel, the CS pins of the units should be connected to allow current balance between units.                                                 |
| 8       | Vco           | Short connecting between Vco (pin8) and Vca (pin10) if output voltage programming function is not activated.                                                                                       |
| 9       | Vci           | Connect to external DC voltage source for output voltage programming, referenced to pin 2 (-S).                                                                                                    |
| 10      | Vca           | Connect to external resistor (1/8W) for output voltage programming.                                                                                                                                |
| 11,12   | GND           | These pins connect to the negative terminal (-V). Return for DC_OK Signal output.                                                                                                                  |



※AC Input Terminal Pin No. Assignment

| Pin No. | Assignment | Diagram                                                                           | Maximum mounting torque |
|---------|------------|-----------------------------------------------------------------------------------|-------------------------|
| 1       | AC/N       |  | 18Kgf-cm                |
| 2       | AC/L       |                                                                                   |                         |
| 3       | FG $\perp$ |                                                                                   |                         |

※DC Output Terminal Pin No. Assignment

| Assignment | Diagram                                                                           | Maximum mounting torque |
|------------|-----------------------------------------------------------------------------------|-------------------------|
| +V, -V     |  | 10Kgf-cm                |

■ Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>