

### Features:

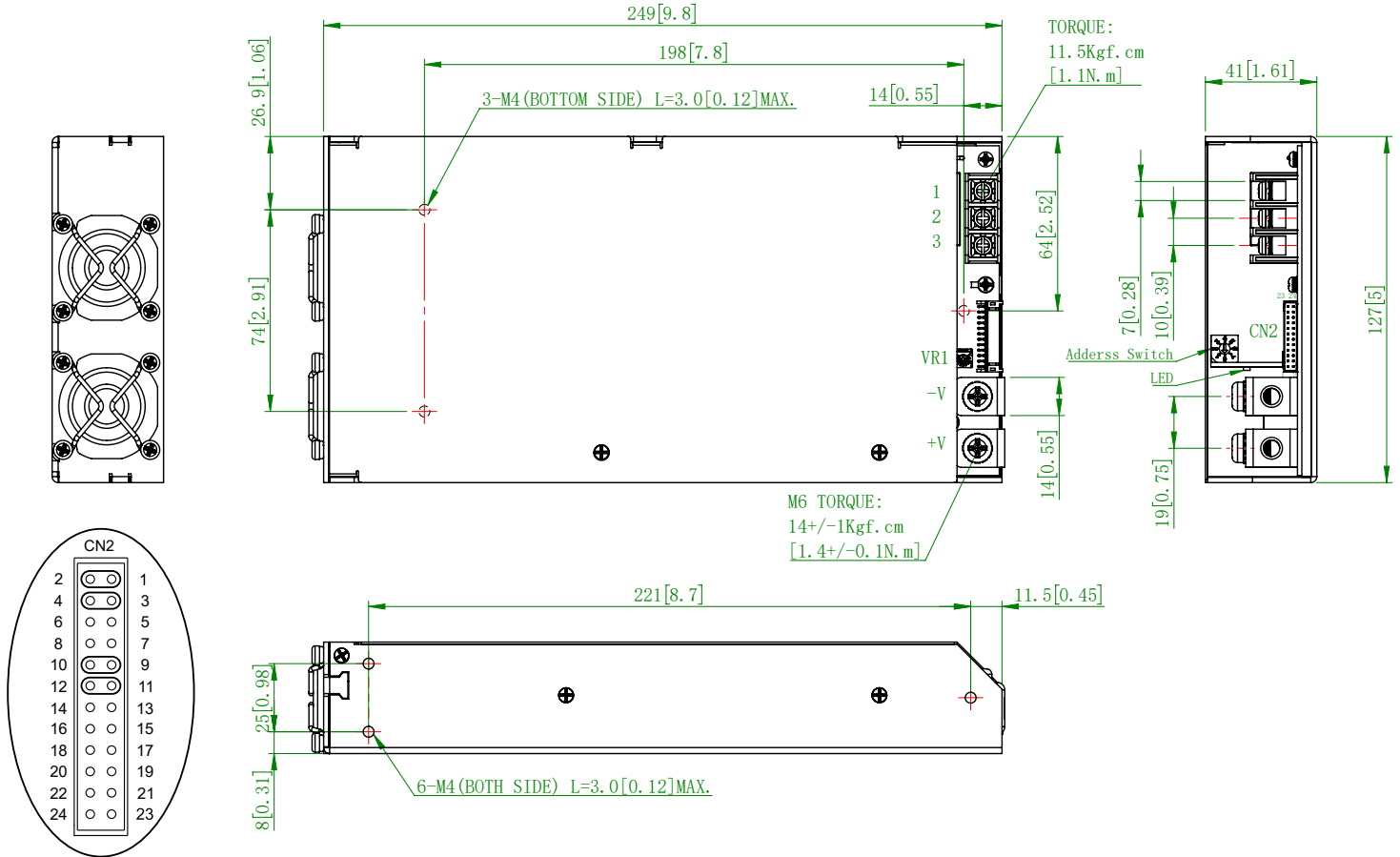
- Universal AC input / Full range
- Programmable output Voltage (0% ~ 105%)
- Programmable output Current (0% ~ 105%)
- Forced current sharing at parallel operation  
(Refer to pg. 5 for connection diagram)
- Constant current limit
- Selectable +5V / 0.5A or +9V / 0.3A auxiliary output
- Global control via RS232
- Remote setting multiple PSU via RS232, RS485 & I<sup>2</sup>C
- Power OK signal
- Remote ON / OFF , Remote sense function
- Protection: OVP , OLP, OTP, Fan failure
- Built-in active PFC Function



| MODEL               |  | AE-800-12   | AE-800-15   | AE-800-24 | AE-800-30 | AE-800-36 | AE-800-48 | AE-800-60 |  |
|---------------------|--|---|---|-----------|-----------|-----------|-----------|-----------|--|
| Output              | DC Voltage Rated   | 12V   | 15V   | 24V       | 30V       | 36V       | 48V       | 60V       |  |
|                     | Rated Current  | 66.7A   | 53.4A   | 33.5A     | 26.7A     | 22.3A     | 16.7A     | 13.4A     |  |
|                     | Current Range  | 0 ~ 66.7A   | 0 ~ 53.4A   | 0 ~ 33.5A | 0 ~ 26.7A | 0 ~ 22.3A | 0 ~ 16.7A | 0 ~ 13.4A |  |
|                     | Rated Power  | 800W  | 800W  | 800W      | 800W      | 800W      | 800W      | 800W      |  |
|                     | Ripple & Noise (Max.)  | Note.2<br>120mVp-p  | 150mVp-p  | 240mVp-p  | 300mVp-p  | 360mVp-p  | 480mVp-p  | 600mVp-p  |  |
|                     | Voltage Adj. Range   | ±5.0% Typical adjustment by potentiometer. (VR1)  |   |           |           |           |           |           |  |
|                     | Voltage Tolerance  | Note.3<br>±2.0%   | rated output voltage of single unit)  |           |           |           |           |           |  |
|                     | Current Tolerance  | ±3.0% rated output current of single unit)  |   |           |           |           |           |           |  |
|                     | Line Regulation  | ±1.0%   |   |           |           |           |           |           |  |
|                     | Load Regulation  | ±1.0%   |   |           |           |           |           |           |  |
|                     | Setup, Rise Time   | 800ms, 100ms at full load   |   |           |           |           |           |           |  |
| Hold Up Time (Typ.) | 8ms / 230VAC at full load  |   |   |           |           |           |           |           |  |
| Input               | Voltage Range  | Note.4<br>90 ~ 264VAC, 127 ~ 370VDC   | (Refer to de-rating curve)  |           |           |           |           |           |  |
|                     | Frequency Range  | 47 ~ 63Hz   |   |           |           |           |           |           |  |
|                     | Power Factor (Typ.)  | 0.95 / 230VAC, 0.98 / 115VAC at full load   |   |           |           |           |           |           |  |
|                     | Efficiency (Max.)  | 89%   | 90%   | 92%       | 92%       | 92%       | 92%       | 93%       |  |
|                     | AC Current (Max.)  | 9.3A / 115VAC, 3.5A / 230VAC  |   |           |           |           |           |           |  |
|                     | Inrush Current (Typ.)  | 30A / 115VAC, 60A / 230VAC  |   |           |           |           |           |           |  |
| Leakage Current     | < 3.5mA / 240VAC   |   |   |           |           |           |           |           |  |
| Protection          | Over Load  | 105% rated output power, Protection type: Constant current limit  |   |           |           |           |           |           |  |
|                     | Over Voltage   | Variable OVP Refer to VCI VS OVP curve.(OVP Tolerance 7%)<br>Protection type: Latch-style (Recovery after reset AC power ON or inhibit) |   |           |           |           |           |           |  |
|                     | Over Temperature   | 85 ±5°C detect on NTC, Protection type: Auto recovery after temperature goes down   |   |           |           |           |           |           |  |
| Function            | Auxiliary Power  | Selectable +5V / 0.5A or +9V / 0.3A auxiliary output  |   |           |           |           |           |           |  |
|                     | Remote ON / OFF Control  | By external switch  |   |           |           |           |           |           |  |
|                     | Power OK Signal  | Open drain signal low when PSU turns on, Max. sink current: 20mA, Max. drain voltage: 40V.  |   |           |           |           |           |           |  |
|                     | Output Voltage Trim  | Adjustment of output voltage is between 0 ~ 105% of rated output  |   |           |           |           |           |           |  |
|                     | Output Current Trim  | Adjustment of output current is between 0 ~ 105% of rated output  |   |           |           |           |           |           |  |
|                     | Parallel (Current Sharing)   | Note.5  | Please refer to page 5  |           |           |           |           |           |  |
|                     | Address Setting  | Up to 8 units can be set using an address switch (sw1), 0~7   |   |           |           |           |           |           |  |
| Environment         | Working Temp.  | -20 ~ +60°C (Refer to de-rating 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  | 10 ~ 500Hz, 2G 10min. / 1cycle, period for 60min. each along X, Y, Z axes Compliance to IEC60068-2-6; IEC60068-2-64                     |   |           |           |           |           |           |  |
| Safety & EMC        | Safety Standards   | Certified EN 62368-1; UL62368-1   |   |           |           |           |           |           |  |
|                     | Withstand Voltage  | Note.7  | I/P-O/P: 3KVAC (4242VDC), I/P-FG: 1.5KVAC (2121VDC), O/P-FG: 0.5KVAC (707VDC) |           |           |           |           |           |  |
|                     | Isolation Resistance   | I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC (25°C / 70% RH)   |   |           |           |           |           |           |  |
|                     | EMI Conduction & Radiation   | Certified EN 55032  |   |           |           |           |           |           |  |
|                     | Power Harmonic & Voltage Fluctuation and Flicker   | Certified EN 61000-3-2; EN 61000-3-3  |   |           |           |           |           |           |  |
|                     | EMS Immunity   | Note.6  | Certified EN 55024; IEC 61000-4-2,3,4,5,6,8,11                                |           |           |           |           |           |  |
| Others              | MTBF   | 95.7K HRS Certified MIL-HDBK-217F   |   |           |           |           |           |           |  |
|                     | Cooling  | Load and temperature control fan  |   |           |           |           |           |           |  |
|                     | Dimension (WxHxD)  | 127x41x249 mm / 5.00x1.61x9.80 inch   |   |           |           |           |           |           |  |
|                     | Packing  | 1.62kg; 9pcs / 17kg / 2.03CUFT  |   |           |           |           |           |           |  |
| Note                | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>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.</li> <li>3. Tolerance: includes setup time tolerance, line regulation and load regulation.</li> <li>4. De-rating may apply in low input voltage. Please check the de-rating curve for more details.</li> <li>5. In parallel connection only one unit will operate if the total output load is less than 5% of the rated power.</li> <li>6. 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.</li> <li>7. This test is done without enclosure: I/P-O/P 4242VDC. If with enclosure: I/P-O/P 2121VDC, I/P-FG: 2121VDC, O/P-FG: 707VDC</li> </ol> |   |   |           |           |           |           |           |  |

### Mechanical Drawings:

Unit:mm / inch



Recommended screw length is measured from the power supply surface

### AC Input Terminal Pin No. Assignment

| Pin No. | Assignment |
|---------|------------|
| 1       | ACL        |
| 2       | ACN        |
| 3       | ⏚          |

### CN2 Function Description:

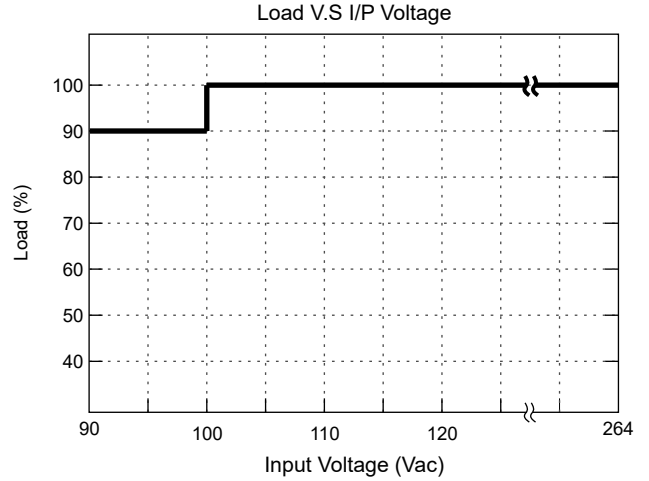
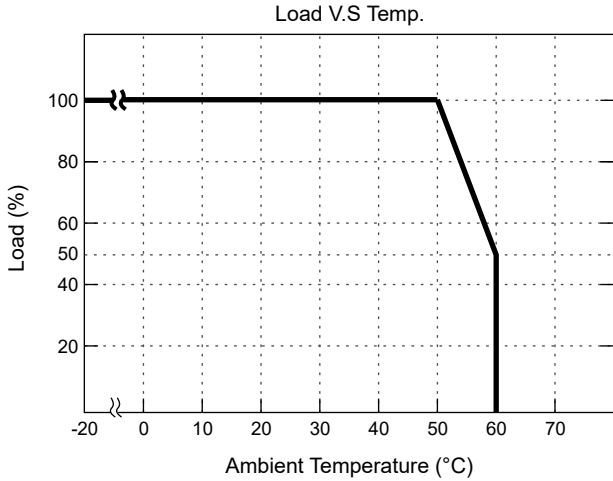
| Pin No. | Function | Description                              | Pin No. | Function | Description   | Mating Housing / Contact    |
|---------|----------|--|---------|----------|---|-----------------------------|
| 1       | VS+      | Remote sense (+)                         | 13      | ACI      | I Program   | JST PHDR-24VS or equivalent |
| 2       | VO+      | Positive output voltage                  | 14      | GND      | Ground  |                             |
| 3       | VS-      | Remote sense (-)                         | 15      | VCI      | V Program   |                             |
| 4       | VO-      | Negative output voltage                  | 16      | GND      | Ground  |                             |
| 5       | POK      | Power OK                                 | 17      | AUX      | +5V / 0.5A or +9V / 0.3A Auxiliary power            |                             |
| 6       | GND      | Ground                                   | 18      | GND      | Ground  |                             |
| 7       | PAR      | Parallel operation current share         | 19      | SCL      | Serial Clock used in the I <sup>2</sup> C interface |                             |
| 8       | VSET     | Aux output setting                       | 20      | SDA      | Serial Data used in the I <sup>2</sup> C interface  |                             |
| 9       | EN-      | Inhibit ON/OFF (-)                       | 21      | AUX      | +5V / 0.5A or +9V / 0.3A Auxiliary power            |                             |
| 10      | GND      | Ground                                   | 22      | GND      | Ground  |                             |
| 11      | EN+      | Inhibit ON/OFF (+)                       | 23      | RX       | For RS232 Receiver function                         |                             |
| 12      | AUX      | +5V / 0.5A or +9V / 0.3A Auxiliary power | 24      | TX       | For RS232 Transmission function                     |                             |

### LED Status:

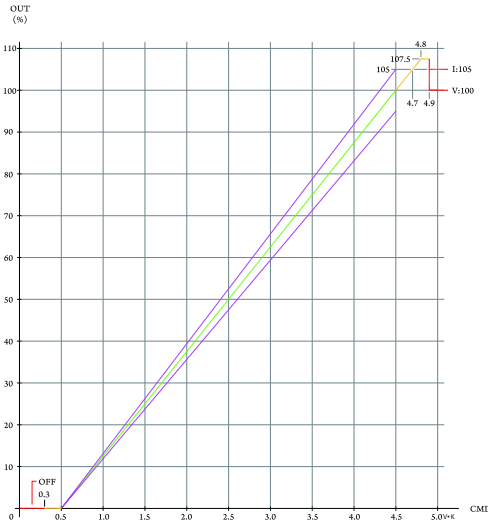
| LED                     | LED Signal | Status                              |
|-------------------------|------------|-------------------------------------|
| Solid(Green)            |            | Power OK (Local mode)               |
| Solid(Orange)           |            | Power OK (Remote mode)              |
| Slow Blink(Green)       |            | Power Standby (Local mode)          |
| Slow Blink(Orange)      |            | Power Standby (Remote mode)         |
| Fast Blink(Red)         |            | Over Voltage Protection ( OVP )     |
| Solid(Red)              |            | Over Load Protection ( OLP )        |
| Slow Blink(Red)         |            | Over Temperature Protection ( OTP ) |
| Intermittent Blink(Red) |            | Fan Failure                         |
| Interface Blink(Red)    |            | Power Failure                       |

\*Local mode : Use ACI/VCI to control output current and voltage.  
Remote mode : Use RS-232 or I<sup>2</sup>C command to control output current and voltage.

### De-rating Curve:

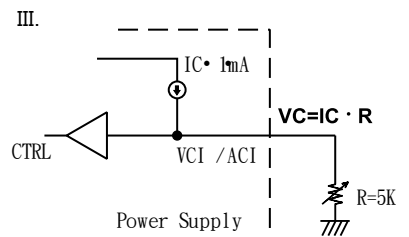
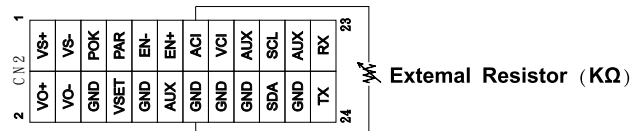
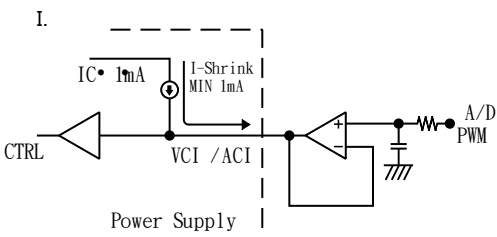
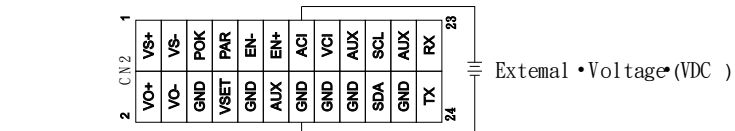
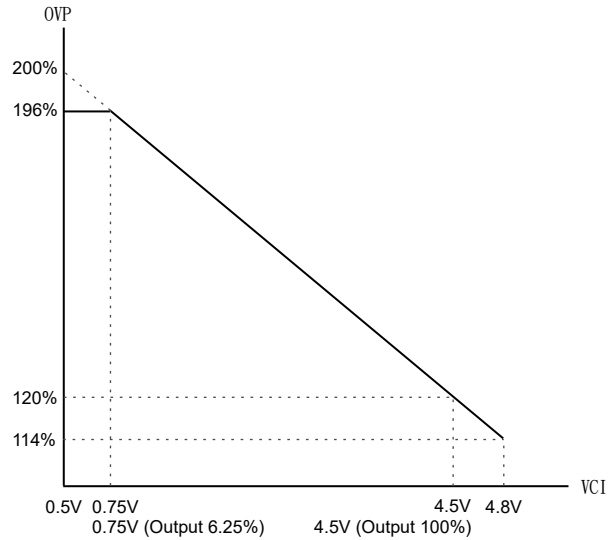


### CMD VS Output Curve:



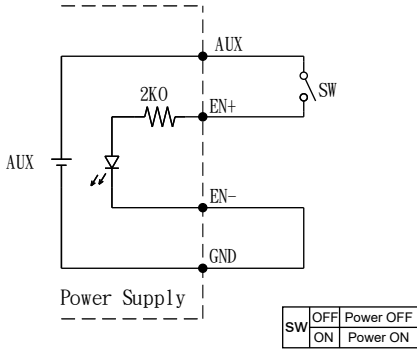
To ensure the power supply output voltage and current could be accurately adjusted, please make sure to adjust the output voltage and current > 10% vs. the rated voltage and current. (e.g. for a 24V unit, please adjust the DC output voltage above 2.4V to ensure accuracy; same applies to the output current)

### VCI VS OVP Curve:



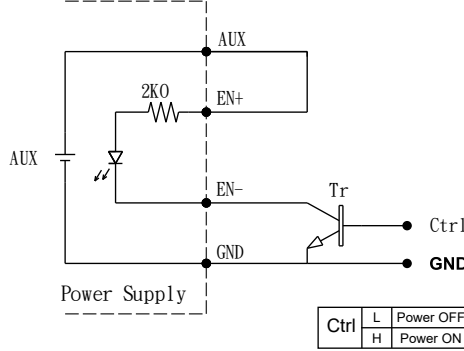
### Remote ON/OFF:

(A) Default Setting



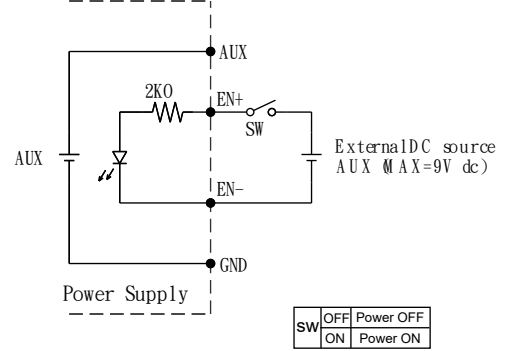
(A) Using internal 5V auxiliary source

(B)



(B) ON / OFF Control by NPN transistor

(C)



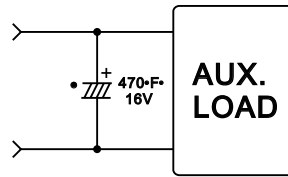
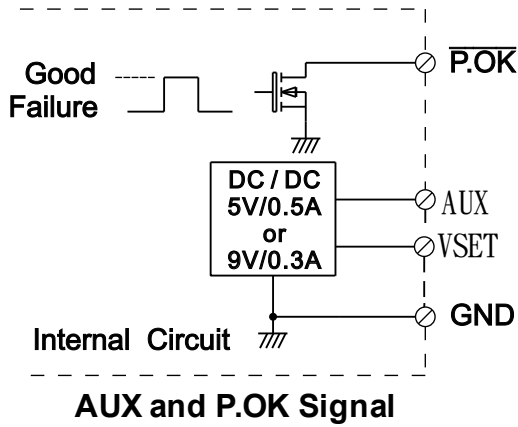
(C) Using external voltage source

### Power OK Signal:

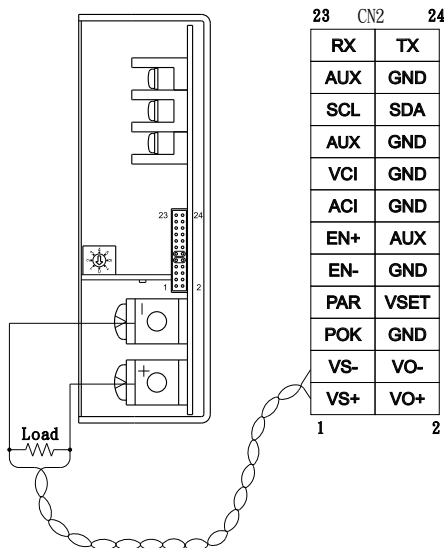
\*The grounding of "AUX" power should be connected to "GND" port. If "V-" is connected as Grounding, make sure to short the GND and V- ports.

\*Place an additional capacitor to have a better performance of auxiliary power operation.

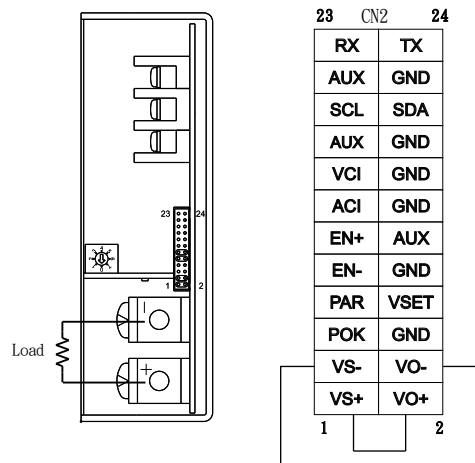
|      |                       |    |
|------|-----------------------|----|
| VSET | Open(Default Setting) | 5V |
|      | Short To GND          | 9V |



1. Remote Sense

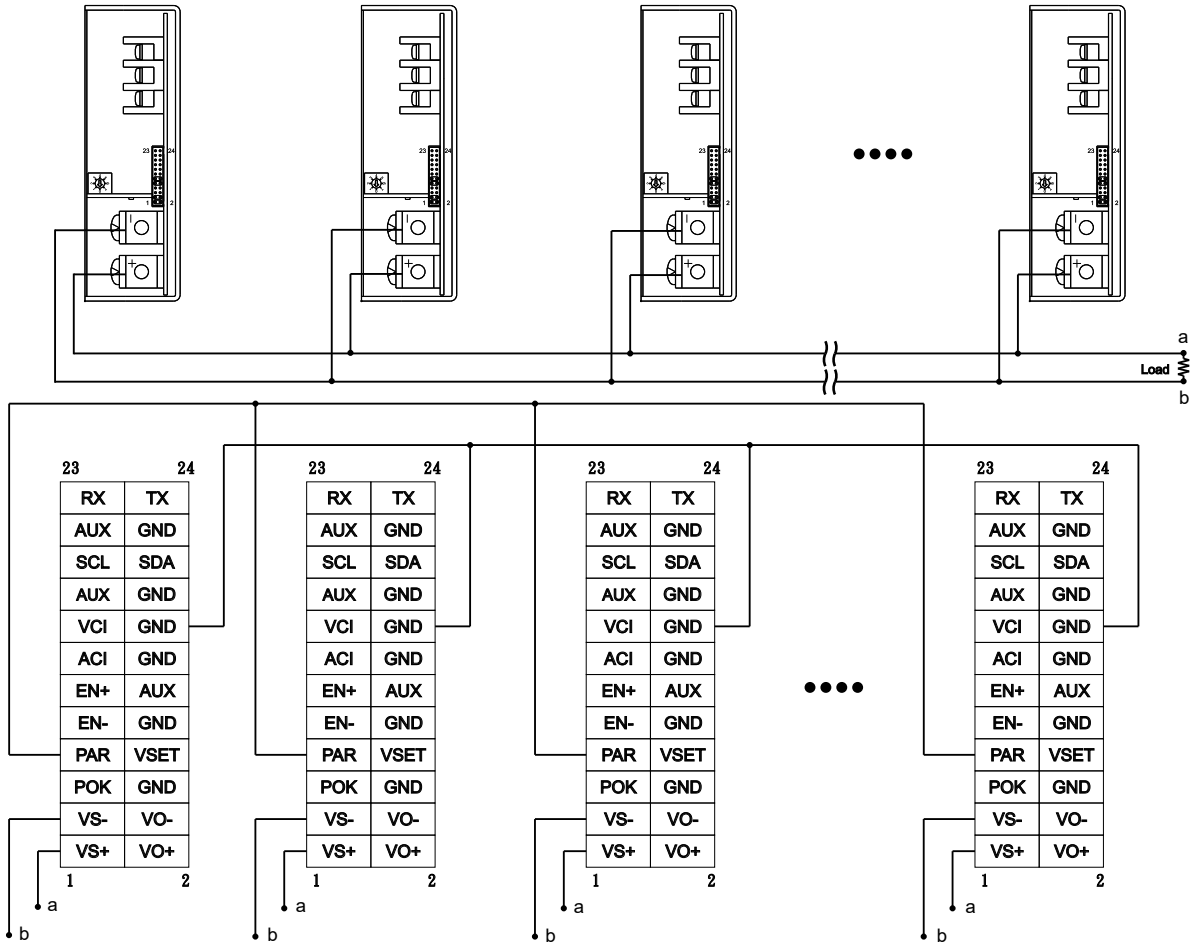


2. Local Sense (Default setting)



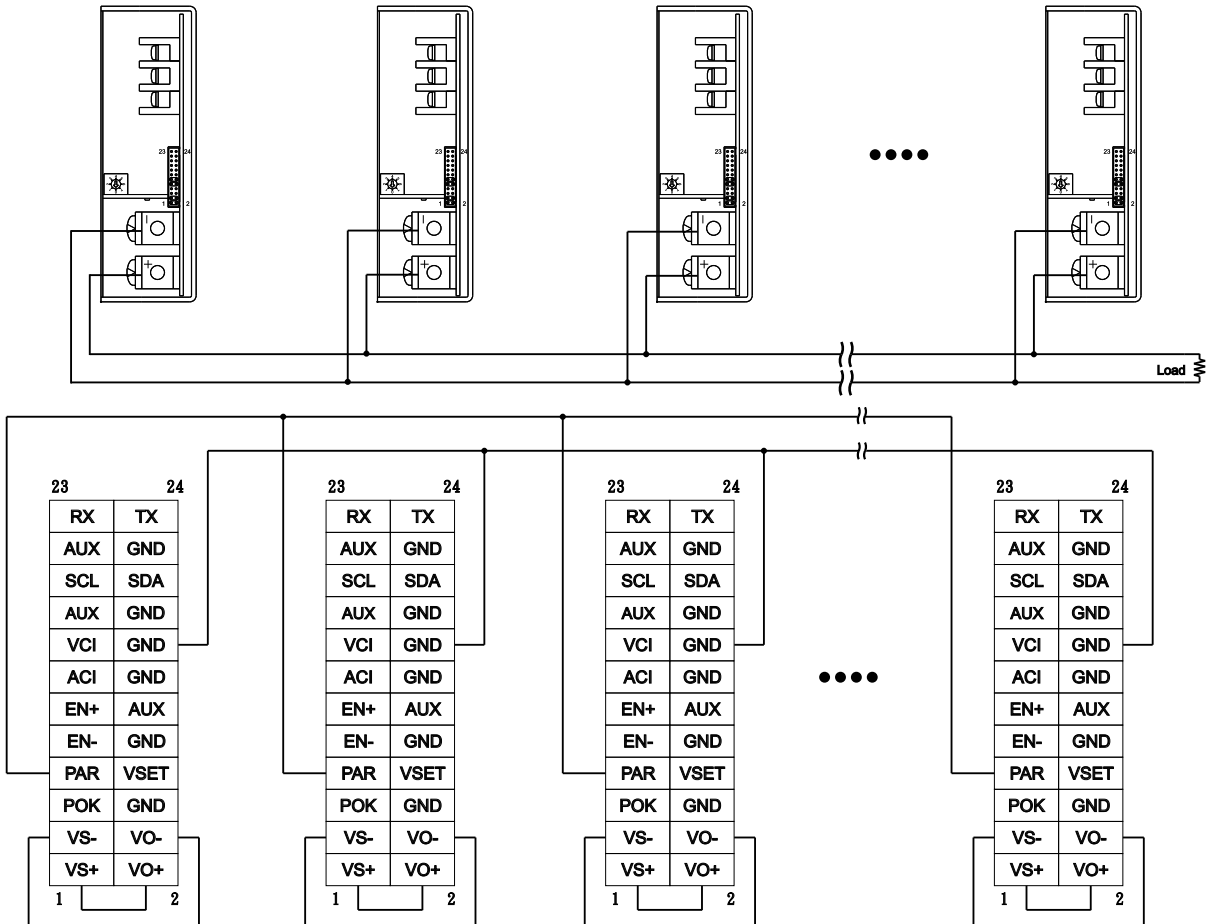
VS-,VS+ Compensation Voltage < 0.5V

### 3. Current Sharing with Remote Sensing(Parallel Connection)



Please connect PAR pins together for current sharing function

### 4. Current Sharing with Local Sensing

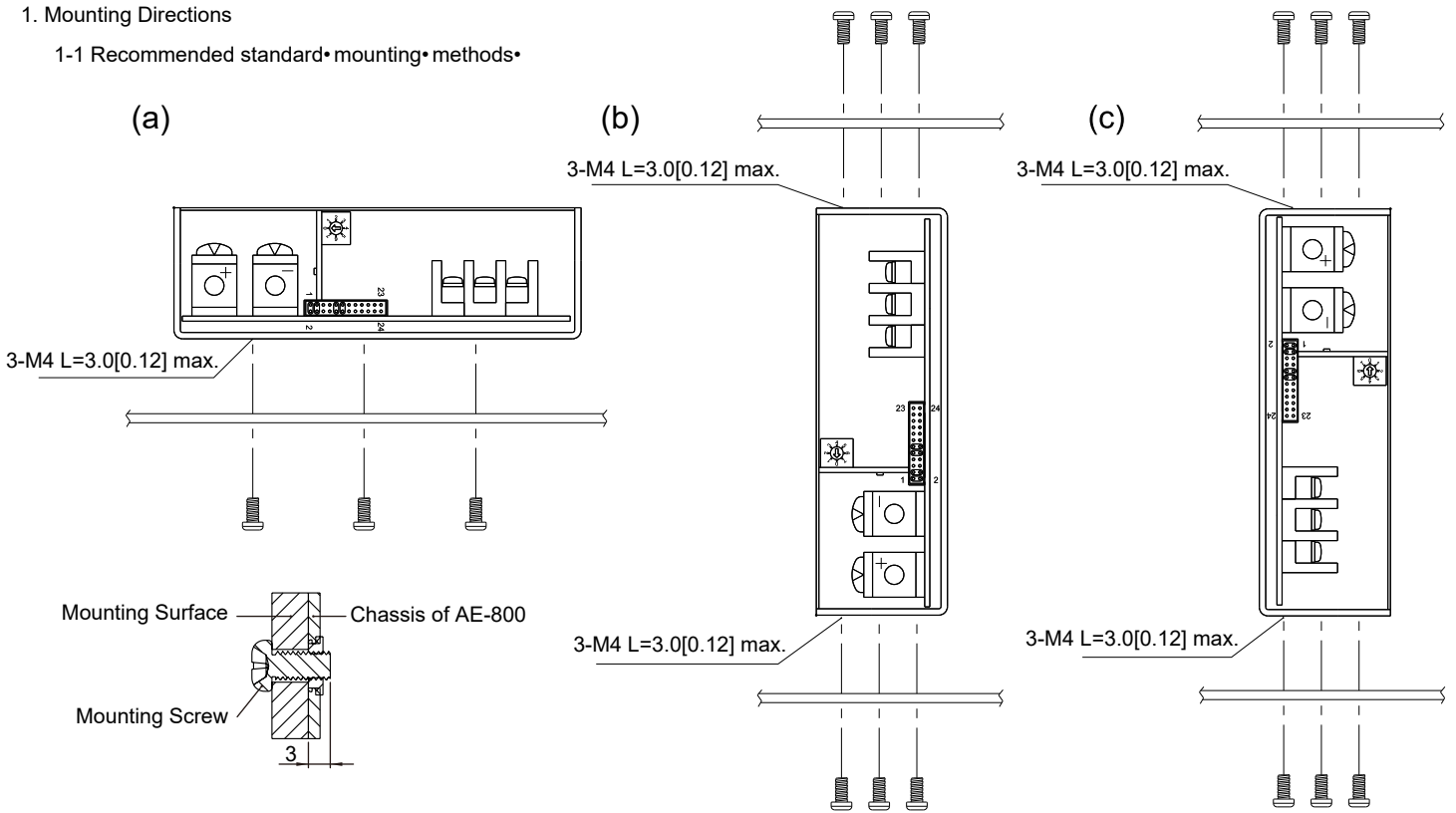


Please connect PAR pins together for current sharing function

### Installation Instruction:

#### 1. Mounting Directions

1-1 Recommended standard mounting methods



Recommended screw length is measured from the power supply surface

#### 2. Mounting Method

2-1 There are ventilating holes on the front and back side panels, do not obstruct; allow 50mm at least for air flow.

2-2 Recommended the torque of mounting screw:  
M4 screw: 1.27N · m (13.0kgf · cm)

