



2000W Power Supply with Single Output

**RSP-2000** series

#### Dimension

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



User's Manual



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## ■ Features

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 92%
- Forced air cooling by built-in DC fan
- Output voltage programmable
- Active current sharing up to 8000W (3+1)
- Built-in remote ON-OFF control / remote sense / auxiliary power / DC OK signal / OTP alarm 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
- Digital broadcasting
- RF application

## ■ GTIN CODE

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

## ■ Description

RSP-2000 is a 2KW 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 70°C. Moreover, RSP-2000 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 - 2000 - 48**

Output voltage (12V/24V/48V)

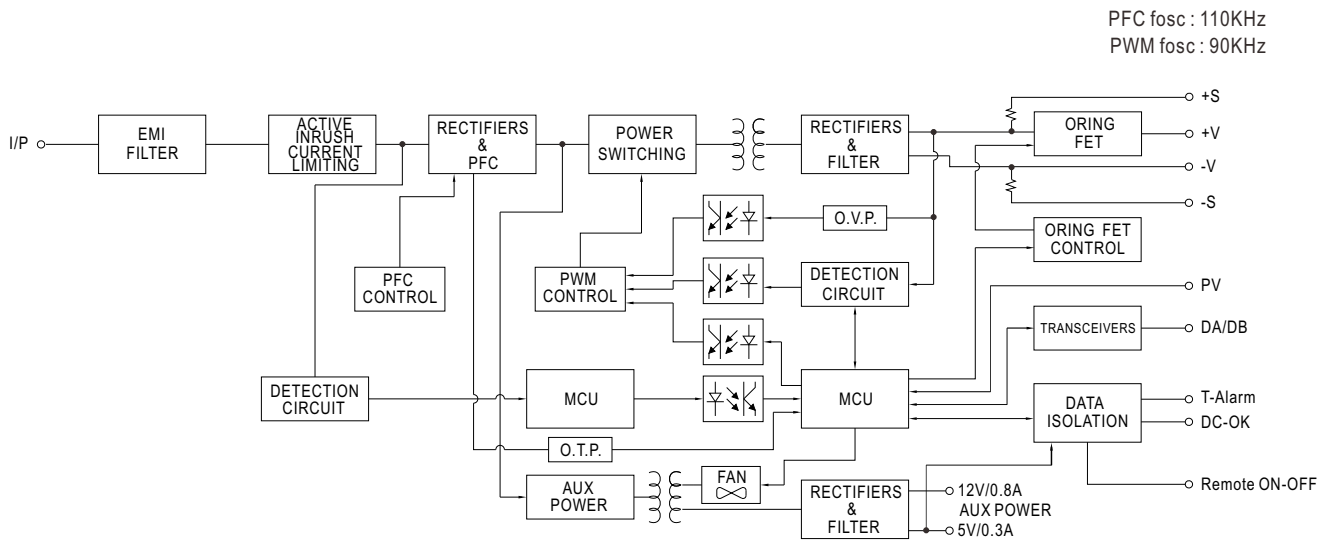
Output wattage

Series name

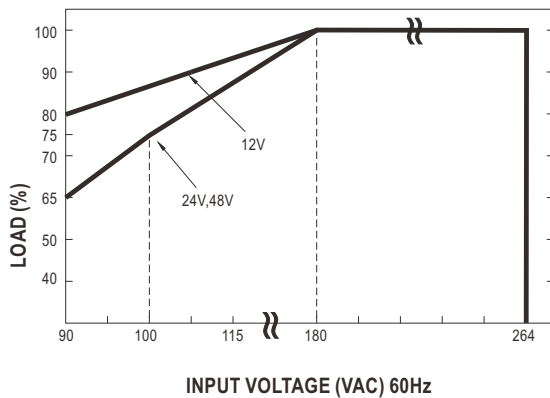
## SPECIFICATION

| MODEL                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RSP-2000-12                                                                                                                                                           |                                   | RSP-2000-24                |                                                                          | RSP-2000-48                |  |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------|--------------------------------------------------------------------------|----------------------------|--|
| OUTPUT                                  | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 12V                                                                                                                                                                   |                                   | 24V                        |                                                                          | 48V                        |  |
|                                         | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 100A                                                                                                                                                                  |                                   | 80A                        |                                                                          | 42A                        |  |
|                                         | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0 ~ 100A                                                                                                                                                              |                                   | 0 ~ 80A                    |                                                                          | 0 ~ 42A                    |  |
|                                         | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1200W                                                                                                                                                                 |                                   | 1920W                      |                                                                          | 2016W                      |  |
|                                         | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 150mVp-p                                                                                                                                                              |                                   | 200mVp-p                   |                                                                          | 300mVp-p                   |  |
|                                         | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10.5 ~ 14V                                                                                                                                                            |                                   | 21 ~ 28V                   |                                                                          | 42 ~ 56V                   |  |
|                                         | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ± 2.0%                                                                                                                                                                |                                   | ± 1.0%                     |                                                                          | ± 1.0%                     |  |
|                                         | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ± 1.0%                                                                                                                                                                |                                   | ± 0.5%                     |                                                                          | ± 0.5%                     |  |
|                                         | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ± 1.0%                                                                                                                                                                |                                   | ± 0.5%                     |                                                                          | ± 0.5%                     |  |
|                                         | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1500ms, 60ms/230VAC at full load                                                                                                                                      |                                   |                            |                                                                          |                            |  |
| HOLD UP TIME (Typ.)                     | 16ms/230VAC at 75% load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                       | 10ms/230VAC at full load          |                            |                                                                          |                            |  |
| INPUT                                   | VOLTAGE RANGE <small>Note.4,5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 90 ~ 264VAC      250 ~ 320VDC                                                                                                                                         |                                   |                            |                                                                          |                            |  |
|                                         | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 47 ~ 63Hz                                                                                                                                                             |                                   |                            |                                                                          |                            |  |
|                                         | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.97/230VAC at full load                                                                                                                                              |                                   |                            |                                                                          |                            |  |
|                                         | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 87%                                                                                                                                                                   |                                   | 90.5%                      |                                                                          | 92%                        |  |
|                                         | AC CURRENT (Typ.) <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 13A/115VAC      7A/230VAC                                                                                                                                             |                                   | 16A/115VAC      10A/230VAC |                                                                          | 16A/115VAC      10A/230VAC |  |
|                                         | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | COLD START 50A                                                                                                                                                        |                                   |                            |                                                                          |                            |  |
| LEAKAGE CURRENT                         | <2mA / 240VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                       |                                   |                            |                                                                          |                            |  |
| PROTECTION                              | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 105 ~ 125% rated output power<br>Protection type : Constant current limiting, unit will shut down o/p voltage after 5 sec. re-power on to recover                     |                                   |                            |                                                                          |                            |  |
|                                         | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 14.7 ~ 17.5V                                                                                                                                                          |                                   | 29.5 ~ 35V                 |                                                                          | 57.6 ~ 67.2V               |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 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 ~ 115% of nominal output voltage. Please refer to the Function Manual.                                                |                                   |                            |                                                                          |                            |  |
|                                         | CURRENT SHARING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Up to 8000W or (3+1) units. Please refer to the Function Manual.                                                                                                      |                                   |                            |                                                                          |                            |  |
|                                         | AUXILIARY POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5V @ 0.3A, 12V @ 0.8A                                                                                                                                                 |                                   |                            |                                                                          |                            |  |
|                                         | REMOTE ON-OFF CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | By electrical signal or dry contact    Power ON:open    Power OFF:short. 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 isolated TTL signal out. Please refer to the Function Manual.                                                                                                     |                                   |                            |                                                                          |                            |  |
| ENVIRONMENT                             | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -35 ~ +70℃ (Refer to "Derating Curve")                                                                                                                                |                                   |                            |                                                                          |                            |  |
|                                         | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20 ~ 90% RH non-condensing                                                                                                                                            |                                   |                            |                                                                          |                            |  |
|                                         | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -40 ~ +85℃, 10 ~ 95% RH non-condensing                                                                                                                                |                                   |                            |                                                                          |                            |  |
|                                         | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ± 0.03%/℃ (0 ~ 50℃)                                                                                                                                                   |                                   |                            |                                                                          |                            |  |
|                                         | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                                                                          |                                   |                            |                                                                          |                            |  |
| SAFETY & EMC<br><small>(Note 6)</small> | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | UL62368-1, CSA C22.2 No. 62368-1, TUV BS EN/EN62368-1, BSMI CNS15598-1, AS/NZS62368.1, BIS IS13252(Part1): 2010/IEC 60950-1:2005 (except 48V), 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), CNS15936 |                            | Class B                                                                  |                            |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Radiated                                                                                                                                                              | BS EN/EN55032 (CISPR32), CNS15936 |                            | Class A                                                                  |                            |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Harmonic Current                                                                                                                                                      | BS EN/EN61000-3-2                 |                            | -----                                                                    |                            |  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Voltage Flicker                                                                                                                                                       | BS EN/EN61000-3-3                 |                            | -----                                                                    |                            |  |
|                                         | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | BS EN/EN55035, BS EN/EN61000-6-2, 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 487.7K hrs min.    Telcordia SR-332 (Bellcore) ; 42.9K hrs min.    MIL-HDBK-217F (25℃)                                                                                |                                   |                            |                                                                          |                            |  |
|                                         | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 295*127*41mm (L*W*H)                                                                                                                                                  |                                   |                            |                                                                          |                            |  |
|                                         | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1.95Kg; 6pcs/12.7Kg/1.15CUFT                                                                                                                                          |                                   |                            |                                                                          |                            |  |
| NOTE                                    | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>5. Please contact MEANWELL for 320~370VDC application.</p> <p>6. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 720mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."<br/>(as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a>)</p> <p>7. 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).</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p> |                                                                                                                                                                       |                                   |                            |                                                                          |                            |  |

## Block Diagram

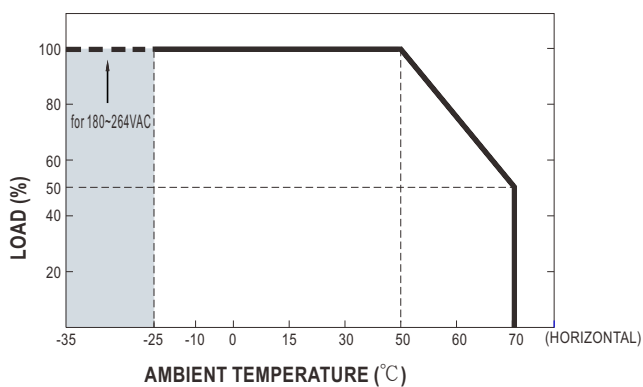


## Static Characteristics

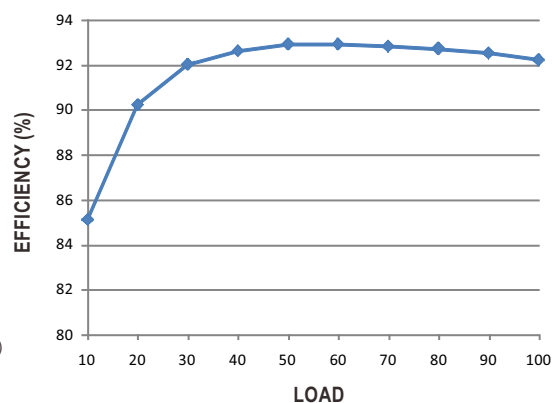


| INPUT \ MODEL | 12V           | 24V          | 48V              |
|---------------|---------------|--------------|------------------|
| 180~264VAC    | 1200W<br>100A | 1920W<br>80A | 2016W<br>42A     |
| 115VAC        | 1140W<br>95A  | 1536W<br>64A | 1612.8W<br>33.6A |
| 100VAC        | 1080W<br>90A  | 1440W<br>60A | 1512W<br>31.5A   |
| 90VAC         | 960W<br>80A   | 1248W<br>52A | 1310.4W<br>27.3A |

## Derating Curve



## Efficiency vs Load (48V Model)

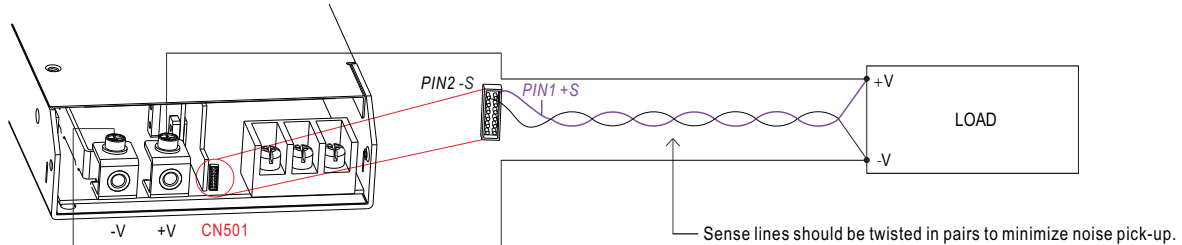


⊙ The curve above is measured at 230VAC.

## Function Manual

### 1. Remote Sense

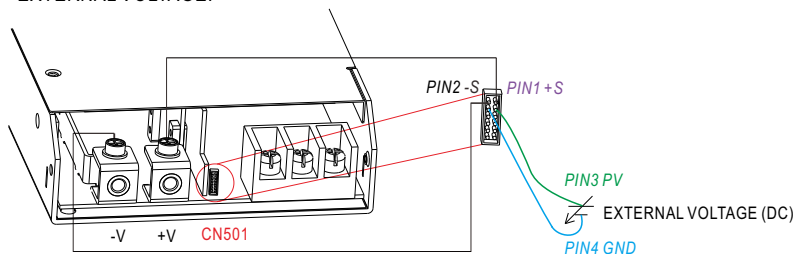
※ The Remote Sense compensates voltage drop on the load wiring up to 0.5V



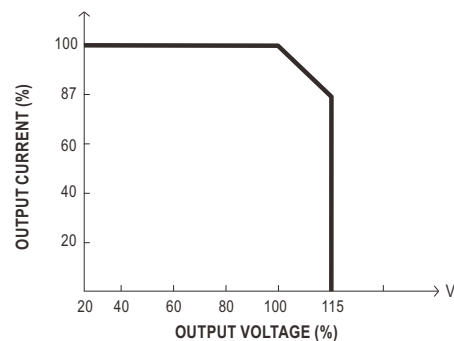
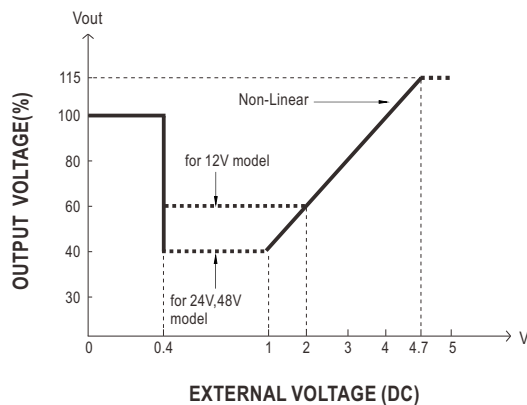
◎ The +S signal should be connected to the positive terminal of the load whereas -S signal to the negative terminal.

### 2. 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 40~115% of the nominal voltage by applying EXTERNAL VOLTAGE.



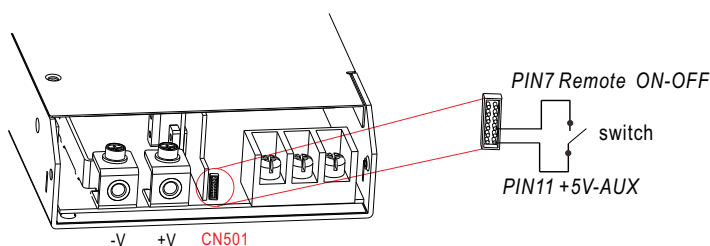
◎ +S & +V, -S & -V also need to be connected on CN501.



◎ The rated current should change with the Output Voltage Programming accordingly.

### 3. 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 and +5V-AUX | Power Supply Status |
|-----------------------------------|---------------------|
| Switch Open                       | ON                  |
| Switch Short                      | OFF                 |

#### 4. Current Sharing with Remote Sense

RSP-2000 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

※ Under parallel operation, the minimum output load should be greater than 5% of total output load; otherwise, it is likely that only one unit operates whereas other units may enter standby mode or their LED status indicators may not turn on.

※ 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.

※ CN502/CN504 Function pin connection

| Parallel | PSU1  |       | PSU2  |       | PSU3  |       | PSU4  |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
|          | CN502 | CN504 | CN502 | CN504 | CN502 | CN504 | CN502 | CN504 |
| 1 unit   | X     | V     | —     | —     | —     | —     | —     | —     |
| 2 unit   | V     | V     | V     | V     | —     | —     | —     | —     |
| 3 unit   | V     | V     | V     | X     | V     | V     | —     | —     |
| 4 unit   | V     | V     | V     | X     | V     | X     | V     | V     |

◎ V is CN502/CN504 connected to plug pin, X is CN502/CN504 not connected to plug pin.

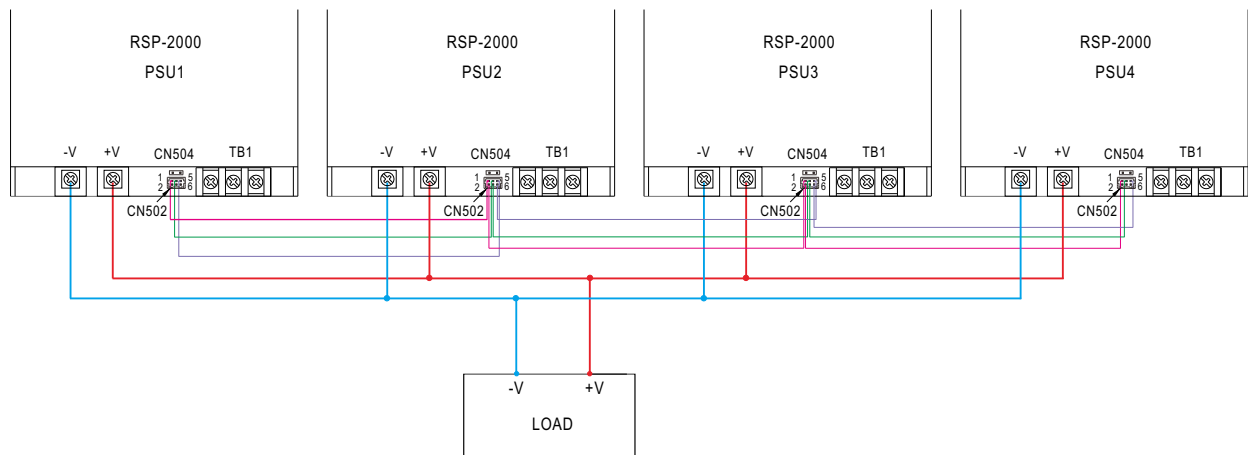
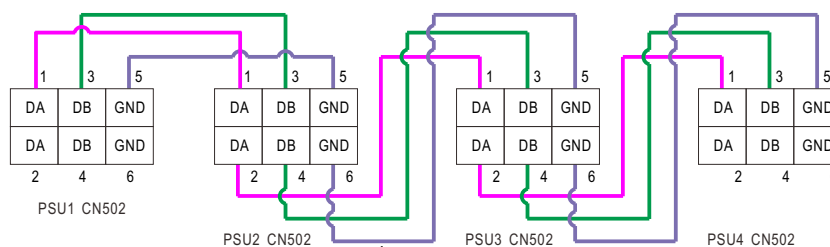


Fig 4.1



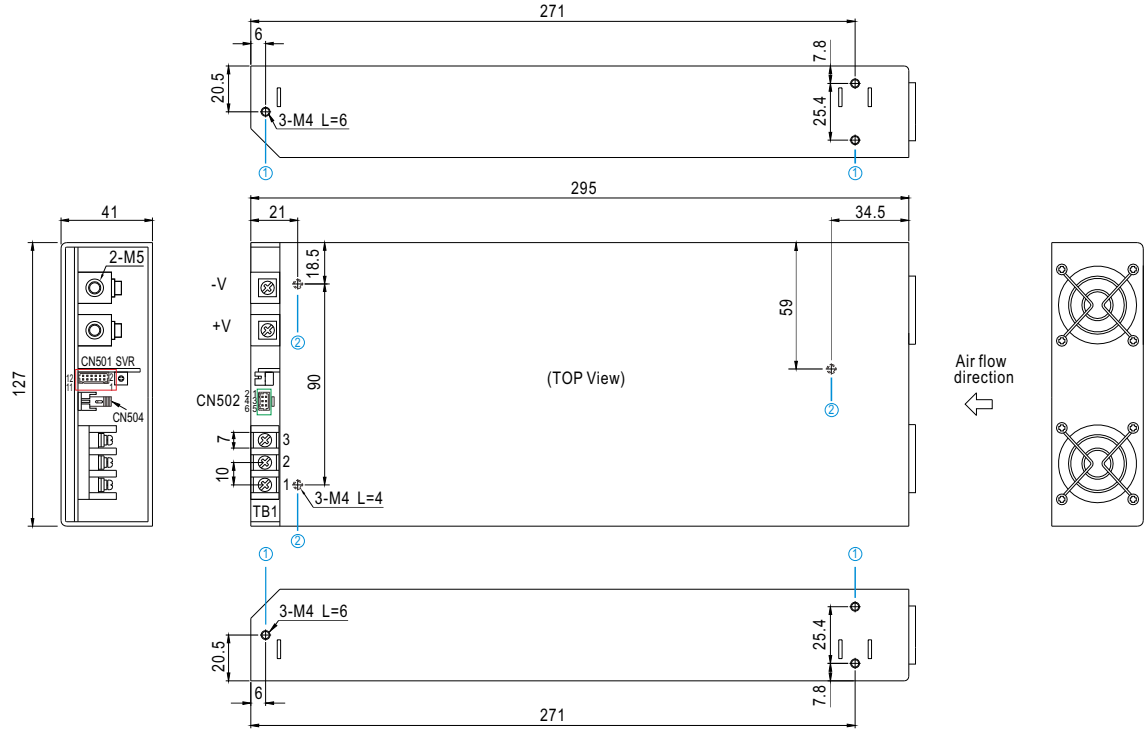
If the lines of CN502 are too long, they should be twisted in pairs to avoid the noise.

◎ DA, DB and GND are connected mutually in parallel.

## Mechanical Specification

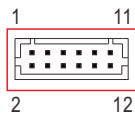
(Unit: mm , tolerance  $\pm 0.5\text{mm}$ )

Case No. 952D

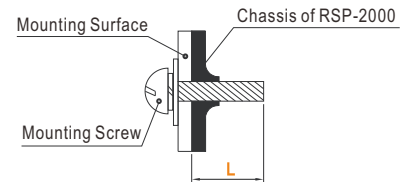


| Hole No. | Recommended Screw Size | MAX. Penetration Depth L | Recommended mounting torque |
|----------|------------------------|--------------------------|-----------------------------|
| ①        | M4                     | 6mm                      | 7~10Kgf-cm                  |
| ②        | M4                     | 4mm                      | 7~10Kgf-cm                  |

※Control Pin No. Assignment (CN501) : HRS DF11-12DP-2DS or equivalent



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



| Pin No. | Function      | Description                                                                                                                                                                                                                                                                          |
|---------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | +S            | Positive sensing for remote sense.                                                                                                                                                                                                                                                   |
| 2       | -S            | Negative sensing for remote sense.                                                                                                                                                                                                                                                   |
| 3       | PV            | Connection for output voltage programming. (Note.1)                                                                                                                                                                                                                                  |
| 4       | GND           | This pin connect to the negative terminal(-V).                                                                                                                                                                                                                                       |
| 5       | DC-OK         | High (4.5 ~ 5.5V) : When the $V_{out} \leq 80\% \pm 6\%$ .<br>Low (0 ~ 0.5V) : When $V_{out} \geq 80\% \pm 6\%$ .<br>The maximum sourcing current is 10mA and only for output. (Note.2)                                                                                              |
| 6       | T-ALARM       | High (4.5 ~ 5.5V) : When the internal temperature (TSW1 or TSW2 open) exceeds the limit of temperature alarm.<br>Low (0 ~ 0.5V) : When the internal temperature (TSW1 or TSW2 short) under the limit temperature. The maximum sourcing current is 10mA and only for output. (Note.2) |
| 7       | Remote ON-OFF | The unit can turn the output on and off by electrical signal or dry contact between Remote ON-OFF and +5V-AUX. (Note.2)<br>Short (4.5 ~ 5.5V) : Power OFF ; Open (0 ~ 0.5V) : Power ON ; The maximum input voltage is 5.5V.                                                          |
| 8,9,10  | GND-AUX       | Auxiliary voltage output GND.<br>The signal return is isolated from the output terminals (+V & -V).                                                                                                                                                                                  |
| 11      | +5V-AUX       | Auxiliary voltage output, 4.5~5.5V, referenced to GND-AUX.<br>The maximum load current is 0.3A. This output has the built-in "Oring diodes" and is not controlled by the Remote ON-OFF control.                                                                                      |
| 12      | +12V-AUX      | Auxiliary voltage output, 10.6~13.2V, referenced to GND-AUX.<br>The maximum load current is 0.8A. This output has the built-in "Oring diodes" and is not controlled by the Remote ON-OFF control.                                                                                    |

Note1: Non-isolated signal, referenced to the output terminals (-V).

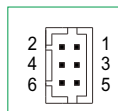
Note2: Isolated signal, referenced to GND-AUX.

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

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

\*Signal between function pin and "GND-AUX".

### ※Control Pin No. Assignment (CN502) : HRS DF11-6DP-2DSA or equivalent



|                |                              |
|----------------|------------------------------|
| Mating Housing | HRS DF11-6DS or equivalent   |
| Terminal       | HRS DF11-6**SC or equivalent |

| Pin No. | Function | Description                                       |
|---------|----------|---------------------------------------------------|
| 1,2     | DA       | Differential digital signal for parallel control. |
| 3,4     | DB       | Differential digital signal for parallel control. |
| 5,6     | GND      | These pins connect to the negative terminal (-V). |

### ※Control Pin No. Assignment (CN504):

| Pin No. | Function            | Description                                                                                                  |
|---------|---------------------|--------------------------------------------------------------------------------------------------------------|
| 1,2     | Terminal resistance | CN504 is the selector of terminal resistor that is designed for DA/DB signals and parallel control function. |

### ※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>