



■ Features :

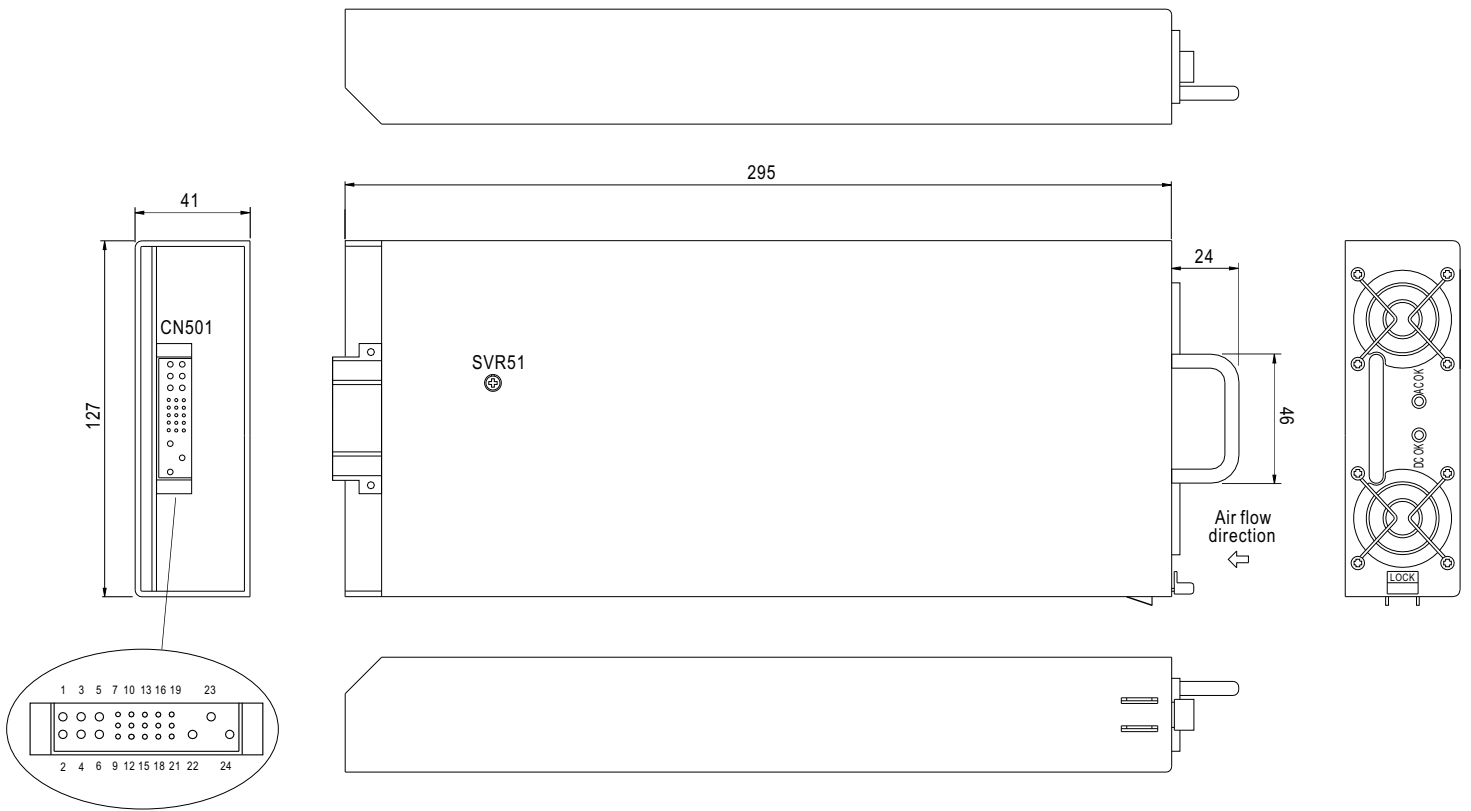
- Universal AC input / Full range
- Built-in 5V/0.5A auxiliary power
- Built-in active PFC function, PF>0.96
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Forced air cooling by built-in DC ball bearing fan
- Low profile: 1U high
- Active current sharing
- Remote control for single unit
- Up to 3000W (3 units) in 19" rack
- Built-in remote sense function
- Hot-swap operation
- I²C serial data bus option
- DC OK signal
- Internal ORing diode

SPECIFICATION

| MODEL | RCP-1000-12 | RCP-1000-24 | RCP-1000-48 | |
|-----------------------|--|---|--------------|--------------|
| OUTPUT | DC VOLTAGE | 12V | 24V | 48V |
| | RATED CURRENT | 60A | 40A | 21A |
| | CURRENT RANGE | 0 ~ 60A | 0 ~ 40A | 0 ~ 21A |
| | RATED POWER | 720W | 960W | 1008W |
| | RIPPLE & NOISE (max.) Note.2 | 150mVp-p | 200mVp-p | 300mVp-p |
| | VOLTAGE ADJ. RANGE | 11.4 ~ 12.6V | 22.8 ~ 25.2V | 45.6 ~ 50.4V |
| | VOLTAGE TOLERANCE Note.3 | ±1.0% | ±1.0% | ±1.0% |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% |
| | LOAD REGULATION | ±0.5% | ±0.5% | ±0.5% |
| | SETUP, RISE TIME | 1000ms, 60ms/230VAC at full load | | |
| HOLD TIME (Typ.) | 16ms/230VAC at full load | | | |
| INPUT | VOLTAGE RANGE | 90 ~ 264VAC | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | |
| | EFFICIENCY (Typ.) | 81% | 87% | 88% |
| | AC CURRENT (Typ.) | 12A/115VAC 6A/230VAC | | |
| | INRUSH CURRENT (Typ.) | COLD START 40A | | |
| | LEAKAGE CURRENT | <1.1mA / 230VAC | | |
| PROTECTION | OVER LOAD | 105 ~ 125% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed | | |
| | OVER VOLTAGE | 13.2 ~ 16.2V | 26.4 ~ 32.4V | 52.8 ~ 64.8V |
| | OVER TEMPERATURE | 75°C ±5°C (TSW1) Detect on heatsink of power transistor 85°C ±5°C (TSW2) Detect on heatsink of power diode Protection type : Shut down o/p voltage, recovers automatically after temperature goes down | | |
| FUNCTION | AUXILIARY POWER | 5V @ 0.5A | | |
| | REMOTE ON/OFF CONTROL | By electrical signal or dry contact ON:short OFF:open | | |
| | DC OK SIGNAL | Open collector signal on when Vout ≥ 80%±5% Max. Sink current:10mA | | |
| | AC FAIL SIGNAL | Open collector signal refer to instruction manual | | |
| | OUTPUT VOLTAGE TRIM | Adjustment of output voltage is possible between 90 ~ 110% of rated output by following | | |
| | OVER TEMP WARNING | A logic Hi refer to instruction manual | | |
| ENVIRONMENT | WORKING TEMP. | -20 ~ +70°C (Refer to output load derating curve) | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH | | |
| | TEMP. COEFFICIENT | ±0.02%/°C (0 ~ 50°C) | | |
| | VIBRATION | Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS | Design refer to UL508, UL60950-1, TUV EN60950-1 | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC | | |
| | EMI CONDUCTION & RADIATION | Compliance to EN55011 (CISPR11), EN55022 (CISPR22), EN61204-3 Class B | | |
| | HARMONIC CURRENT | Compliance to EN61000-3-2,-3 | | |
| OTHERS | MTBF | Khrs min. MIL-HDBK-217F (25°C) | | |
| | DIMENSION | 295*127*41mm (L*W*H) Rack 350.8*442*44(L*W*H) | | |
| | PACKING | 2Kg | | |
| NOTE | <ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 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. 5. Derating may be needed under low input voltages. Please check the derating curve for more details. | | | |

Mechanical Specification

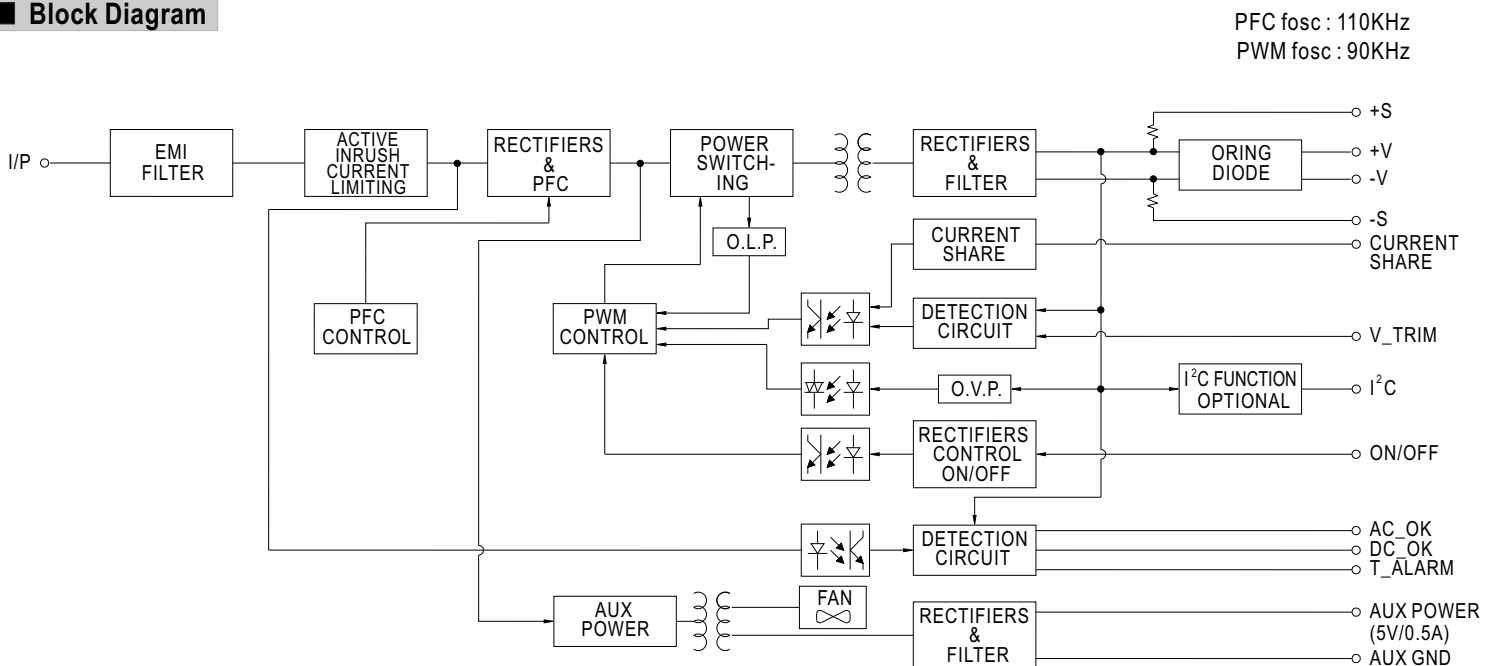
Case No. 952A Unit:mm



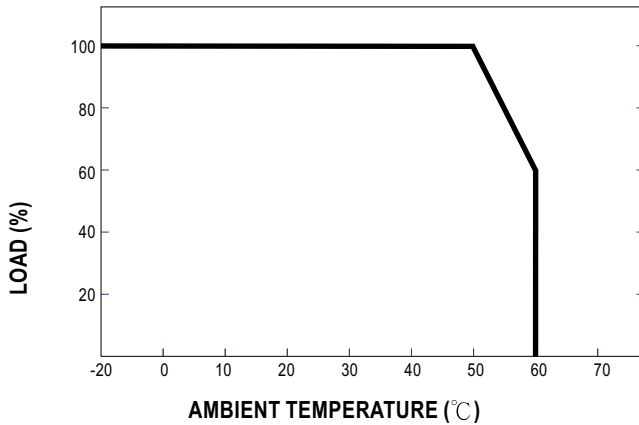
Input / Output Connector Pin. No Assignment(CN501) : Postronic PCIB24W9M400A1

| Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment | Mating Housing |
|---------|------------|---------|------------|---------|------------|---------|------------|--|
| 1,2,4 | +V | 10 | AC_OK | 15 | +5V_AUX | 20 | A1 | Postronic PCIB24W9F400A1 or equivalent |
| 3,5,6 | -V | 11 | DC_OK | 16 | GND_AUX | 21 | A2 | |
| 7 | ON/OFF | 12 | (CS) | 17 | SDA | 22 | FG | |
| 8 | +S | 13 | V_TRIM | 18 | SCL | 23 | AC/L | |
| 9 | -S | 14 | T_ALARM | 19 | A0 | 24 | AC/N | |
| | | | | | | | | |

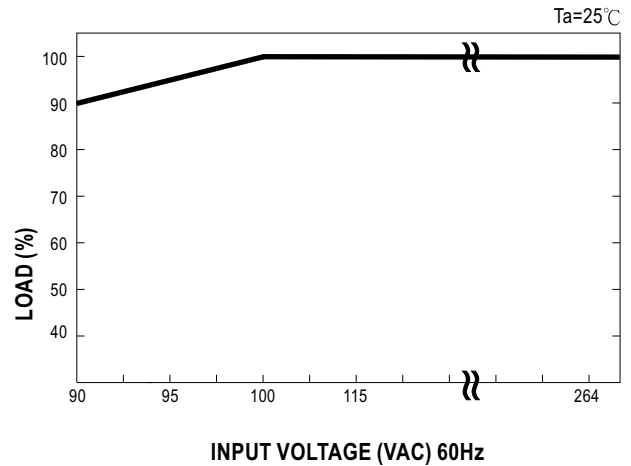
Block Diagram



Derating Curve



Static Characteristics



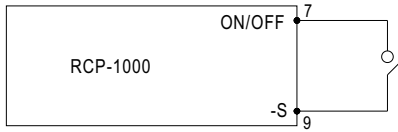
CN501 IN/OUT Connector pins function description

| Pin No. | Function | Description |
|----------|----------|---|
| 1,2,4 | +V | Positive output voltage |
| 3,5,6 | -V | Negative output voltage |
| 7 | ON/OFF | Turns the output on and off by electrical or dry contact between pin 7 and pin (-S). Short: ON, Open:OFF. |
| 8 | +S | Positive sensing. The +S signal should be connected to the positive terminal of the load. The +S and -S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V. |
| 9 | -S | Negative sensing. The -S signal should be connected to the negative terminal of the load. The -S and +S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V. |
| 10 | AC-OK | High when the input voltage is $\geq 83V_{rms} \pm 3V$. Low when the input voltage is $\leq 83V_{rms} \pm 3V$. |
| 11 | DC-OK | High when the $V_{out} \geq 80\% \pm 5\%$. Low when $V_{out} \leq 85\% \pm 5\%$ |
| 12 | CS | Current sharing signal. When units are connected in parallel, the CS pins of the units should be connected to allow current balance between units. |
| 13 | V-TRIM | Connection for output voltage trimming. The voltage can be trimmed within its defined range. |
| 14 | T-ALARM | High when the internal temperature is within safe limit, Low $10^{\circ}C$ below thermal shut down. |
| 15 | +5V-AUX | Auxiliary voltage output, 4.3~5.3V, referenced to pin 16. The maximum load current is 0.5A. This output has the built-in. Oring diodes and is not controlled by the remote ON/OFF control. |
| 16 | GND-AUX | Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V). |
| 17 | SDA | Serial data used in the I ² C interface option. Refer to the I ² C interface description. |
| 18 | SCL | Serial clock used in the I ² C interface option. Refer to the I ² C interface description. |
| 19,20,21 | A0,A1,A2 | I ² C interface address lines. Refer to the I ² C interface description. |
| 22 | FG | AC Frame Ground |
| 23 | AC/L | AC Line |
| 24 | AC/N | AC Neutral |

Function Manual

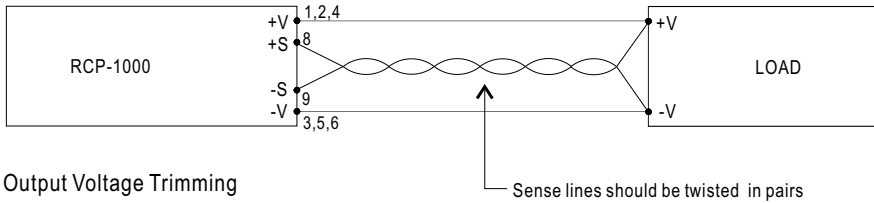
1. Single Unit Operation

1.1 Remote ON/OFF Control

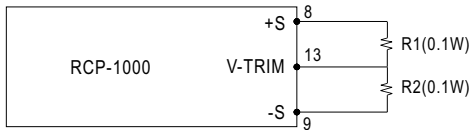


| Between ON/OFF and -S | Output |
|-----------------------|--------|
| SW OFF (Open) | ON |
| SW ON (Short) | OFF |

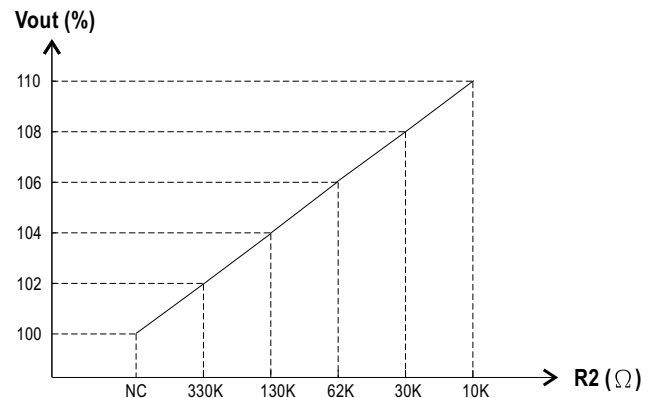
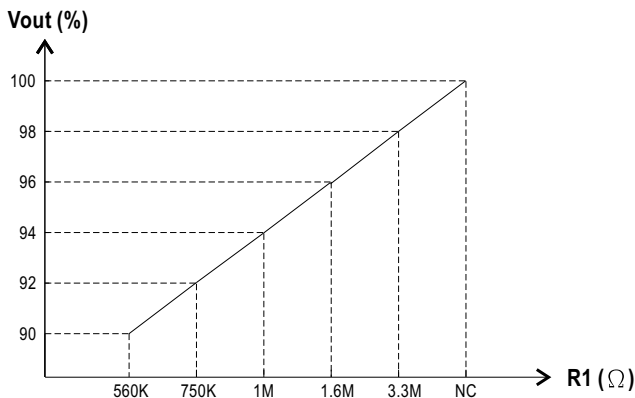
1.2 Remote Sensing



1.3 Output Voltage Trimming



1.3.1 RCP-1000-24



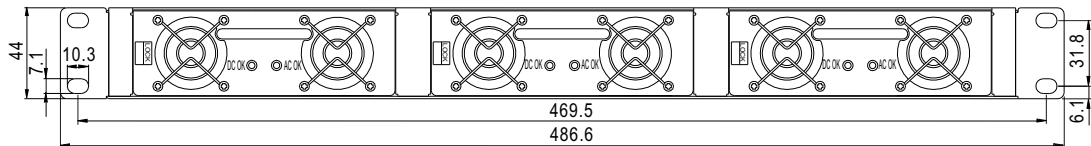
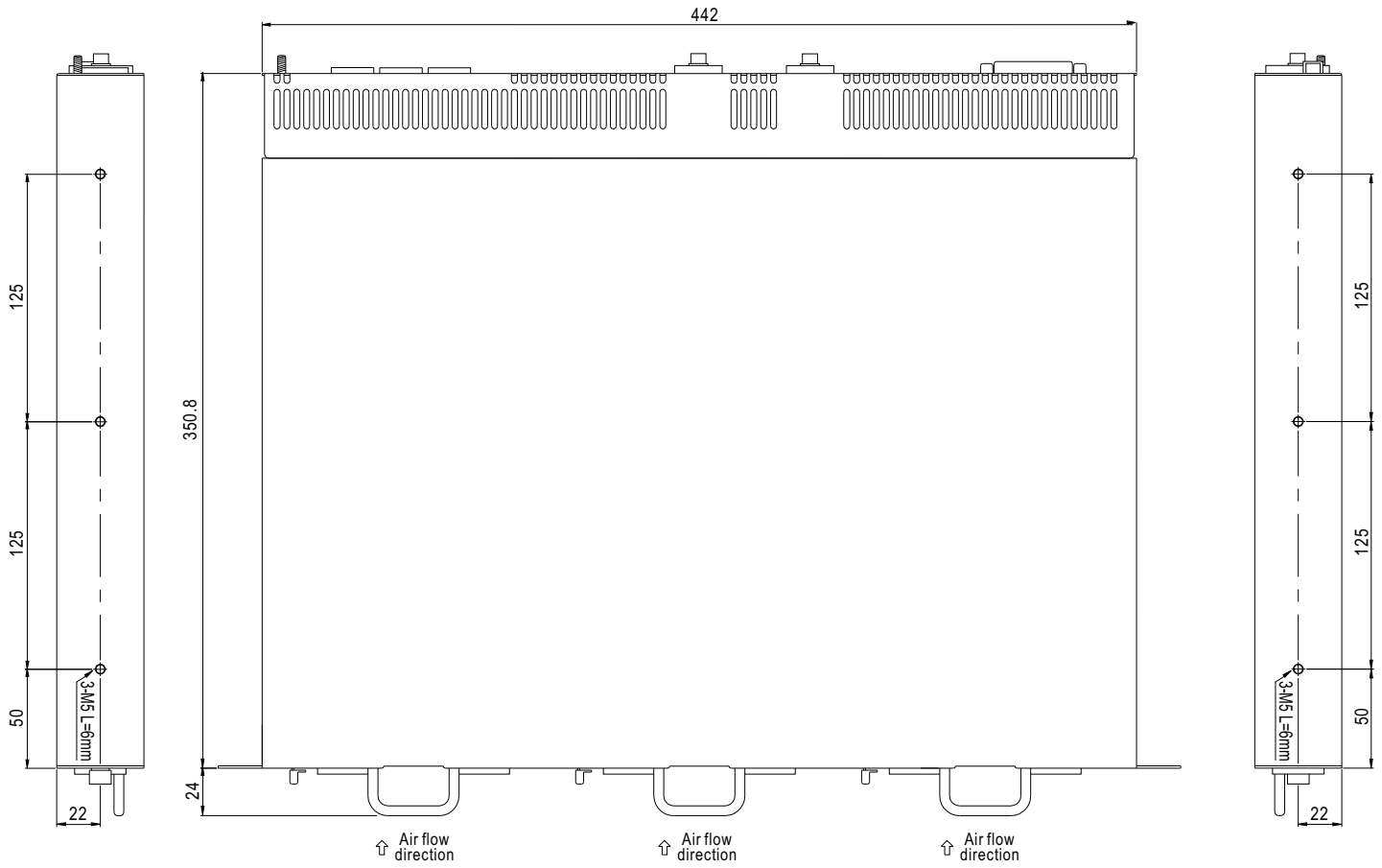
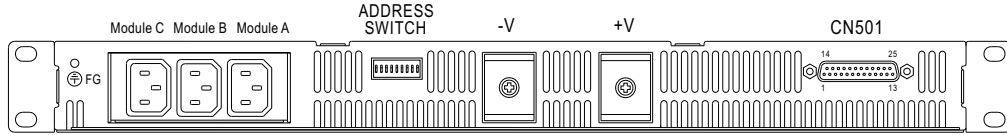
1.4 Front Panel Indicators & Corresponding Signal at Function Pins

| Function | LED | Description | * Singal | PSU Output |
|----------|-----|---|------------|------------|
| AC-OK | ON | When input voltage $\geq 83V \pm 3V$ | 0 ~ 0.5V | ON |
| AC-NG | OFF | When input voltage $\leq 83V \pm 3V$ | 4.5 ~ 5.5V | OFF |
| DC-OK | ON | When output voltage $\geq 80\% \pm 5\%$ of V_o rated. | 0 ~ 0.5V | ON |
| DC-NG | OFF | When output voltage $\leq 80\% \pm 5\%$ of V_o rated. | 4.5 ~ 5.5V | ON |

*Singal between function pin and "-S".

Mechanical Specification

Case No. 952A Unit:mm

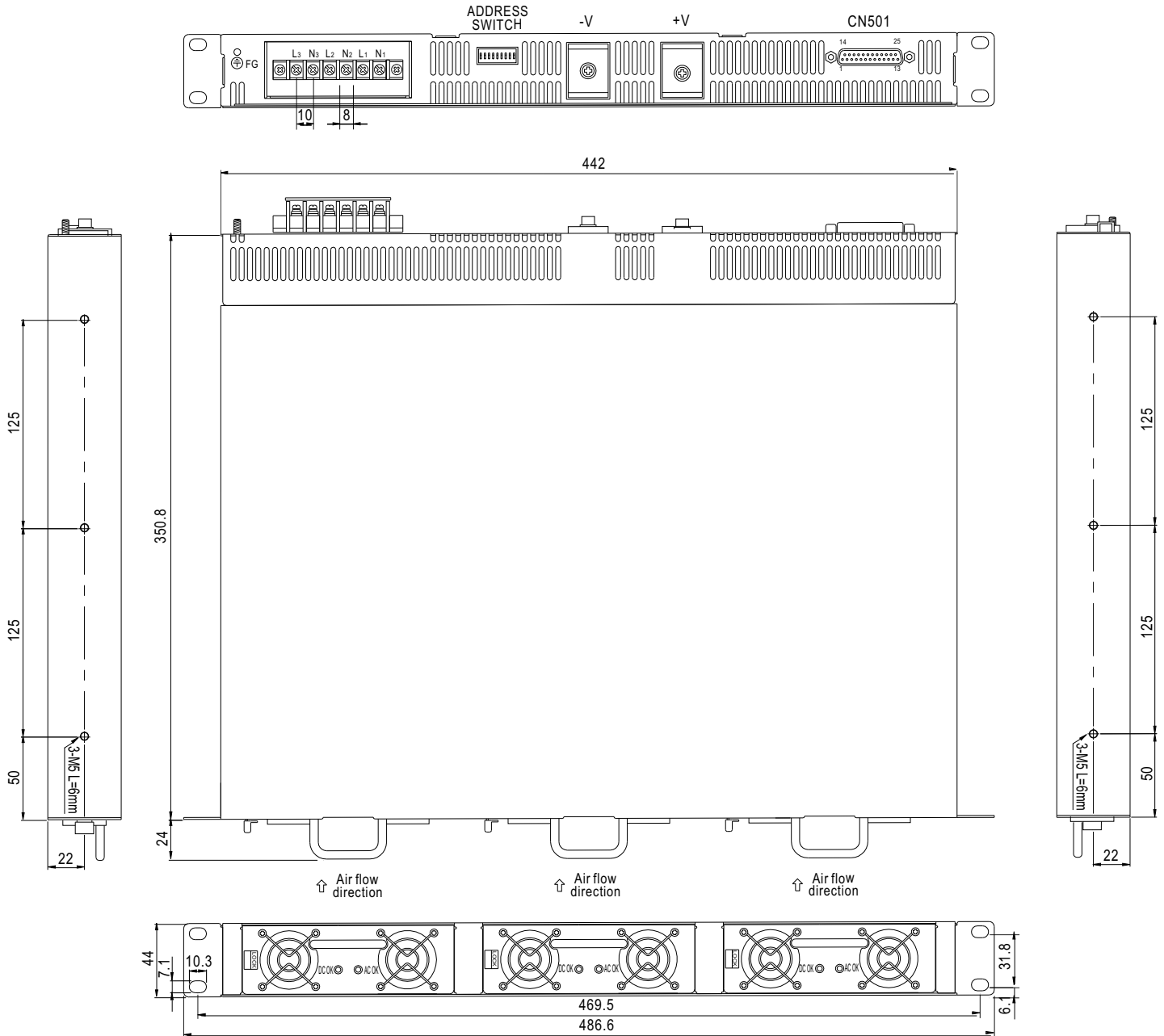


Connector Pin. No Assignment(CN501) :

| Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|------------|---------|------------|---------|------------|---------|------------|
| 1 | ON/OFF_A | 6 | +5V_AUX | 11 | V_-TRIM_B | 16 | AC_OK_C | 21 | -S |
| 2 | AC_OK_A | 7 | GND_AUX | 12 | T_ALARM_B | 17 | DC_OK_C | 22 | NC |
| 3 | DC_OK_A | 8 | ON/OFF_B | 13 | NC | 18 | V_-TRIM_C | 23 | SCL |
| 4 | V_-TRIM_A | 9 | AC_OK_B | 14 | CS | 19 | T_ALARM_C | 24 | SDA |
| 5 | T_ALARM_A | 10 | DC_OK_B | 15 | ON/OFF_C | 20 | +S | 25 | NC |

Mechanical Specification

Case No. 952A Unit:mm



Connector Pin. No Assignment(CN501) :

| Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|------------|---------|------------|---------|------------|---------|------------|
| 1 | ON/OFF_1 | 6 | +5V_AUX | 11 | V_-TRIM_2 | 16 | AC_OK_3 | 21 | -S |
| 2 | AC_OK_1 | 7 | GND_AUX | 12 | T_ALARM_2 | 17 | DC_OK_3 | 22 | NC |
| 3 | DC_OK_1 | 8 | ON/OFF_2 | 13 | NC | 18 | V_-TRIM_3 | 23 | SCL |
| 4 | V_-TRIM_1 | 9 | AC_OK_2 | 14 | CS | 19 | T_ALARM_3 | 24 | SDA |
| 5 | T_ALARM_1 | 10 | DC_OK_2 | 15 | ON/OFF_3 | 20 | +S | 25 | NC |