



100W Single Output with PFC Function

**RSP-100** series

Dimension

|      |   |      |   |      |      |
|------|---|------|---|------|------|
| L    | * | W    | * | H    |      |
| 179  | * | 99   | * | 30   | mm   |
| 7.05 | * | 3.90 | * | 1.18 | inch |

User's Manual



R33100  
RoHS  
CNS14336-1

AS/NZS62368-1 UL62368-1

BS EN/EN62368-1 GB4943.1 TPTC004 IEC62368-1  
BS EN/EN61558-1  
BS EN/EN61558-2-16

## Features

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 88%
- Cooling by free air convection
- Built-in remote ON-OFF control
- Protections: Short circuit / Overload / Over voltage / Over temperature
- LED indicator for power on
- 3 years warranty

## Applications

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

## GTIN CODE

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

## Description

RSP-100 is a 100W single output enclosed type AC/DC power supply. This series operates for 85~264VAC input voltage and offers the models with the DC output mostly demanded from the industry. Each model is cooled by free air convection, working for the temperature up to 70°C.

## Model Encoding / Order Information

**RSP - 100 - 15**

Output voltage (3.3V/5V/7.5V/12V/13.5V/15V/24V/27V/48V)  
Output wattage  
Series name

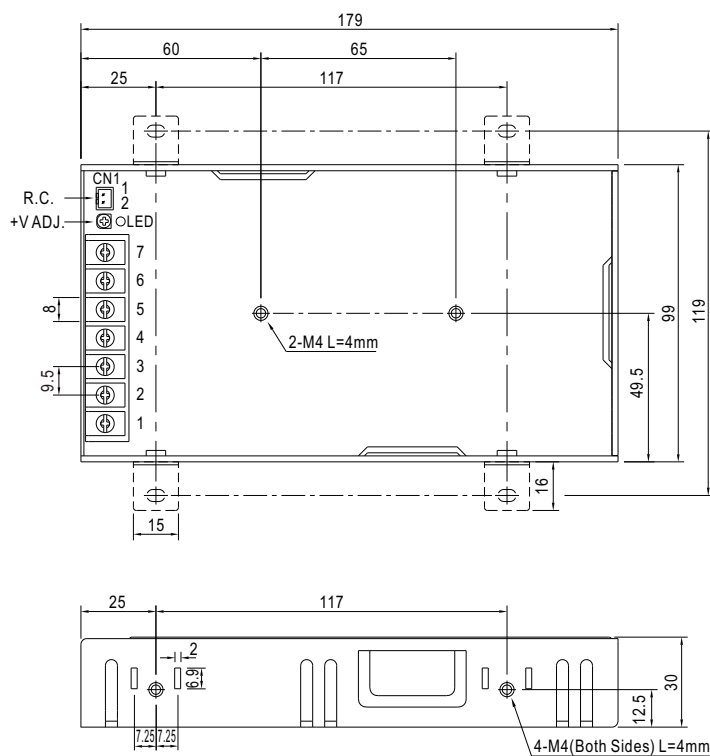


## SPECIFICATION

| MODEL                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RSP-100-3.3                                                                                                                                                | RSP-100-5   | RSP-100-7.5   | RSP-100-12   | RSP-100-13.5   | RSP-100-15    | RSP-100-24   | RSP-100-27    | RSP-100-48   |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|--------------|----------------|---------------|--------------|---------------|--------------|
| OUTPUT                                  | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3.3V                                                                                                                                                       | 5V          | 7.5V          | 12V          | 13.5V          | 15V           | 24V          | 27V           | 48V          |
|                                         | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20A                                                                                                                                                        | 20A         | 13.5A         | 8.5A         | 7.5A           | 6.7A          | 4.2A         | 3.8A          | 2.1A         |
|                                         | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0 ~ 20A                                                                                                                                                    | 0 ~ 20A     | 0 ~ 13.5A     | 0 ~ 8.5A     | 0 ~ 7.5A       | 0 ~ 6.7A      | 0 ~ 4.2A     | 0 ~ 3.8A      | 0 ~ 2.1A     |
|                                         | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 66W                                                                                                                                                        | 100W        | 101.25W       | 102W         | 101.25W        | 100.5W        | 100.8W       | 102.6W        | 100.8W       |
|                                         | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 100mVp-p                                                                                                                                                   | 100mVp-p    | 100mVp-p      | 100mVp-p     | 100mVp-p       | 100mVp-p      | 150mVp-p     | 150mVp-p      | 250mVp-p     |
|                                         | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.14 ~ 3.63V                                                                                                                                               | 4.75 ~ 5.5V | 7.13 ~ 8.25V  | 11.4 ~ 13.2V | 12.8 ~ 14.9V   | 14.3 ~ 16.5V  | 22.8 ~ 26.4V | 25.7 ~ 29.7V  | 45.6 ~ 52.8V |
|                                         | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ±2.0%                                                                                                                                                      | ±2.0%       | ±2.0%         | ±1.0%        | ±1.0%          | ±1.0%         | ±1.0%        | ±1.0%         | ±1.0%        |
|                                         | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ±0.5%                                                                                                                                                      | ±0.5%       | ±0.5%         | ±0.5%        | ±0.5%          | ±0.5%         | ±0.5%        | ±0.5%         | ±0.5%        |
|                                         | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ±1.0%                                                                                                                                                      | ±1.0%       | ±1.0%         | ±0.5%        | ±0.5%          | ±0.5%         | ±0.5%        | ±0.5%         | ±0.5%        |
|                                         | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 600ms, 30ms at full load                                                                                                                                   |             |               |              |                |               |              |               |              |
|                                         | HOLD UP TIME (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 16ms at full load                                                                                                                                          |             |               |              |                |               |              |               |              |
| INPUT                                   | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 85 ~ 264VAC      120 ~ 370VDC                                                                                                                              |             |               |              |                |               |              |               |              |
|                                         | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 47 ~ 63Hz                                                                                                                                                  |             |               |              |                |               |              |               |              |
|                                         | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | PF>0.93/230VAC      PF>0.98/115VAC at full load                                                                                                            |             |               |              |                |               |              |               |              |
|                                         | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 83%                                                                                                                                                        | 86%         | 87%           | 86%          | 86.5%          | 87%           | 87%          | 87%           | 88%          |
|                                         | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1.1A/115VAC      0.55A/230VAC                                                                                                                              |             |               |              |                |               |              |               |              |
|                                         | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | COLD START 30A/230VAC                                                                                                                                      |             |               |              |                |               |              |               |              |
|                                         | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <2mA / 240VAC                                                                                                                                              |             |               |              |                |               |              |               |              |
| PROTECTION                              | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 105 ~ 135% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed                      |             |               |              |                |               |              |               |              |
|                                         | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3.63 ~ 4.46V                                                                                                                                               | 5.5 ~ 6.75V | 8.25 ~ 10.13V | 13.2 ~ 16.2V | 14.85 ~ 18.23V | 16.5 ~ 20.25V | 26.4 ~ 32.4V | 29.7 ~ 36.45V | 52.8 ~ 64.8V |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Protection type : Shut down o/p voltage, re-power on to recover                                                                                            |             |               |              |                |               |              |               |              |
|                                         | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Shut down o/p voltage, recovers automatically after temperature goes down                                                                                  |             |               |              |                |               |              |               |              |
| FUNCTION                                | REMOTE CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CN1: < 0~0.8VDC POWER ON , 4~10VDC POWER OFF                                                                                                               |             |               |              |                |               |              |               |              |
| ENVIRONMENT                             | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -30 ~ +70°C (Refer to "Derating Curve")                                                                                                                    |             |               |              |                |               |              |               |              |
|                                         | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 20 ~ 90% RH non-condensing                                                                                                                                 |             |               |              |                |               |              |               |              |
|                                         | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -40 ~ +85°C, 10 ~ 95% RH non-condensing                                                                                                                    |             |               |              |                |               |              |               |              |
|                                         | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ±0.05%/°C (0 ~ 50°C)                                                                                                                                       |             |               |              |                |               |              |               |              |
|                                         | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                                                               |             |               |              |                |               |              |               |              |
|                                         | OVER VOLTAGE CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | III ; According to EN61558, EN50178, EN60664-1, EN62477-1 ; altitude up to 2000 meters                                                                     |             |               |              |                |               |              |               |              |
| SAFETY & EMC<br><small>(Note 4)</small> | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | UL62368-1, TUV BS EN/EN62368-1, BS EN/EN61558-1, BS EN/EN61558-2-16, EAC TP TC 004, CCC GB4943.1, BSMI CNS14336-1 approved, Design refer to AS/NZS 62368.1 |             |               |              |                |               |              |               |              |
|                                         | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | I/P-O/P:4KVAC    I/P-FG:2KVAC    O/P-FG:0.5KVAC                                                                                                            |             |               |              |                |               |              |               |              |
|                                         | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH                                                                                                  |             |               |              |                |               |              |               |              |
|                                         | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020, CNS13438, GB9254 Class B, GB17625.1                                    |             |               |              |                |               |              |               |              |
|                                         | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, light industry level, EAC TP TC 020                                                           |             |               |              |                |               |              |               |              |
| OTHERS                                  | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2325.2K hrs min.    Telcordia SR-332 (Bellcore) ; 288.5K hrs min.    MIL-HDBK-217F (25°C)                                                                  |             |               |              |                |               |              |               |              |
|                                         | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 179*99*30mm (L*W*H)                                                                                                                                        |             |               |              |                |               |              |               |              |
|                                         | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.52Kg; 24pcs/14.5Kg/0.81CUFT                                                                                                                              |             |               |              |                |               |              |               |              |
| NOTE                                    | <div>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</div> <div>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.</div> <div>3. Tolerance : includes set up tolerance, line regulation and load regulation.</div> <div>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</div> <div>5. Strongly recommended that external output capacitance should not exceed 5000uF. (Only for: RSP-100-3.3/-5/-7.5)</div> <div>6. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</div> <div>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></div> |                                                                                                                                                            |             |               |              |                |               |              |               |              |

Case No.227A Unit:mm

## Mechanical Specification



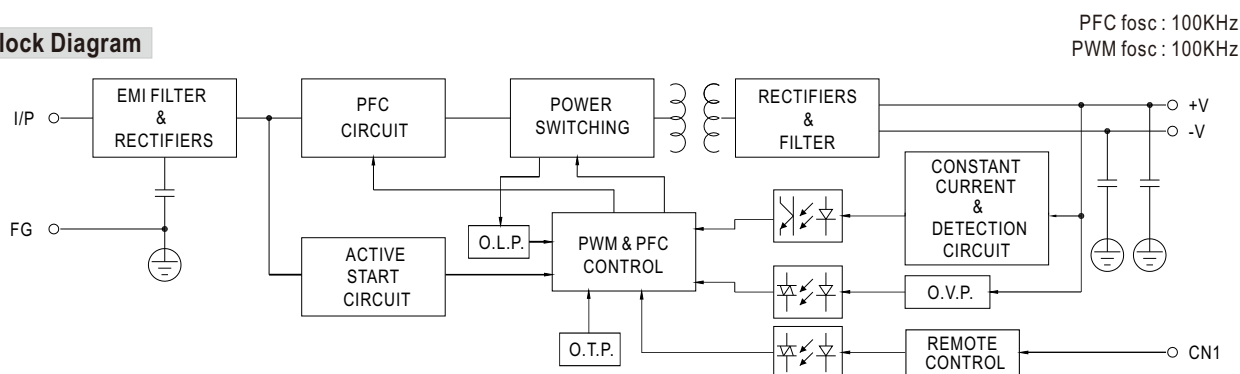
### Terminal Pin No. Assignment

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

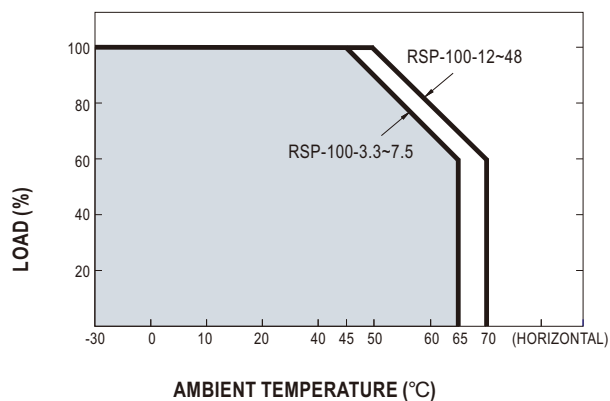
Remote ON/OFF(CN1): JST S2B-XH or equivalent(optional)

| Pin No. | Assignment | Mating Housing        | Terminal                        |
|---------|------------|-----------------------|---------------------------------|
| 1       | RC+        | JST XHP or equivalent | JST SXH-001T-P0.6 or equivalent |
| 2       | RC-        |                       |                                 |

## Block Diagram



## Derating Curve



## Output Derating VS Input Voltage

