



■ **Features:**

- Universal AC input / Full range
- Programmable output Voltage (0% ~ 105%)
- Programmable output Current (0% ~ 105%)
- Forced current sharing at parallel operation
- Constant current limit
- Selectable +5V / 0.5A or +9V / 0.3A auxiliary output
- Global control via RS232
- Remote setting multiple PSU via RS232, RS485 & I²C
- Power OK signal
- Remote ON / OFF, Remote sense function
- Protection: OVP, OLP, OTP, Fan failure
- 3 years warranty

| MODEL | | AE-1500-12 | AE-1500-15 | AE-1500-24 | AE-1500-30 | AE-1500-36 | AE-1500-48 | AE-1500-60 | |
|---------------------|----------------------------|---|---|------------|------------|------------|------------|------------|--|
| Output | DC Voltage Range | 12V | 15V | 24V | 30V | 36V | 48V | 60V | |
| | Rated Current | 125A | 100A | 62.5A | 50A | 41.7A | 31.3A | 25A | |
| | Current Range | 0 ~ 125A | 0 ~ 100A | 0 ~ 62.5A | 0 ~ 50A | 0 ~ 41.7A | 0 ~ 31.3A | 0 ~ 25A | |
| | Rated Power | 1500W | 1500W | 1500W | 1500W | 1501W | 1502W | 1500W | |
| | Ripple & Noise (Max.) | Note.2 150mVp-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 ±2.0% | | | | | | | |
| | Line Regulation | ±1.0% | | | | | | | |
| | Load Regulation | ±1.0% | | | | | | | |
| | Setup, Rise Time | 800ms, 100ms at full load | | | | | | | |
| Hold Up Time (Typ.) | 14ms / 230VAC at full load | | | | | | | | |
| Input | Voltage Range | Note.4 90 ~ 264VAC, 127 ~ 370VDC | | | | | | | |
| | Frequency Range | 47 ~ 63Hz | | | | | | | |
| | Power Factor (Typ.) | 0.95 / 230VAC, 0.99 / 115VAC at full load | | | | | | | |
| | Efficiency (Typ.) | 89% | 90% | 92% | 92% | 92% | 92% | 93% | |
| | AC Current (Typ.) | 18A / 115VAC, 9A / 230VAC | | | | | | | |
| | Inrush Current (Typ.) | 30A / 115VAC, 45A / 230VAC | | | | | | | |
| Leakage Current | < 2.5mA / 240VAC | | | | | | | | |
| Protection | Over Load | 105% rated output power Protection type: Constant current limit | | | | | | | |
| | Over Voltage | Variable OVP, 120 ± 7% Vout. Refer to VCI VS OVP curve. Protection type: Latch-style (Recovery after reset AC power ON or inhibit) | | | | | | | |
| | Over Temperature | 85 ±5°C detect on heat sink of secondary side 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 | | | | | | |
| Environment | Working Temp. | -20 ~ +60°C (Refer to load 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 IEC 68-2-6, IEC 68-2-64 | | | | | | | |
| Safety & EMC | Safety Standards | Certified UL 60950-1; EN 60950-1 | | | | | | | |
| | 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 | | | | | | | |
| | EMI Conduction & Radiation | Certified EN 55022; EN 61204-3; EN 61000-6-3 | | | | | | | |
| | Harmonic Current | Certified EN 61000-3-2; EN 61000-3-3 | | | | | | | |
| Note.6 | EMS Immunity | Certified EN 55024; EN6 1204-3; EN6 1000-6-1; IEC 61000-4-2, 3, 4, 5, 6, 8, 11 | | | | | | | |
| Others | Cooling | Load and temperature control fan | | | | | | | |
| | Dimension (WxHxD) | 127x63.5x280 mm / 5.000x2.500x11.024 inch | | | | | | | |
| | Packing | 2.6kg; 6pcs / 16.6kg / 1.86CUFT | | | | | | | |

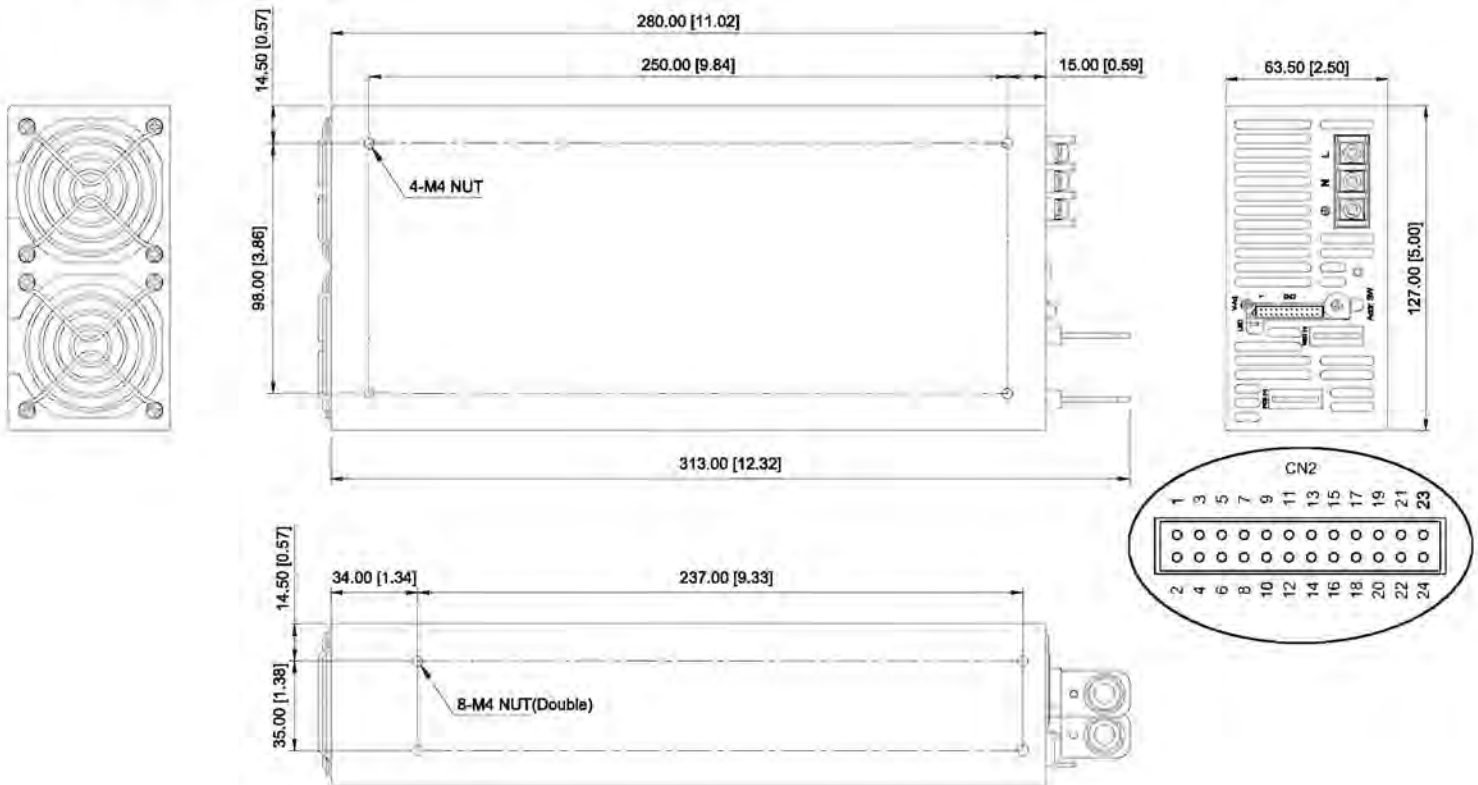
Note

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 setup time tolerance, line regulation and load regulation.
4. De-rating may apply in low input voltage. Please check the de-rating curve for more details.
5. In parallel connection only one unit will operate if the total output load is less than 5% of the rated power.
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.
7. This test is done without enclosure.



■ Mechanical Drawings:

Unit:mm / inch



AC Input Terminal Pin No. Assignment

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

Control pin number assignment (CN2): JST S24B-PHDS or equivalent

| Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment | Mating Housing / Contact | |
|---------|------------|---------|------------|---------|------------|--------------------------------|-------------------------------------|
| 1 | VS+ | 9 | EN- | 17 | AUX | JST PHDR-24VS or equivalent | JST SPHD-002T-P0.5 or equivalent |
| 2 | VO+ | 10 | GND | 18 | GND | | |
| 3 | VS- | 11 | EN+ | 19 | SCL | | |
| 4 | VO- | 12 | AUX | 20 | SDA | | |
| 5 | POK | 13 | ACI | 21 | AUX | | |
| 6 | GND | 14 | GND | 22 | GND | | |
| 7 | PAR | 15 | VCI | 23 | NC. | | |
| 8 | VSET | 16 | GND | 24 | NC. | | |

■ CN2 Function Description:

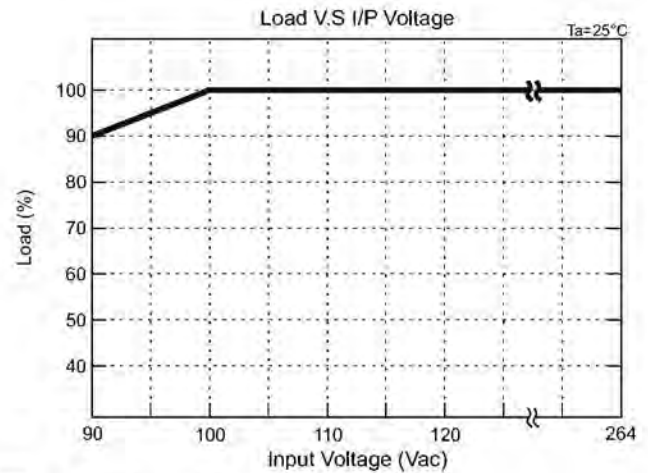
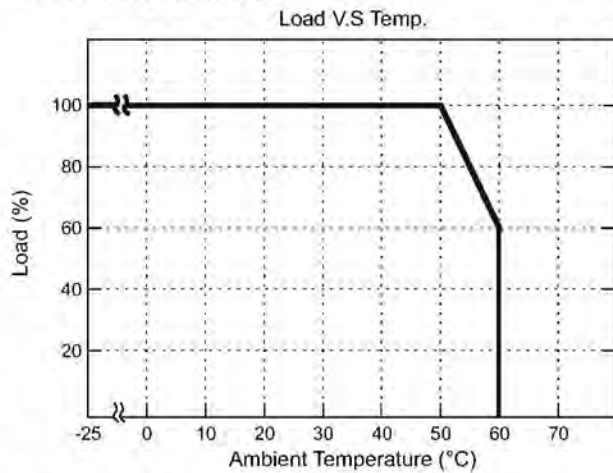
| Pin No. | Function | Description | Pin No. | Function | Description |
|---------|----------|--|---------|----------|---|
| 1 | VS+ | Positive output voltage | 13 | ACI | I Program |
| 2 | VO+ | Remote sense (+) | 14 | GND | Ground |
| 3 | VS- | Remote sense (-) | 15 | VCI | V Program |
| 4 | VO- | 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 ² C interface |
| 8 | VSET | Aux output setting | 20 | SDA | Serial Data used in the I ² 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 | NC. | For RS232 Transmission function |
| 12 | AUX | +5V / 0.5A or +9V / 0.3A Auxiliary power | 24 | NC. | For RS232 Receiver function |

■ **LED Status:**

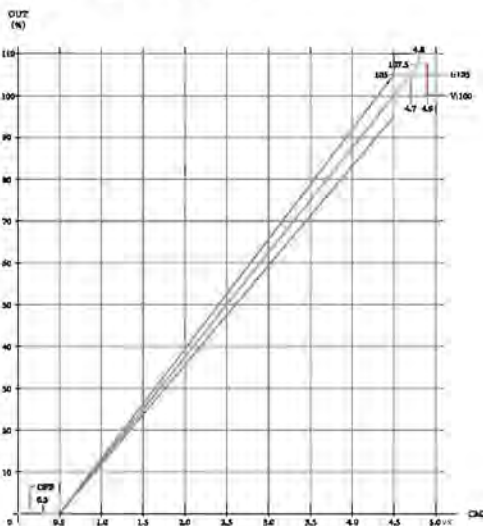
| LED | LED Signal | Status |
|-------------------------|------------|-------------------------------------|
| Solid(Green) | | Power OK (Local mode) |
| Solid(Orange) | | Power OK (Remote mode) |
| Slow Blink(Green) | | Power Standby |
| Fast Blink(Red) | | Over Voltage Protection (OVP) |
| Solid(Red)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

*Local mode : Use ACI/VCI to control output current and voltage.
 Remote mode : Use RS-232 or I²C command to control output current and voltage.

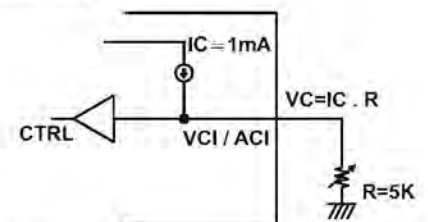
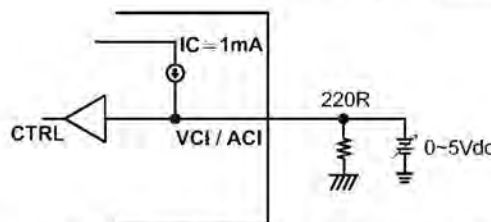
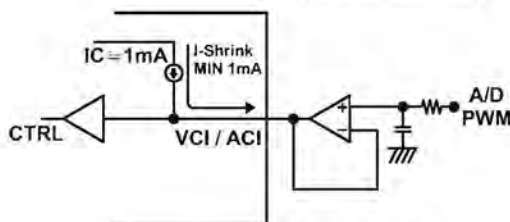
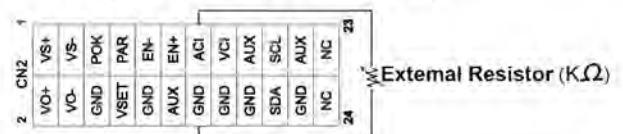
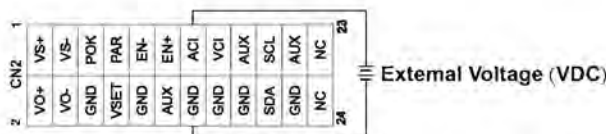
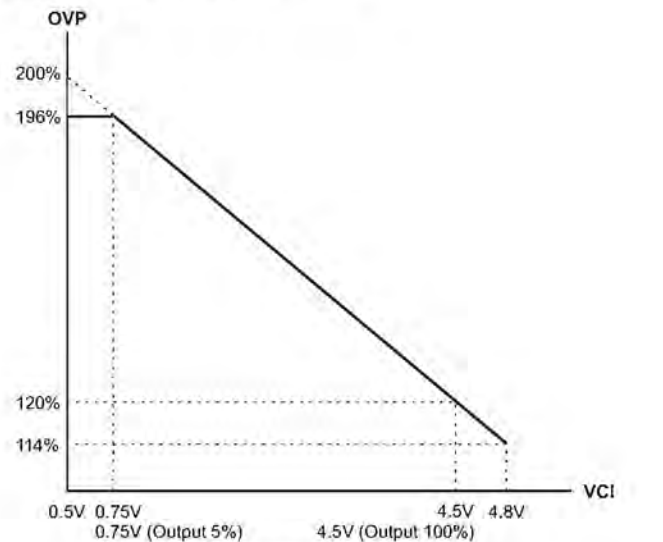
■ **De-rating Curve:**



■ **CMD VS Output Curve:**

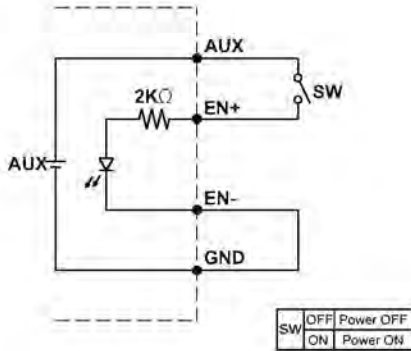


■ **VCI VS OVP Curve:**



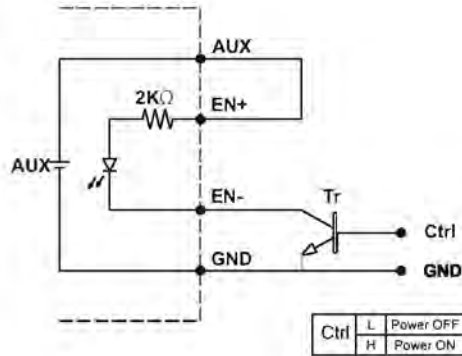
■ Remote ON/OFF:

(A) Default Setting



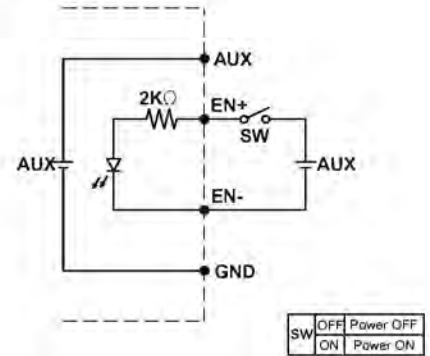
(A) Using internal 5V auxiliary source

(B)



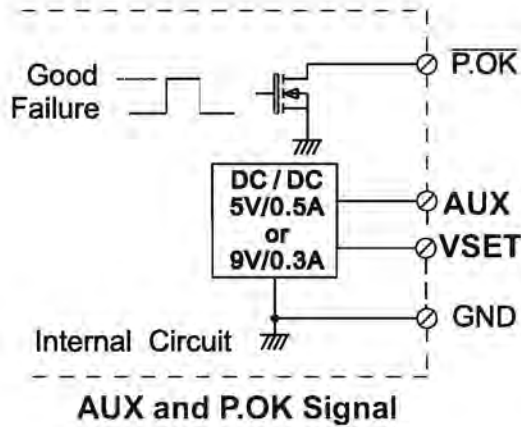
(B) ON / OFF Control by NPN transistor

(C)



(C) Using external voltage source

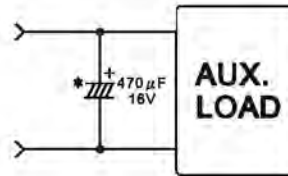
■ Power OK Signal:



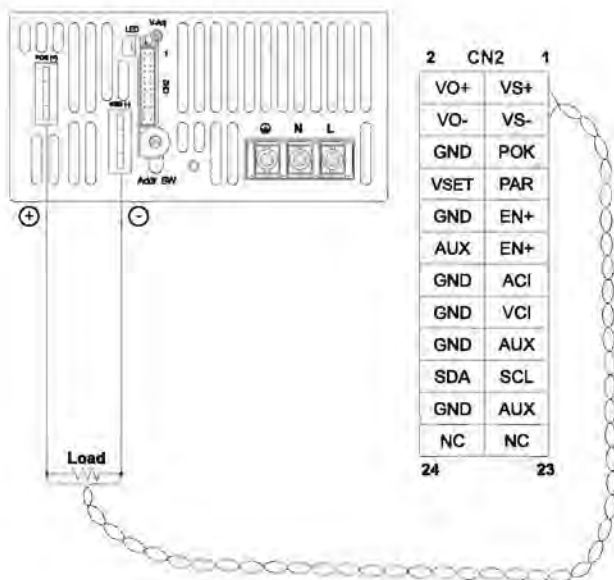
*Place an additional capacitor to have a better performance of auxiliary power operation.

*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.

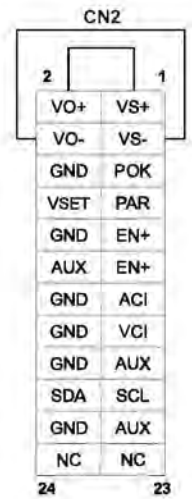
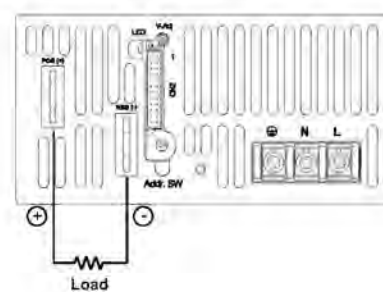
| | | |
|------|-----------------------|----|
| VSET | Open(Default Setting) | 5V |
| | Short To GND | 9V |



1. Remote Sense

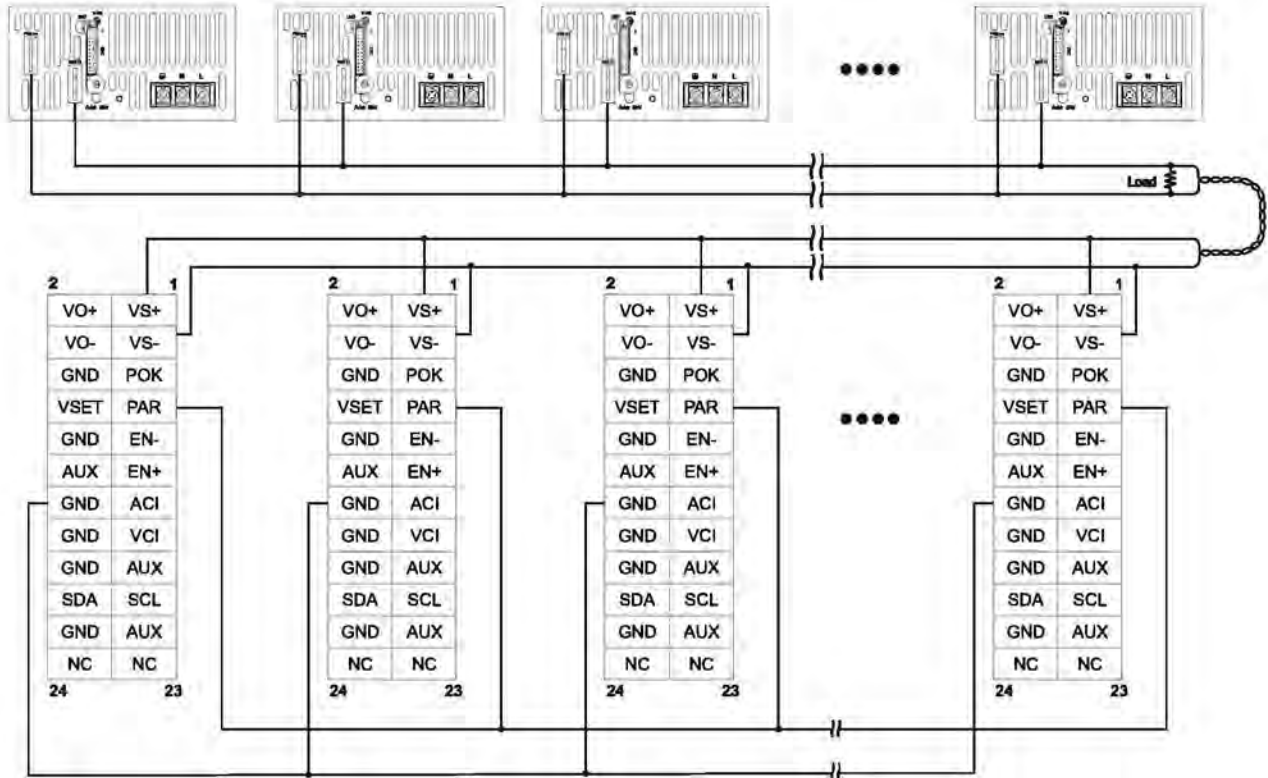


2. Local Sense (Default setting)

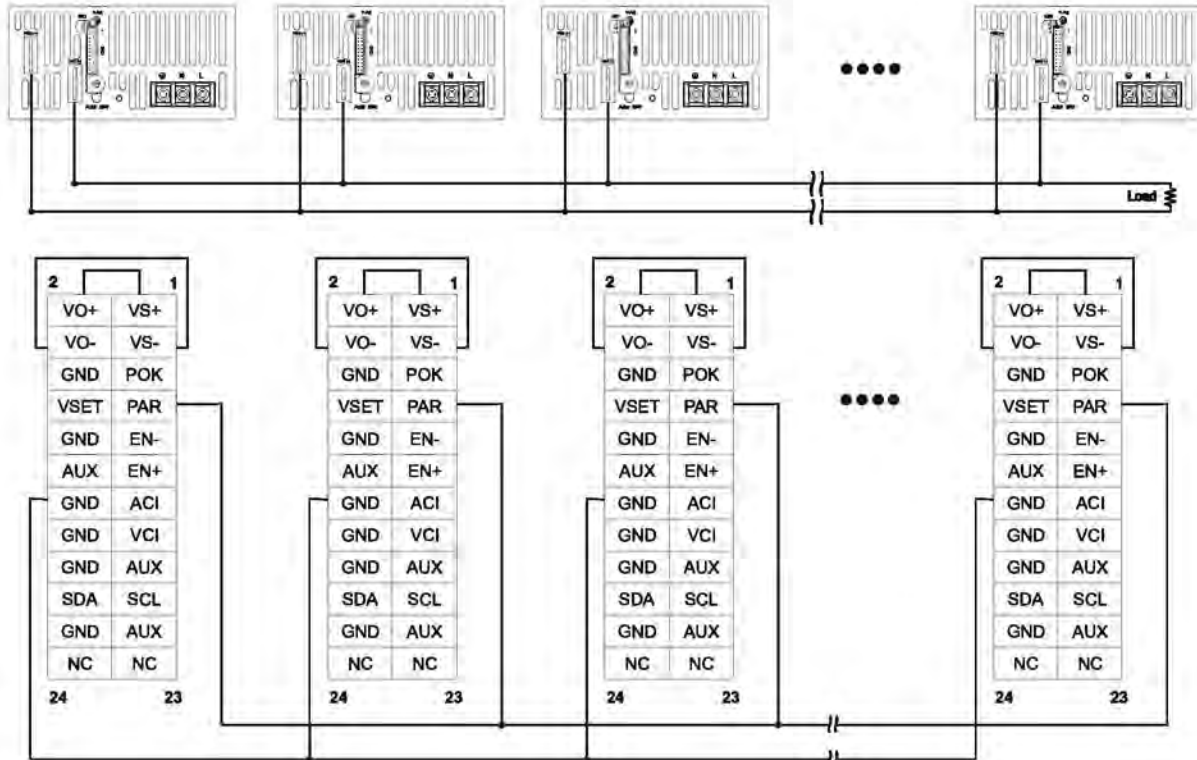




3. Current Sharing with Remote Sensing



4. Current Sharing with Local Sensing

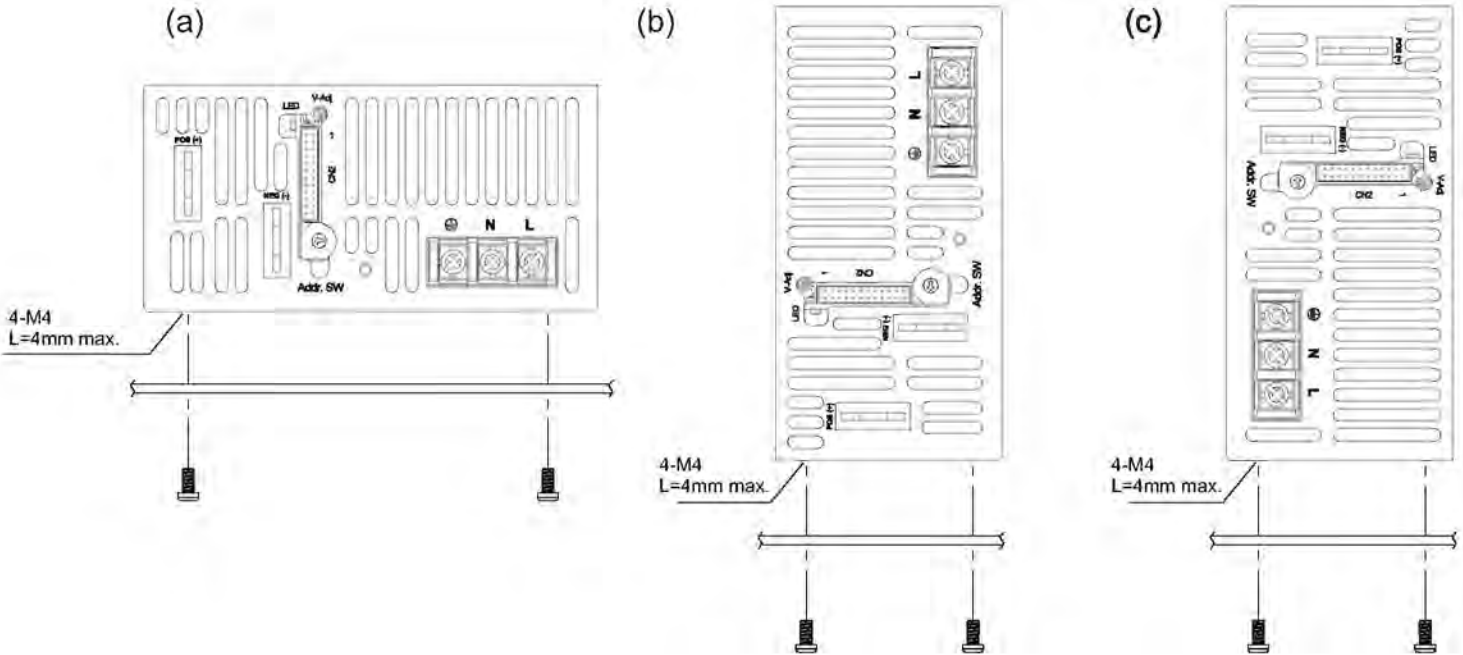




■ **Installation Instruction:**

1. Mounting Directions

1-1 Recommended standard mounting methods:



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 The Maximum allowable penetration of screw is 4mm. Incomplete threading should not be penetrated.

2-3 Recommended the torque of mounting screw:
M4 screw: 1.27N · m (13.0kgf · cm)

