

### 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 & I<sup>2</sup>C
- Power OK signal
- Remote ON / OFF, Remote sense function
- Protection: OVP, OLP, OTP, Fan failure

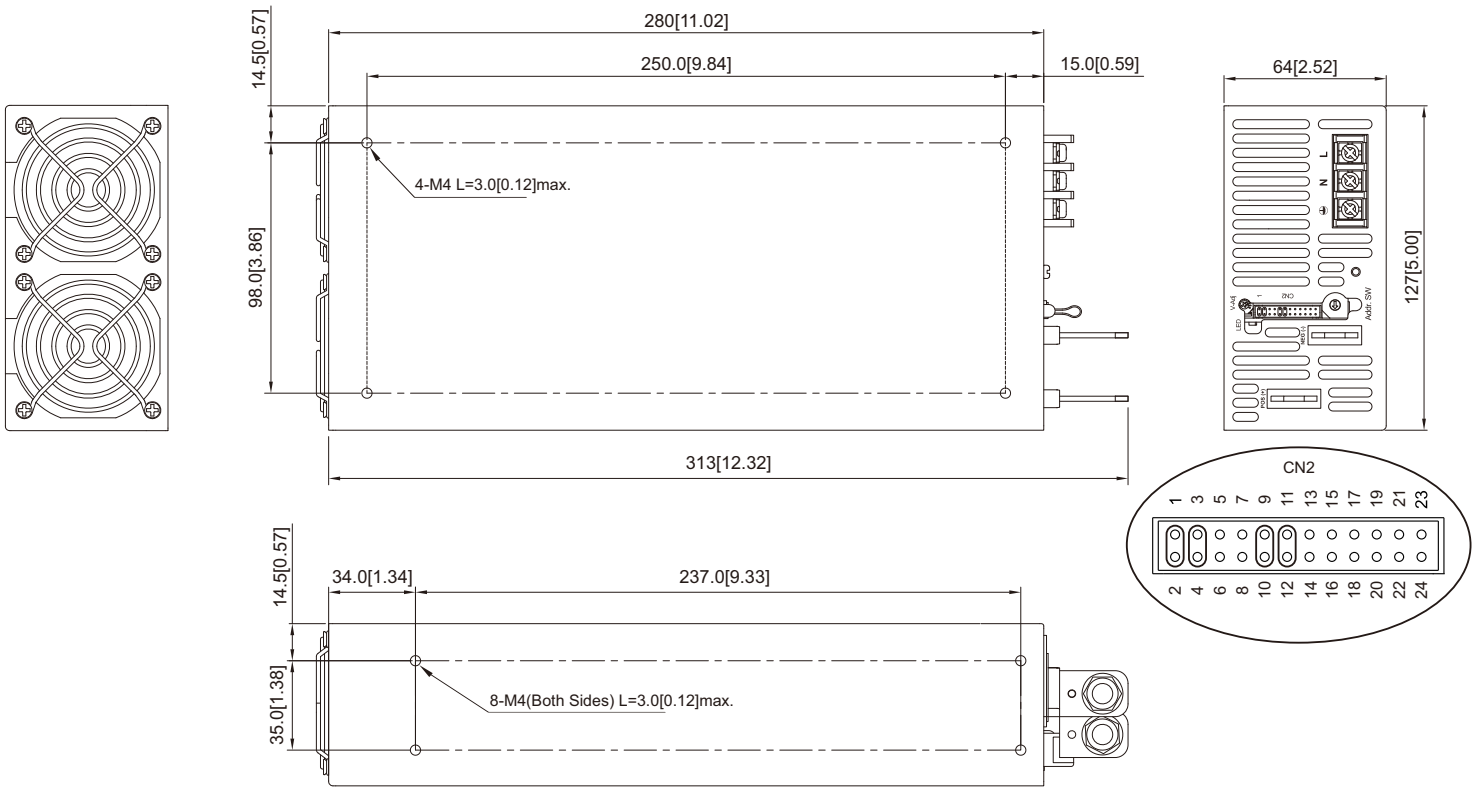


MODEL		AE-1500-12	AE-1500-15	AE-1500-24	AE-1500-30	AE-1500-36	AE-1500-48	AE-1500-60	
Output	DC Voltage Range	12V	15V	24V	30V	36V	48V	60V	
	Rated Current	125A	100A	62.5A	50A	41.7A	31.3A	25A	
	Current Range	0 ~ 125A	0 ~ 100A	0 ~ 62.5A	0 ~ 50A	0 ~ 41.7A	0 ~ 31.3A	0 ~ 25A	
	Rated Power	1500W	1500W	1500W	1500W	1500W	1500W	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%							
Input	Setup, Rise Time	800ms, 100ms at full load							
	Hold Up Time (Typ.)	14ms / 230VAC at full load							
	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							
Protection	Inrush Current (Typ.)	30A / 115VAC, 45A / 230VAC							
	Leakage Current	< 2.5mA / 240VAC							
	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 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							
Environment	Working Temp.	-25 ~ +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							
	Power Harmonic & Voltage Fluctuation and Flicker	Certified EN 61000-3-2; EN 61000-3-3							
EMS Immunity	Note.6	Certified EN 55024; EN6 1204-3; EN61000-6-1; IEC 61000-4-2, 3, 4, 5, 6, 8, 11							
Others	MTBF	111K HRS Certified MIL-HDBK-217F							
	Cooling	Load and temperature control fan							
	Dimension (WxHxD)	127x64x280 mm / 5.00x2.52x11.02 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: I/P-O/P 4242VDC. If with enclosure: I/P-O/P 2121VDC, I/P-FG: 2121VDC, O/P-FG: 707VDC

### 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	L
2	N
3	⏏

### CN2 Function Description:

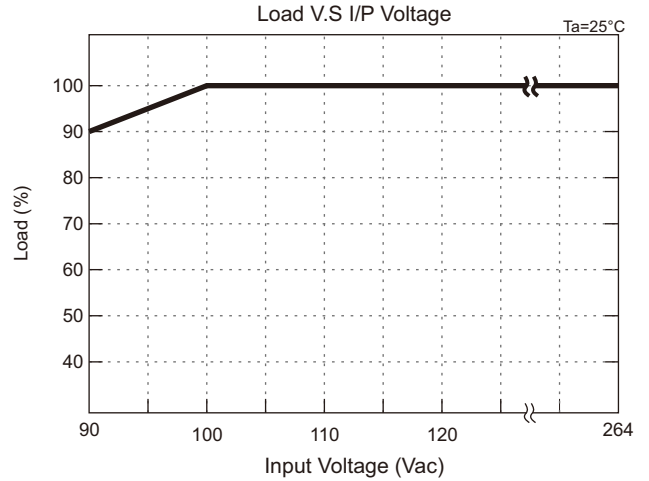
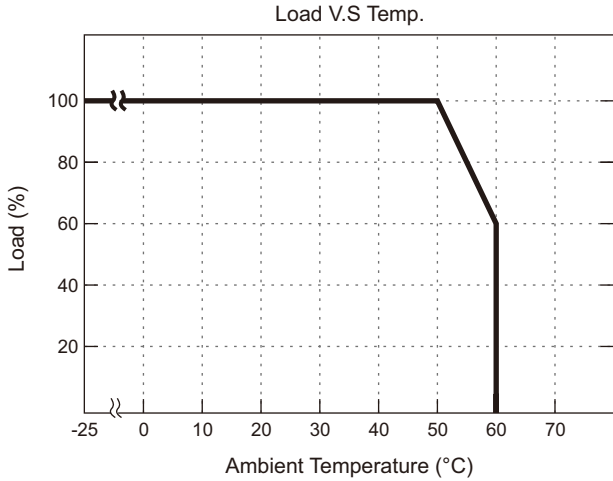
Pin No.	Function	Description	Pin No.	Function	Description	Mating Housing / Contact
1	VS+	Remote sense (+)	13	ACI	I Program	JST PHDR-24VS or equivalent
2	VO+	Positive output voltage	14	GND	Ground	
3	VS-	Remote sense (-)	15	VCI	V Program	
4	VO-	Negative output voltage	16	GND	Ground	
5	POK	Power OK	17	AUX	+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:

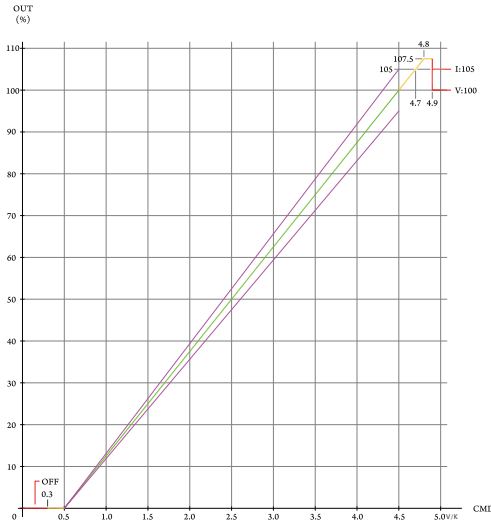
LED	LED Signal	Status
Solid(Green)		Power OK (Local mode)
Solid(Orange)		Power OK (Remote mode)
Slow Blink(Green)		Power Standby
Fast Blink(Red)		Over Voltage Protection ( OVP )
Solid(Red)		Over Load Protection ( OLP )
Slow Blink(Red)		Over Temperature Protection ( OTP )
Intermittent Blink(Red)		Fan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

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

### De-rating Curve:

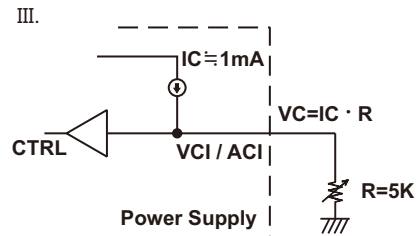
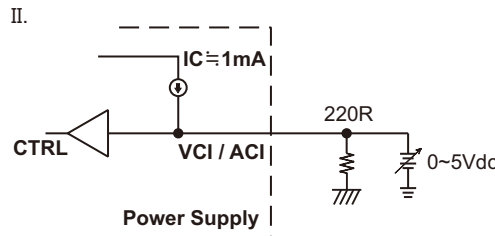
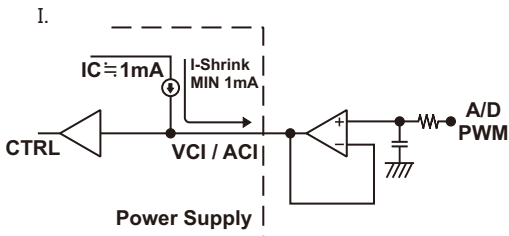
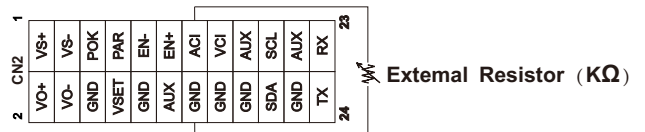
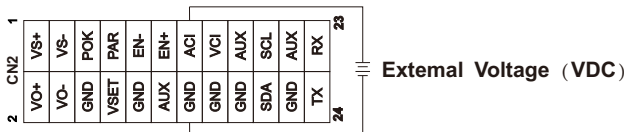
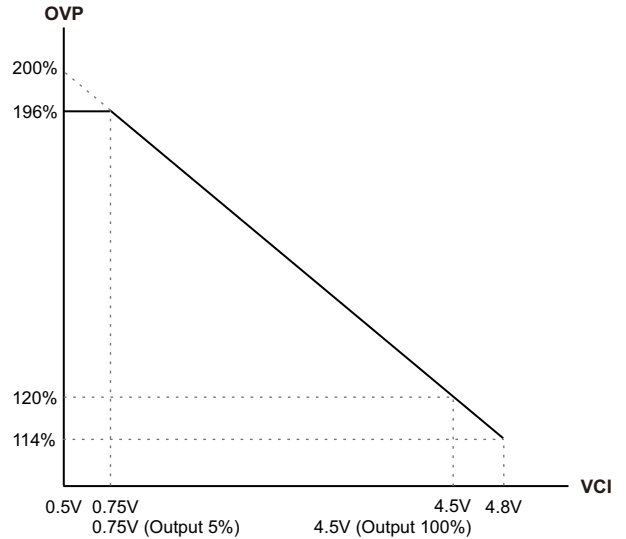


### CMD VS Output Curve:



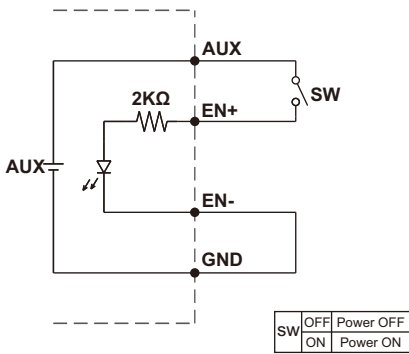
To ensure the power supply output voltage and current could be accurately adjusted, please make sure to adjust the output voltage and current > 10% vs. the rated voltage and current. (e.g. for a 24V unit, please adjust the DC output voltage above 2.4V to ensure accuracy; same applies to the output current)

### VCI VS OVP Curve:



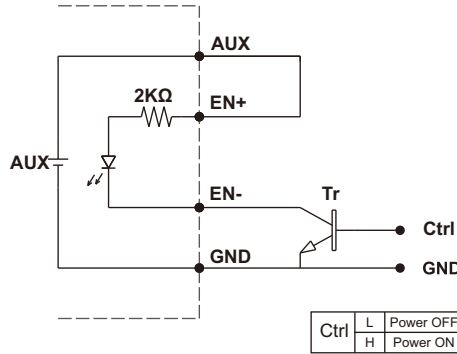
### Remote ON/OFF:

(A) Default Setting



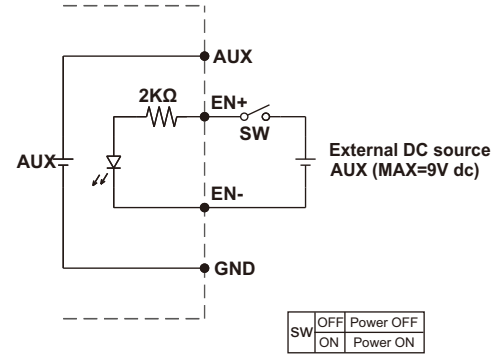
(A) Using internal 5V auxiliary source

(B)



(B) ON / OFF Control by NPN transistor

(C)



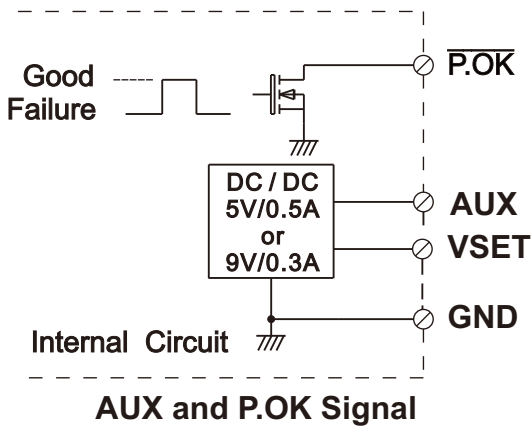
(C) Using external voltage source

\*GND shown in above diagram is referring to the GND of CN2, not the Grounding from main power(NEG-).\*

### Power OK Signal & Auxiliary Power Setting:

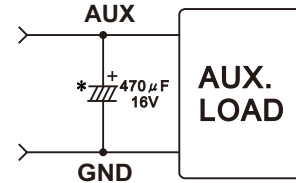
\*The grounding of "AUX" power and P.OK signal should be connected to "GND" port. If "VO-" is connected as Grounding, make sure to short the GND and VO- ports.

Open drain signal low when PSU turns on, Max. P.OK sink current: 20mA, Max. drain voltage: 40V.



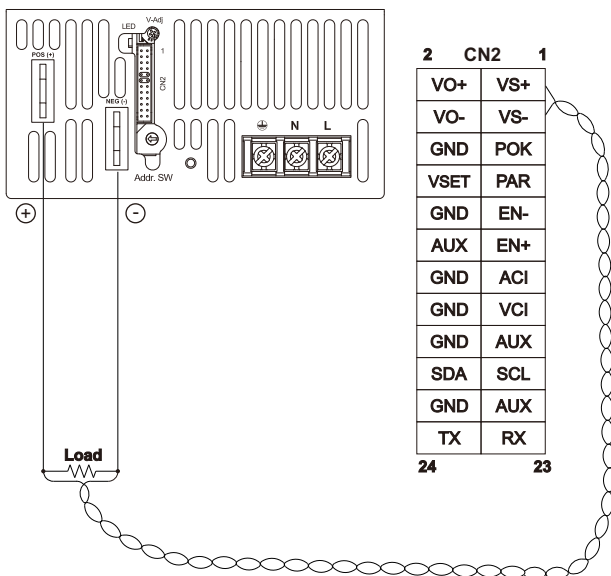
\*GND shown in above diagram is referring to the GND of CN2, not the Grounding from main power(NEG-).\*

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

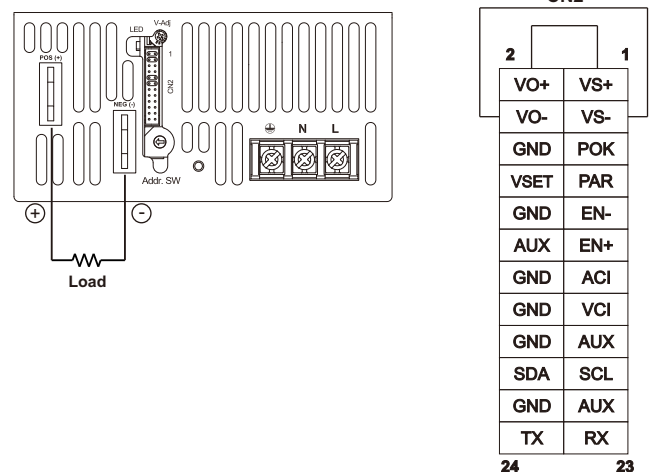


Do NOT exceed 5V/0.5A or 9V/0.3A

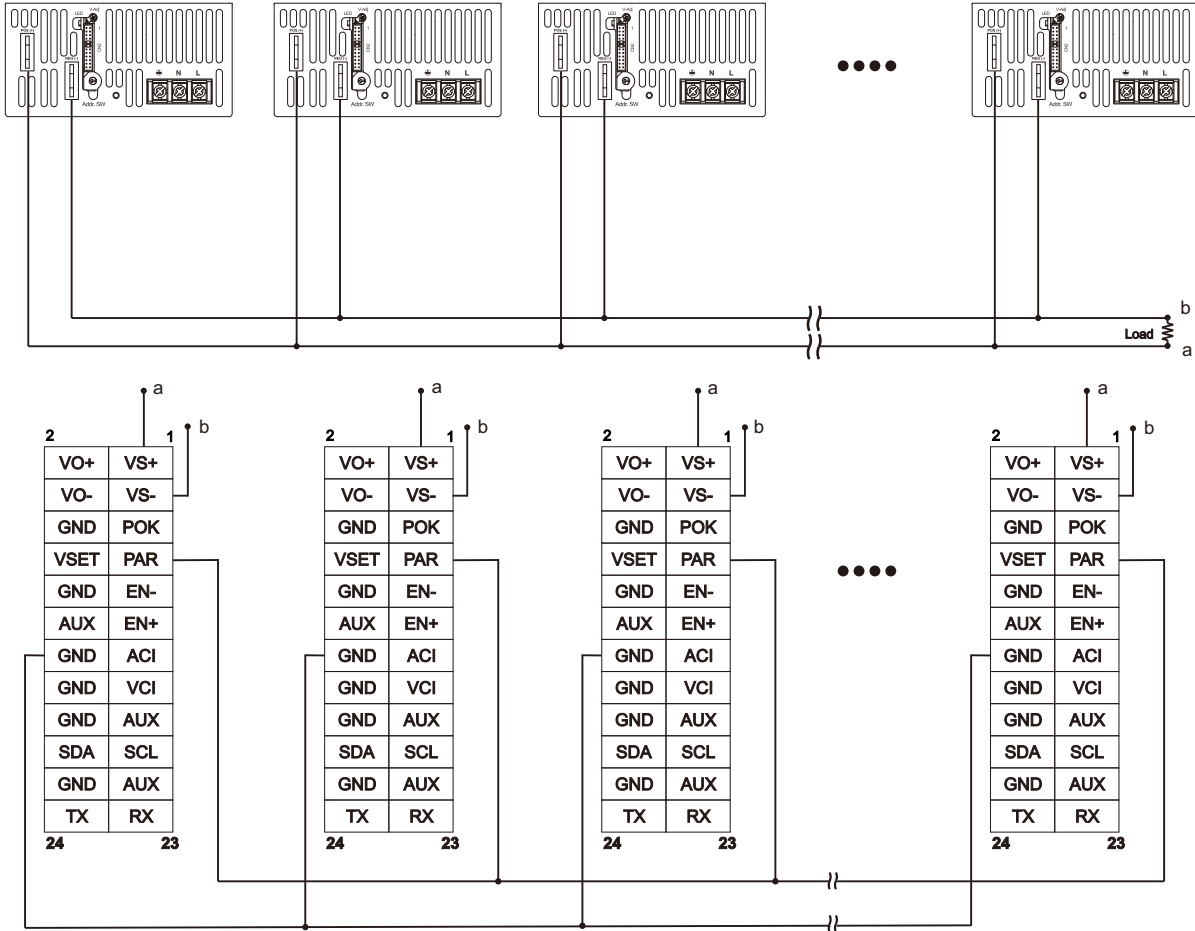
1. Remote Sense



2. Local Sense (Default setting)

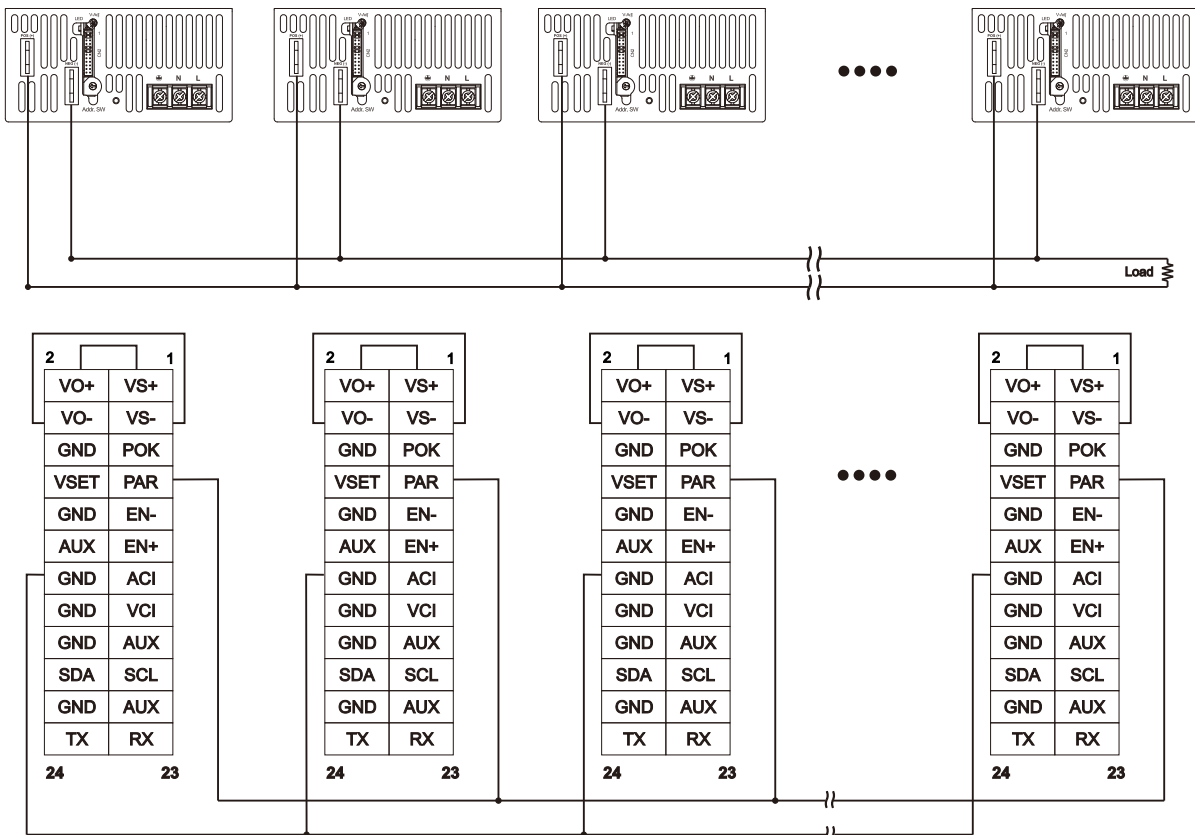


### 3. Current Sharing with Remote Sensing(Parallel Connection)



Please connect PAR pins together for current sharing function

### 4. Current Sharing with Local Sensing

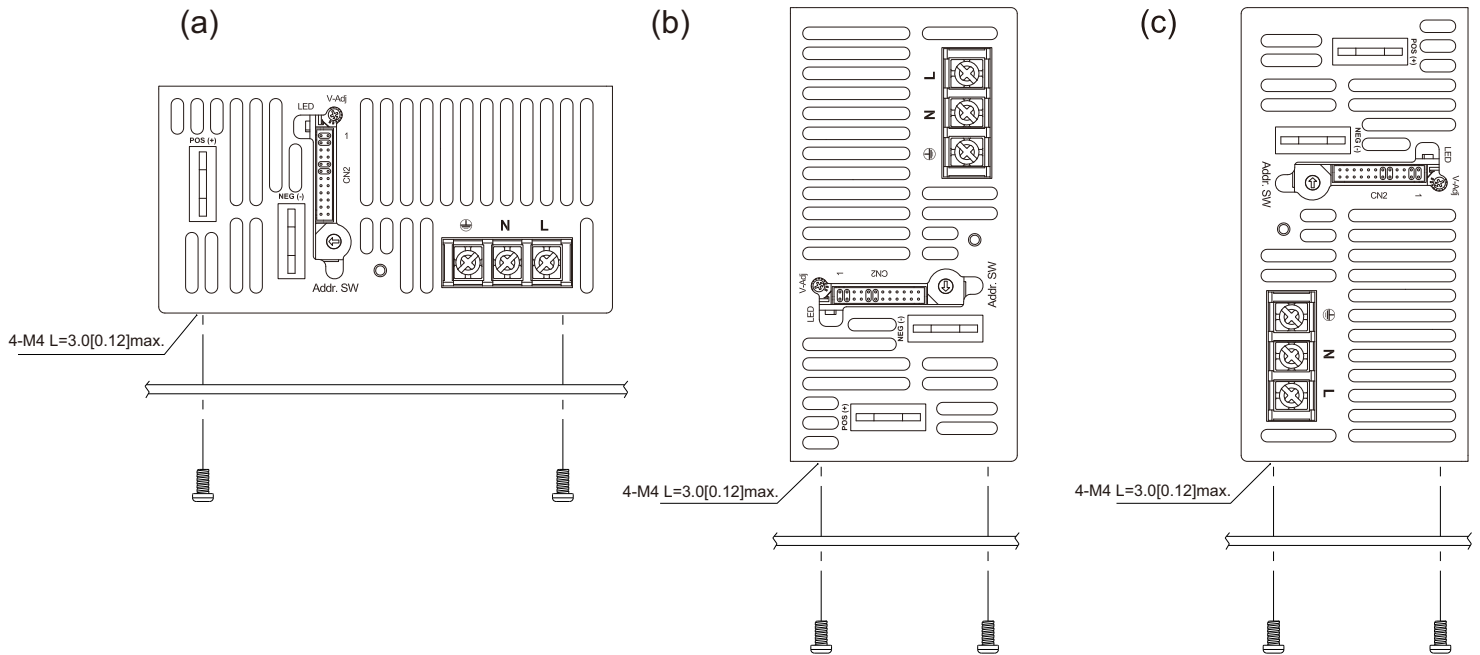


Please connect PAR pins together for current sharing function

### 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)

