



■ Features :

- Universal AC input / Full range
- AC input active surge current limiting
- High efficiency up to 92%
- Built-in 12V/0.1A auxiliary power
- Built-in active PFC function, PF>0.97
- Protections: Short circuit / Overload / Over voltage / Over temperature / Fan alarm
- Output voltage can be trimmed between 40 ~ 110% by 2 ~ 5.5VDC external control signal
- Output current can be trimmed between 40 ~ 110% by 2 ~ 5.5VDC external control signal
- Forced air cooling by built-in DC with fan speed control function
- High power density 9.44w/inch<sup>3</sup>
- 1U low profile 41mm
- DC OK Signal
- Built-in remote ON-OFF control
- Built-in remote sense function
- 3 years warranty

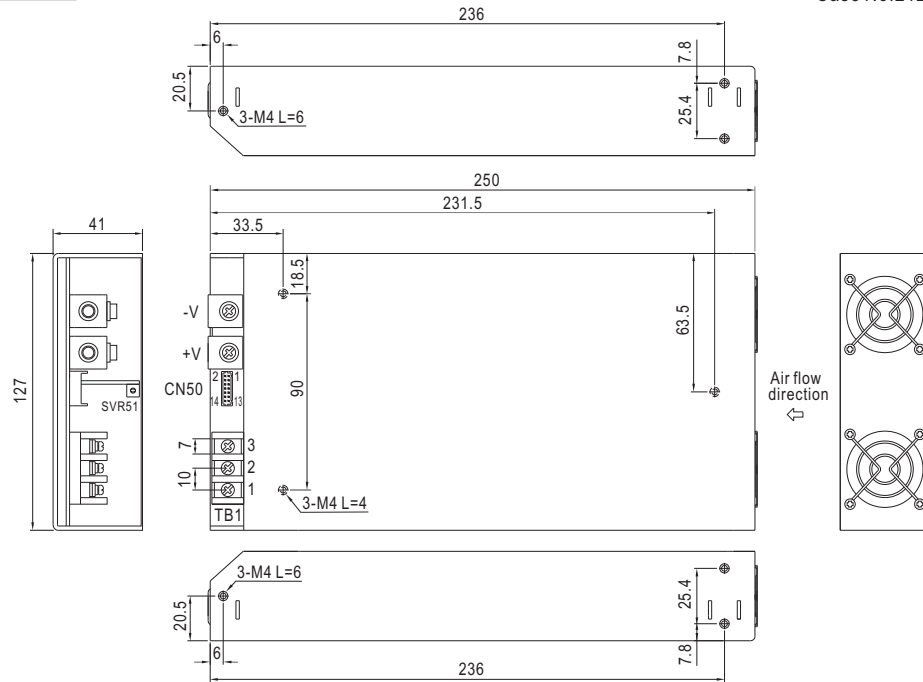


SPECIFICATION

| MODEL                 | RSP-750-5   | RSP-750-12   | RSP-750-15               | RSP-750-24            | RSP-750-27   | RSP-750-48 |              |
|-----------------------|---|--|--------------------------|-----------------------|--------------|------------|--------------|
| OUTPUT                | DC VOLTAGE  | 5V   | 12V                      | 15V                   | 24V          | 27V        | 48V          |
|                       | RATED CURRENT   | 100A   | 62.5A                    | 50A                   | 31.3A        | 27.8A      | 15.7A        |
|                       | CURRENT RANGE   | 0 ~ 100A   | 0 ~ 62.5A                | 0 ~ 50A               | 0 ~ 31.3A    | 0 ~ 27.8A  | 0 ~ 15.7A    |
|                       | RATED POWER   | 500W   | 750W                     | 750W                  | 751.2W       | 750.6W     | 753.6W       |
|                       | RIPPLE & NOISE (max.) Note.2  | 150mVp-p   | 150mVp-p                 | 150mVp-p              | 150mVp-p     | 150mVp-p   | 150mVp-p     |
|                       | VOLTAGE ADJ. RANGE  | 4.75 ~ 5.5V  | 10 ~ 13.5V               | 13.5 ~ 16.5V          | 20 ~ 26.4V   | 24 ~ 30V   | 43 ~ 55V     |
|                       | VOLTAGE TOLERANCE Note.3  | ±2.0%  | ±1.0%                    | ±1.0%                 | ±1.0%        | ±1.0%      | ±1.0%        |
|                       | LINE REGULATION   | ±0.5%  | ±0.5%                    | ±0.5%                 | ±0.5%        | ±0.5%      | ±0.5%        |
|                       | LOAD REGULATION   | ±2.0%  | ±0.5%                    | ±0.5%                 | ±0.5%        | ±0.5%      | ±0.5%        |
|                       | SETUP, RISE TIME  | 1000ms, 50ms at full load  |                          |                       |              |            |              |
| HOLD UP TIME (Typ.)   | 16ms/230VAC 16ms/115VAC at full load  |  |                          |                       |              |            |              |
| INPUT                 | VOLTAGE RANGE Note.5  | 90 ~ 264VAC  | 127 ~ 370VDC             |                       |              |            |              |
|                       | FREQUENCY RANGE   | 47 ~ 63Hz  |                          |                       |              |            |              |
|                       | POWER FACTOR (Typ.)   | 0.97/230VAC  | 0.98/115VAC at full load |                       |              |            |              |
|                       | EFFICIENCY (Typ.)   | 82%  | 87%                      | 89%                   | 90.5%        | 90.5%      | 92%          |
|                       | AC CURRENT (Typ.)   | 5V : 5.6A/115VAC   | 2.8A/230VAC              | 12V~48V : 8.2A/115VAC | 3.9A/230VAC  |            |              |
|                       | INRUSH CURRENT (Typ.)   | 25A/115VAC   | 40A/230VAC               |                       |              |            |              |
|                       | LEAKAGE CURRENT   | <2.0mA / 240VAC  |                          |                       |              |            |              |
| PROTECTION            | OVERLOAD  | 105 ~ 125% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed  |                          |                       |              |            |              |
|                       | OVER VOLTAGE  | 5.75 ~ 6.75V   | 13.8 ~ 16.8V             | 17 ~ 20.5V            | 27.6 ~ 32.4V | 31 ~ 36.5V | 56.6 ~ 66.2V |
|                       | OVER TEMPERATURE  | 85°C ±5°C (TSW2) detect on heatsink of O/P diode; 80°C ±5°C (TSW1) detect on heatsink of power transistor<br>Protection type : Shut down o/p voltage, recovers automatically after temperature goes down |                          |                       |              |            |              |
| FUNCTION              | AUXILIARY POWER(AUX)  | 12V @ 0.1A ; tolerance : ±10%  |                          |                       |              |            |              |
|                       | REMOTE ON/OFF CONTROL Note.6  | Power on : short between on/off(pin13) & 12V-AUX(pin14) on CN50 Power off : open between on/off(pin13) & 12-AUX(pin14) on CN50   |                          |                       |              |            |              |
|                       | DC OK SIGNAL  | The TTL signal out, PSU turn on = 0 ~ 1V ; PSU turn off = 3.3 ~ 5.6V   |                          |                       |              |            |              |
|                       | OUTPUT VOLTAGE TRIM Note.6  | Adjustment of output voltage is possible between 40 ~ 110% by 2 ~ 5.5VDC external control signal   |                          |                       |              |            |              |
| ENVIRONMENT           | OUTPUT CURRENT TRIM   | Adjustment of output current is between 40 ~ 110% by 2 ~ 5.5VDC external control signal  |                          |                       |              |            |              |
|                       | 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   |                          |                       |              |            |              |
|                       | TEMP. COEFFICIENT   | ±0.03%/°C (0 ~ 50°C)   |                          |                       |              |            |              |
|                       | VIBRATION   | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes   |                          |                       |              |            |              |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS  | UL60950-1, TUV EN60950-1 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°C / 70% RH   |                          |                       |              |            |              |
|                       | EMC EMISSION  | Compliance to EN55022 (CISPR22), EN61000-3-2,-3  |                          |                       |              |            |              |
|                       | EMC IMMUNITY  | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A  |                          |                       |              |            |              |
| OTHERS                | MTBF  | 120.8K hrs min. MIL-HDBK-217F (25°C)   |                          |                       |              |            |              |
|                       | DIMENSION   | 250*127*41mm (L*W*H)   |                          |                       |              |            |              |
|                       | PACKING   | 1.64Kg; 6pcs/10.8Kg/1.1CUFT  |                          |                       |              |            |              |
| NOTE                  | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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. 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>)</p> <p>5. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>6. The power supply unit will have no output if the shorting connector is not assembled. It contains three shorting wires: one is from on/off(pin13) to 12V-AUX(pin14), two is from PC(pin7) to PO(pin8) and the other is from PV(pin5) to PS(pin6). Please refer to function manual for details.</p> <p>7. Please consult MEAN WELL for applications of more units connecting in parallel.</p> |  |                          |                       |              |            |              |

**Mechanical Specification**

Case No.212A Unit:mm



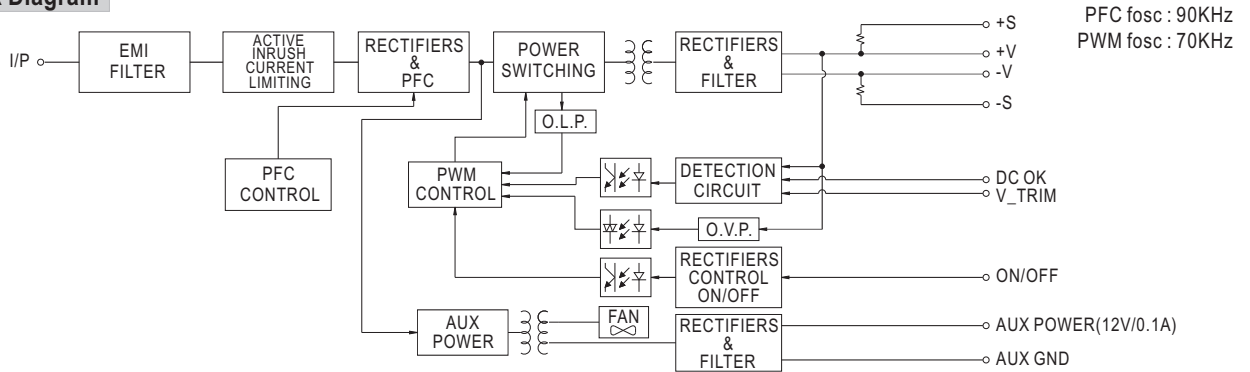
**AC Input Terminal Pin No. Assignment**

| Pin No. | Assignment |
|---------|------------|
| 1       | AC/N       |
| 2       | AC/L       |
| 3       | FG $\perp$ |

**Control Pin No. Assignment (CN50) : HRS DF11-14DP-2DS or equivalent**

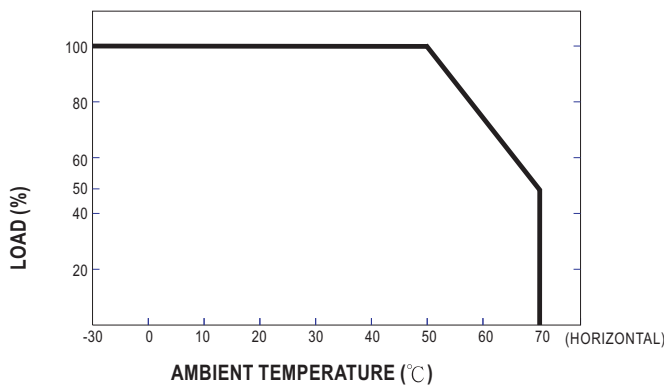
| Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment | Mating Housing              | Terminal                    |
|---------|------------|---------|------------|---------|------------|-----------------------------|-----------------------------|
| 1       | +S         | 6       | PS         | 12      | G-AUX      | HRS DF11-14DS or equivalent | HRS DF11-**SC or equivalent |
| 2       | +VS        | 7       | PC         | 13      | ON/OFF     |                             |                             |
| 3       | -S         | 8       | PO         | 14      | 12V-AUX    |                             |                             |
| 4       | -VS        | 9       | DC-OK      |         |            |                             |                             |
| 5       | PV         | 10,11   | GND        |         |            |                             |                             |

**Block Diagram**



PFC fosc : 90KHz  
PWM fosc : 70KHz

**Derating Curve**



**Static Characteristics**



■ Function Description of CN50

| Pin No. | Function | Description   |
|---------|----------|---|
| 1       | +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. |
| 2       | +VS      | +V Signal. The +VS should be connected to the +S to reduce the noise when "output voltage TRIM" function is in use.   |
| 3       | -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. |
| 4       | -VS      | -V Signal. The -VS should be connected to the -S to reduce the noise when "output voltage TRIM" function is in use.   |
| 5       | PV       | Connect to external DC voltage source for output voltage trimming, referenced to pin 10,11 (GND). Output voltage can be trimmed between 40 ~ 110% of the rated output voltage.  |
| 6       | PS       | Short connecting between PV (pin5) and PS (pin6) if "output voltage TRIM" function is not used.   |
| 7       | PC       | Connect to external DC voltage source for output current trimming, referenced output current can be trimmed between 40 ~ 110% of the rated output current. Please refer to function manual for details.               |
| 8       | PO       | Short connecting between PC (pin7) and PO (pin8) if output current trim function is not used.   |
| 9       | DC_OK    | Open collector signal, referenced to pin10,11(GND). Low when PSU turns on. The maximum sink current is 10mA and the maximum external voltage is 5.6V.   |
| 10,11   | GND      | These pins connect to the negative terminal (-V). Return for DC_OK Signal output.   |
| 12      | G-AUX    | Auxiliary voltage output ground. The signal return is isolated from the output terminals (+V & -V).   |
| 13      | ON/OFF   | Turns the output on and off by electrical or dry contact between pin 13 ( ON/OFF) and pin 14 (12V-AUX). Short: Power ON, Open: Power OFF.   |
| 14      | 12V-AUX  | Auxiliary voltage output, 10.8~13.2V, referenced to pin 12(G-AUX). The maximum load current is 0.1A. This output is not controlled by the "remote ON/OFF control".  |

■ Function Manual

1. "Remote ON/OFF" and "Output voltage trim" and "Output current trim" functions are not used.

- (1) The power supply unit will have no output if the shorting connector (accessory comes along with the PSU) is not assembled. It contains three shorting wires : one is from ON/OFF (pin13) to 12V-AUX (pin14), two is from PV(pin5) to PS (pin6) and the other is from PC (pin7) to PO (pin8).
- (2) Factory setting is shorted as Fig 1.1

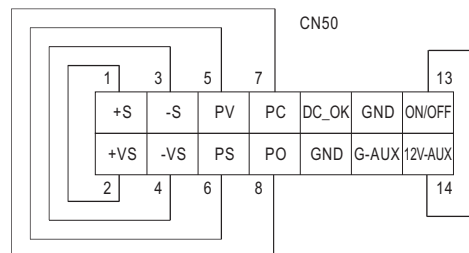
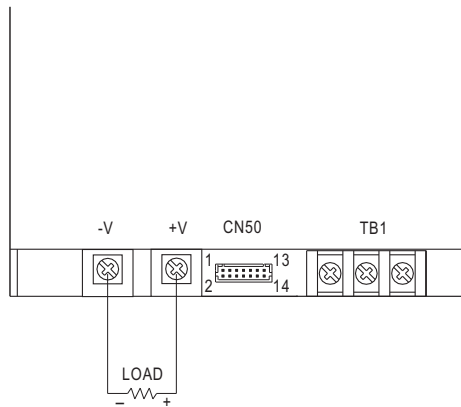


Fig 1.1 (Shorting connector)

**2.Remote ON/OFF**

The PSU can be turned ON/OFF by using the "Remote ON/OFF" function

| Between ON/OFF(pin13) and 12V-AUX(pin14) | Output Status |
|--|---------------|
| SW close (Short)                         | PSU ON        |
| SW open (Open)                           | PSU OFF       |

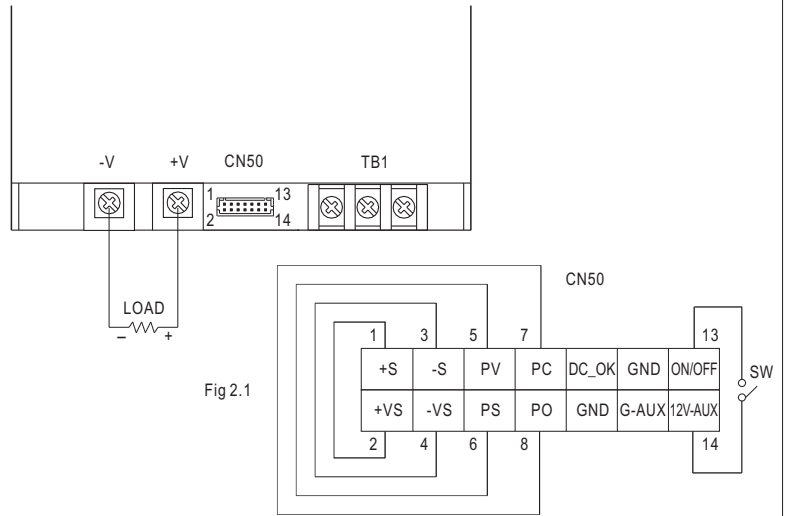


Fig 2.1

**3.DC\_OK signal**

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

**3-1 Sink current :**

The maximum sink current is 10mA and the maximum external voltage is 5.6V.

**3-2 TTL voltage signal :**

| Between DC- OK(pin9) and GND(pin10&11) | Output Status |
|--|---------------|
| 0 ~ 1V                                 | PSU ON        |
| 3.3 ~ 5.6V                             | PSU OFF       |

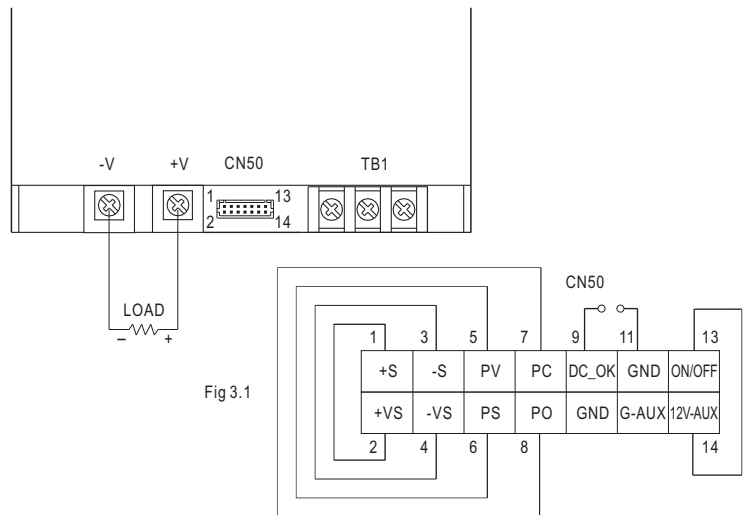


Fig 3.1

**4.Remote Sense**

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

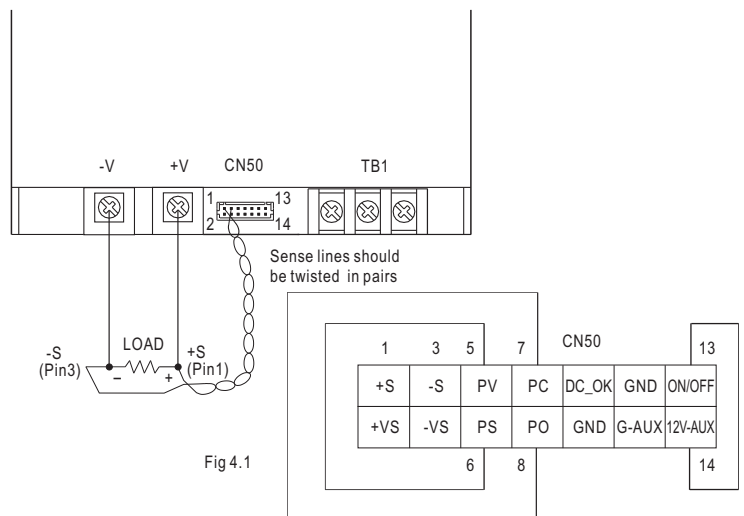
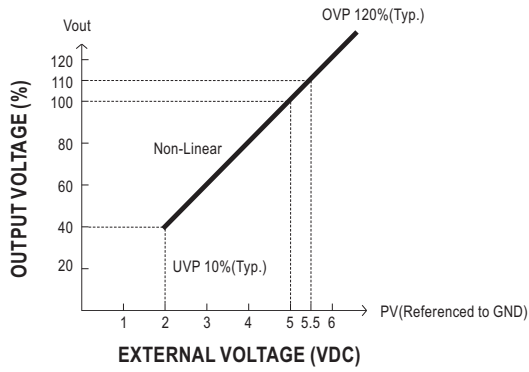


Fig 4.1

**5. Output Voltage TRIM**

Output voltage of RSP-750 can be trimmed between 40% ~ 110% of its rated value by the following methods :

(1) Using an external DC source (2~5.5VDC) between "PV"(pin5) and "GND"(pin10, 11) that is shown in Fig5.1



Note: External voltage < 0.5V Vo may be the UVP need to restart.

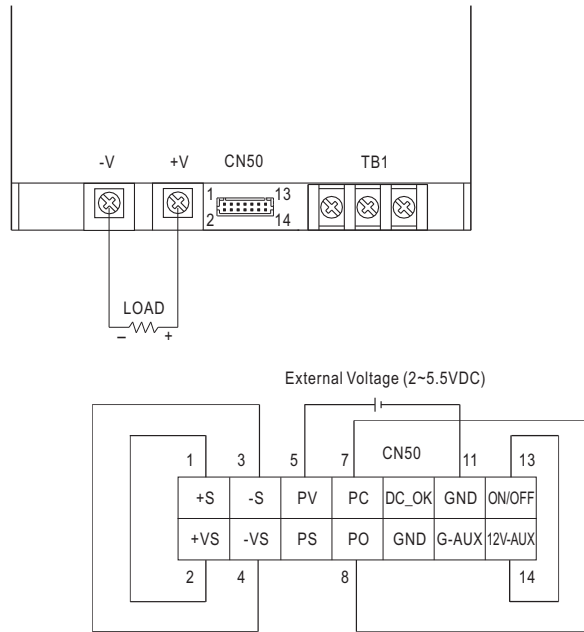


Fig 5.1

**6. Output Current TRIM**

Output current of RSP-750 can be trimmed between 40% ~ 110% of its rated value by the following methods :

(1) Using external voltage source between "PC"(pin7) and "GND"(pin10, 11) that is shown in Fig6.1

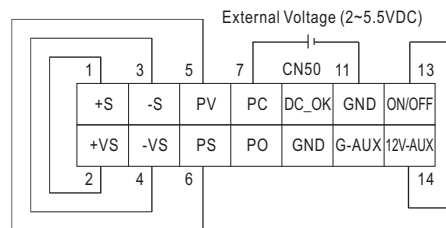
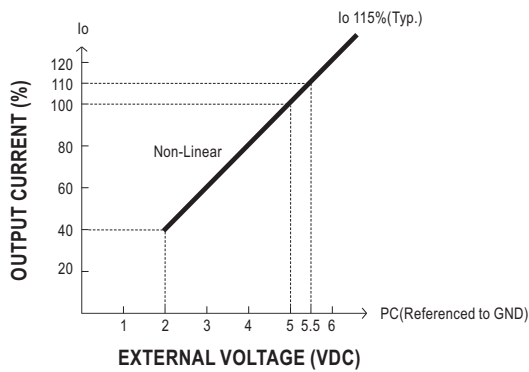


Fig 6.1