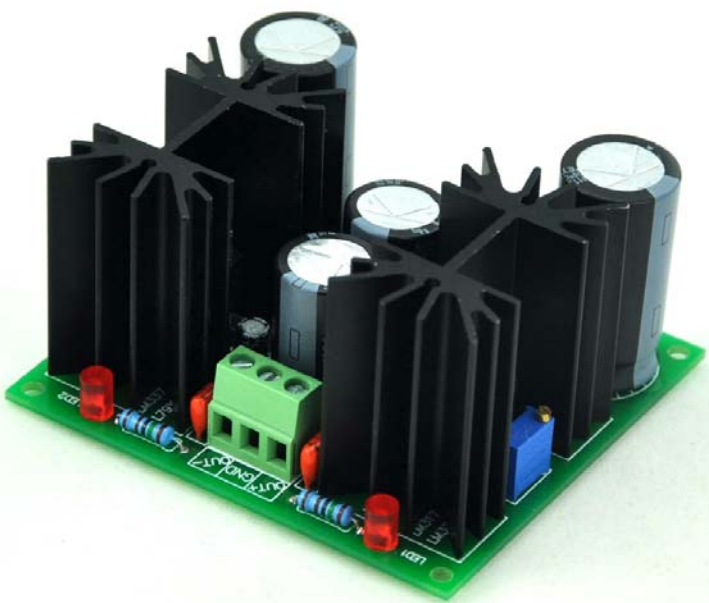


# CZH-LABS

**Positive & Negative Voltage Regulator Module**

**Model: D-1002 series**



# Positive&Negative Voltage Regulator Module

Based on 7800/7900 series or LM317/LM337 voltage regulator IC design

| Version   | Input DC<br>+ and - | Input AC<br>dual AC | Output Vol.<br>DC | Max. Output<br>Current | Note                           |
|-----------|---------------------|---------------------|-------------------|------------------------|--------------------------------|
| D1002/5V  | ±8 to ±35V          | Dual 6.7 to 25V     | ±5 +/-0.2V        | 1 Amp                  | Output voltage non-adjustable. |
| D1002/6V  | ±9 to ±35V          | Dual 7.5 to 25V     | ±6 +/-0.25V       | 1 Amp                  | Output voltage non-adjustable. |
| D1002/8V  | ±11 to ±35V         | Dual 8.9 to 25V     | ±8 +/-0.3V        | 1 Amp                  | Output voltage non-adjustable. |
| D1002/9V  | ±12 to ±35V         | Dual 9.6 to 25V     | ±9 +/-0.35V       | 1 Amp                  | Output voltage non-adjustable. |
| D1002/10V | ±13V to ±35V        | Dual 10.3 to 25V    | ±10 +/-0.4V       | 1 Amp                  | Output voltage non-adjustable. |
| D1002/12V | ±15 to ±35V         | Dual 11.8 to 25V    | ±12 +/-0.5V       | 1 Amp                  | Output voltage non-adjustable. |
| D1002/15V | ±18 to ±35V         | Dual 13.9 to 25V    | ±15 +/-0.6V       | 1 Amp                  | Output voltage non-adjustable. |
| D1002/18V | ±21 to ±35V         | Dual 16.0 to 25V    | ±18 +/-0.7V       | 1 Amp                  | Output voltage non-adjustable. |
| D1002/24V | ±27 to ±35V         | Dual 20.3 to 28.5V  | ±24 +/-1V         | 1 Amp                  | Output voltage non-adjustable. |
| D1002/ADJ | ±4 to ±43V          | Dual 4.5 to 30V     | ±1.25 to -37V     | 1.5 Amp                | Output voltage adjustable      |

## Note:

1, The item is analog voltage regulator, no step-up function, input to output dropout voltage must  $\geq 3V_{DC}$ .

2, Max. output current:  $10 / (V_{inDC} - V_{outDC})$  Amp, up to 1 Amp (D1001/ADJ is 1.5 Amp).

3, For AC input mode, please according the following formula to calculate DC.

$$V_{inDC} = (V_{inAC} \times 1.414) - 1.4$$

2, For AC input mode, transformer no-load voltage must be less than the maximum allowable voltage, for example: D1002/12V, the maximum AC input 25V.

PCB size: L80mm x W72.5mm / L3.15" x W2.85"

Module size:

(without DIN rail carrier): L80mm x W72.5mm x H43mm / L3.15" x W2.85" x H1.69"

(with DIN rail carrier): L83mm x W87mm x H66mm / L3.27" x W3.43" x H2.60"

This is a very typical regulator circuit, other electrical specifications please read these IC datasheet:

7800: <https://www.fairchildsemi.com/datasheets/LM/LM7805.pdf>

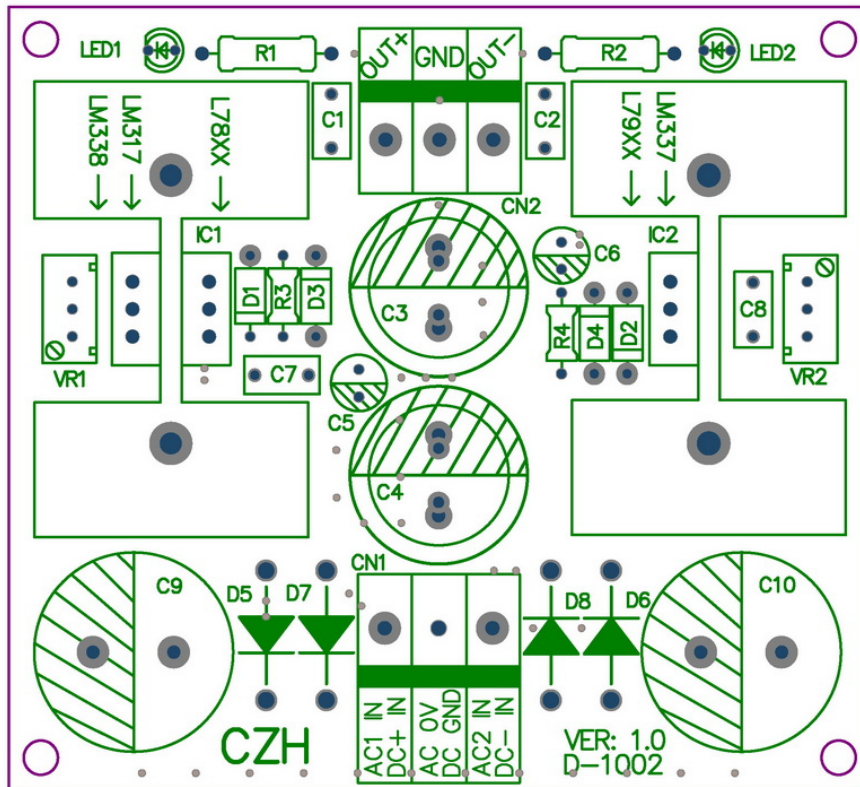
7900: <https://www.fairchildsemi.com/datasheets/LM/LM7905.pdf>

LM317: <https://www.fairchildsemi.com/datasheets/LM/LM317.pdf>

LM337: <https://www.fairchildsemi.com/datasheets/LM/LM337.pdf>

Any questions feel free to contact me:: [Jianglily2005@gmail.com](mailto:Jianglily2005@gmail.com)

## Wring Diagram and Adjust:



**Input Terminal Block --- for DC mode:**

- DC+ IN:** DC voltage input Positive.
- DC GND:** DC input ground (0V).
- DC- IN:** DC voltage input Negative.

**Input Terminal Block --- for AC mode:**

- AC1 IN:** AC input 1.
- AC 0V:** AC 0V, power transformer output center-tap.
- AC2 IN:** AC input 2.

**Output Terminal Block:**

- OUT+:** Regulated DC voltage output Positive.
- GND:** DC output ground (0V).
- OUT-:** Regulated DC voltage output Negative.

**VR1:**

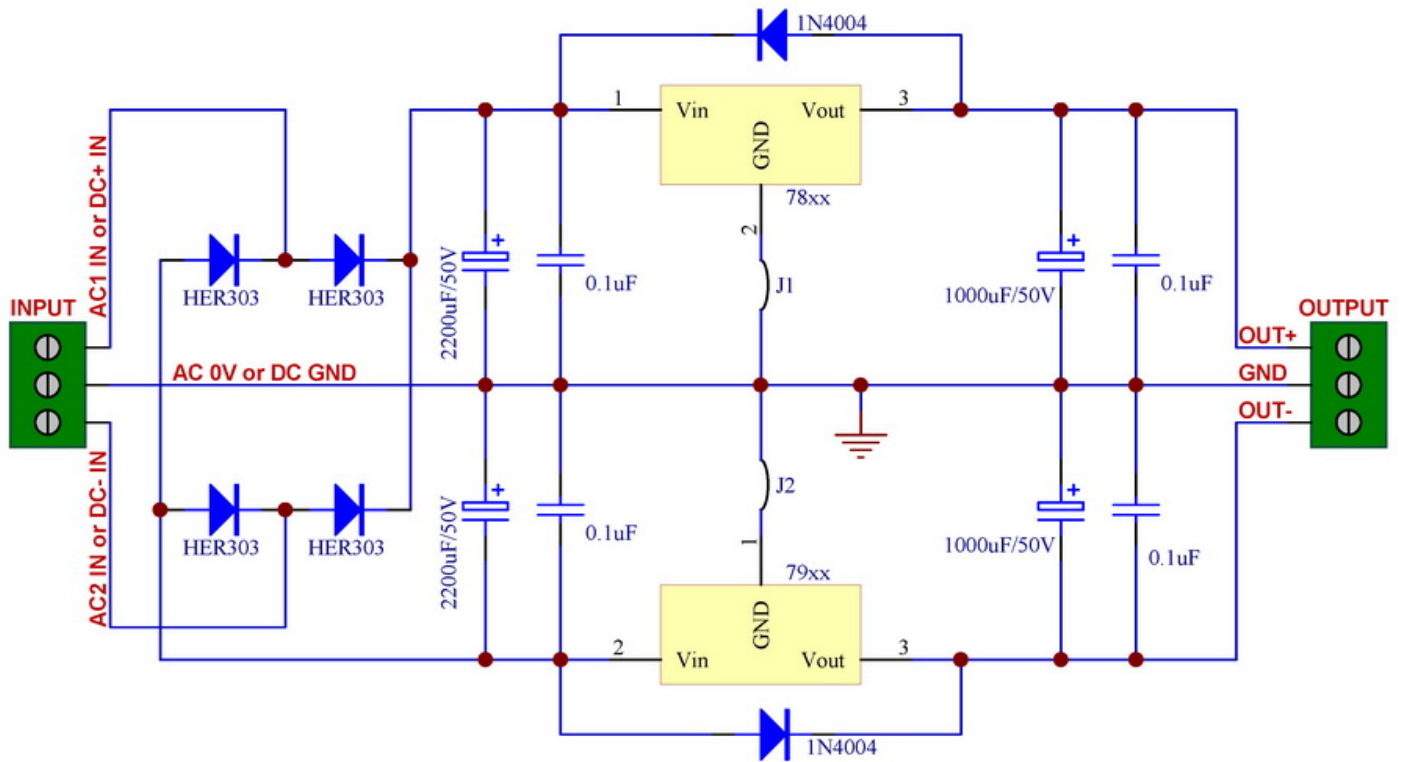
Only for adjustable version, for output Positive voltage value adjust. this is a precision 25-turns potentiometer.

**VR2:**

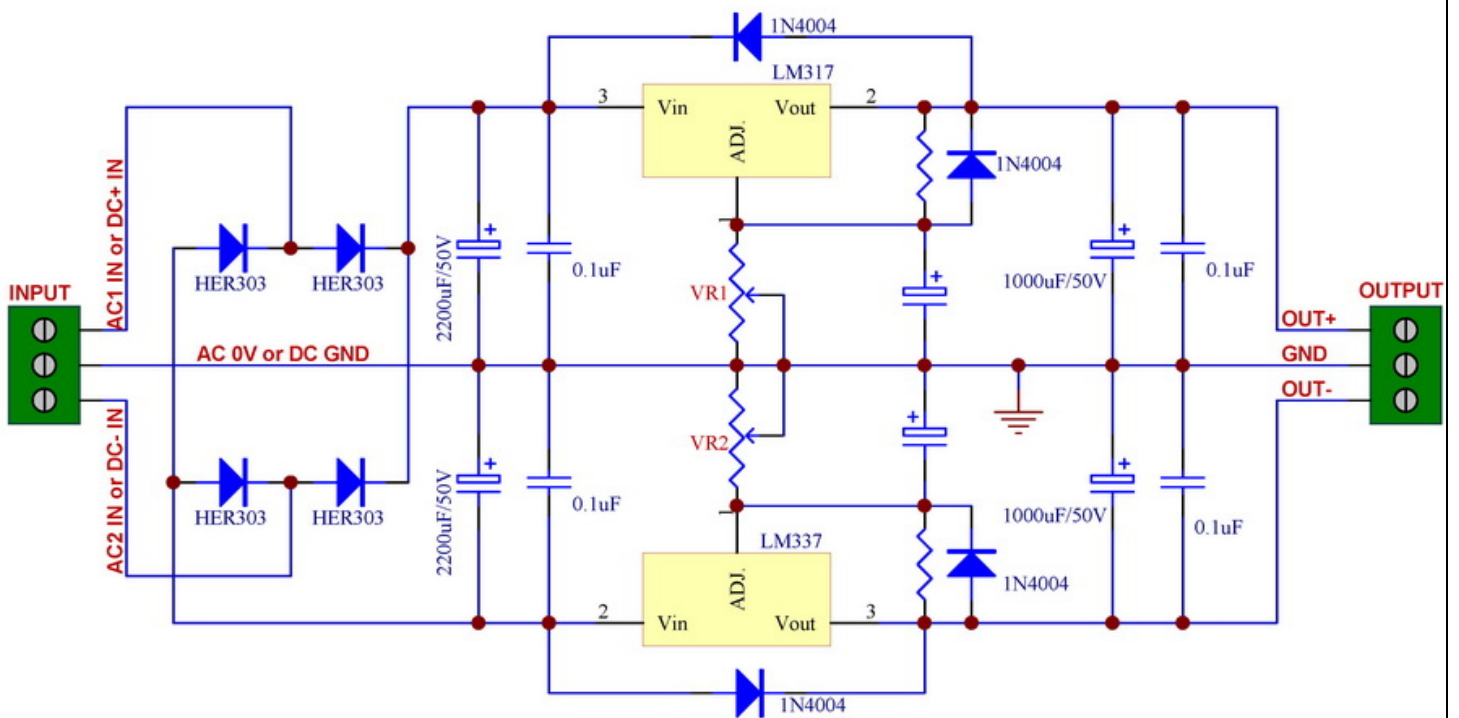
Only for adjustable version, for output Negative voltage value adjust. this is a precision 25-turns potentiometer.

# Schematic:

## Non-adjustable Version

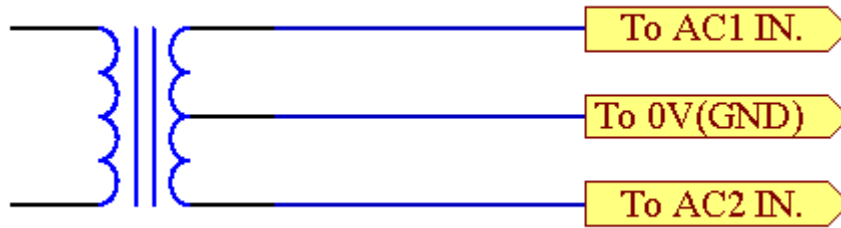


## Adjustable Version



**About AC input mode power transformer connect:**

For 3 wire output power transformer



For 4 wire output power transformer

