

### Features:

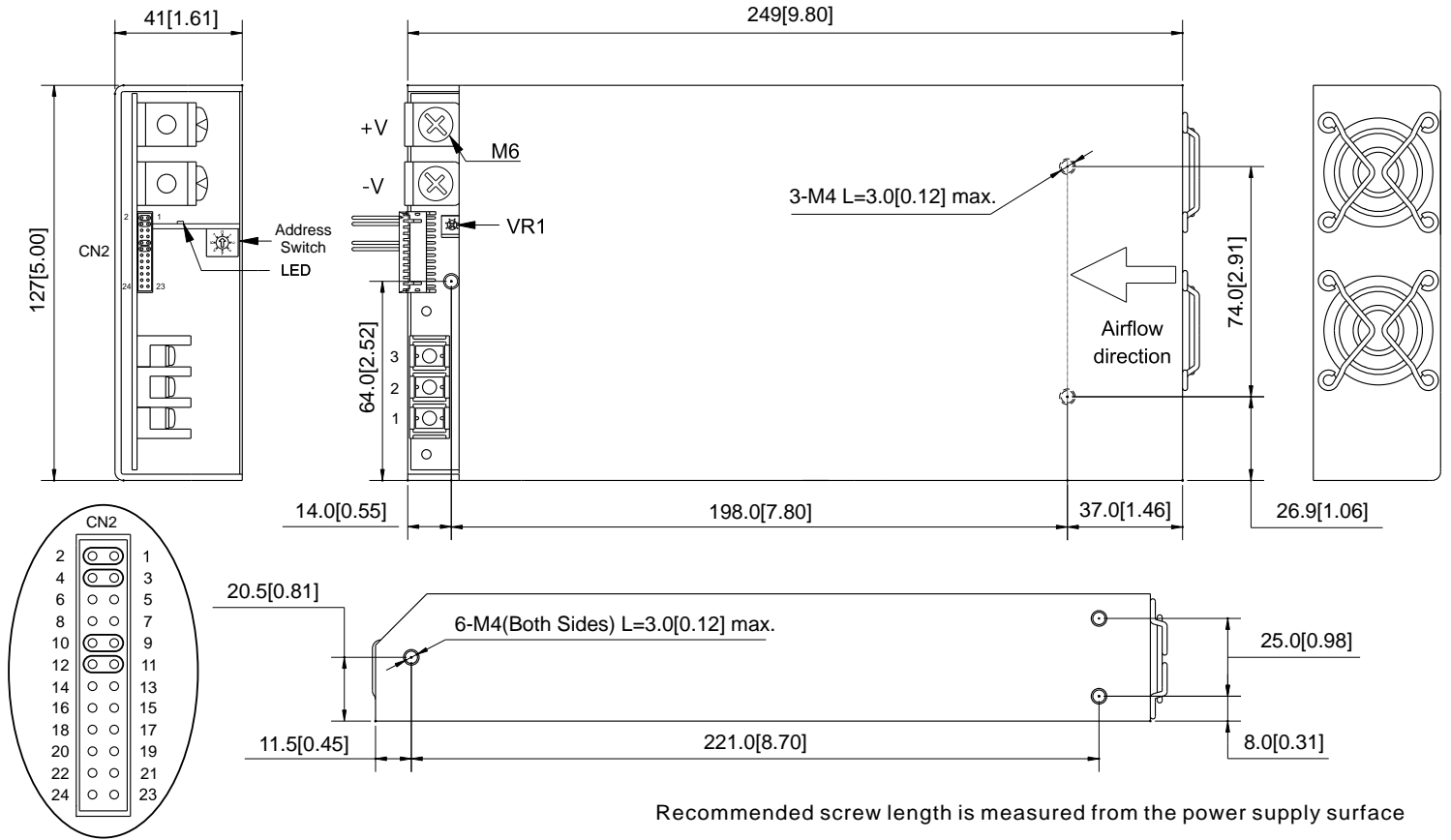
- 1U Design
- Programmable output Voltage (0% ~ 105%)
- Universal AC input / Full range
- Programmable output Current (0% ~ 105%)  
(Refer to pg. 5 for connection diagram)
- Forced current sharing at parallel operation
- Constant current limit
- Selectable +5V / 0.5A or +9V / 0.3A auxiliary output
- 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
- 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 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 ±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							
	Frequency Range	47 ~ 63Hz							
	Power Factor (Typ.)								
	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%) 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	Address Setting	Up to 8 units can be set using an address switch (sw1), 0~7							
	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)							
Safety & EMC	Vibration	10 ~ 500Hz, 2G 10min. / 1cycle, period for 60min. each along X, Y, Z axes Compliance to IEC60068-2-6; IEC60068-2-64							
	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							
Others	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						
Cooling	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:

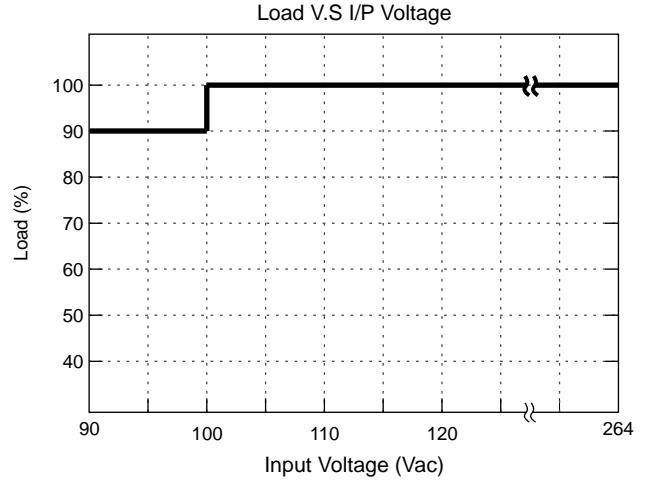
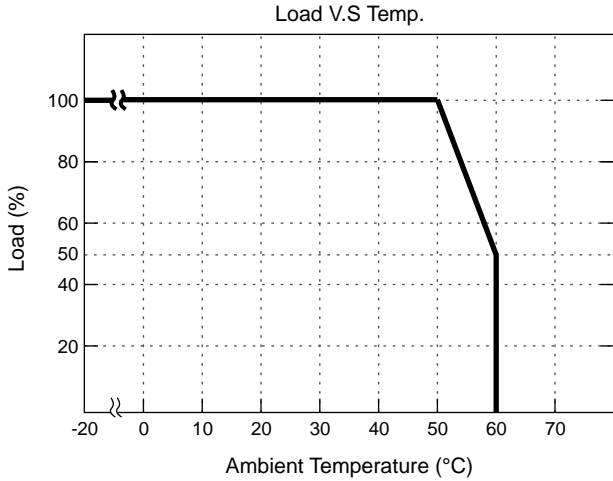
Pin No.	Function	Description	Pin No.	Function	Description	Mating Housing / Contact	
1	VS+	Remote sense (+)	13	ACI	I Program	JST PHDR-24VS or equivalent	JST SPHD-002T-P0.5 or equivalent
2	VO+	Positive output voltage	14	GND	Ground		
3	VS-	Remote sense (-)	15	VCI	V Program		
4	VO-	Negative output voltage	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:

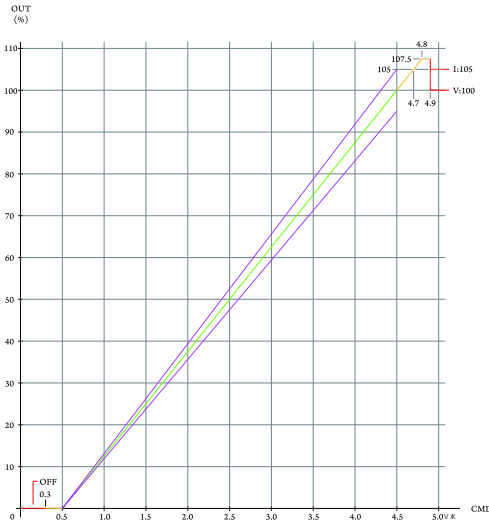
LED	LED Signal	Status
Solid(Green)		Power OK (Local mode)
Solid(Orange)		Power OK (Remote mode)
Slow Blink(Green)		Power Standby
Fast Blink(Red)		Over Voltage Protection ( OVP )
Solid(Red)		Over Load Protection ( OLP )
Slow Blink(Red)		Over Temperature Protection ( OTP )
Intermittent Blink(Red)		Fan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

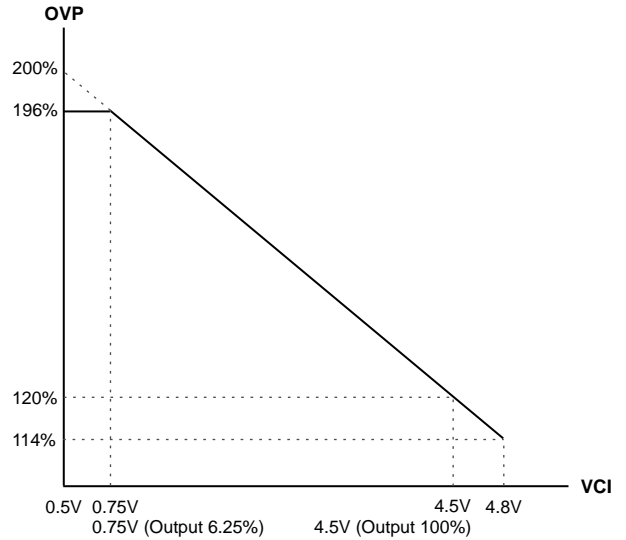
### De-rating Curve:



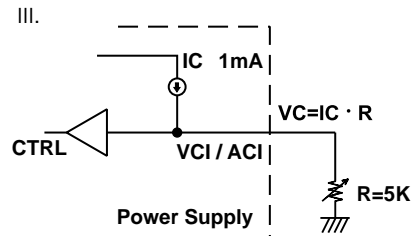
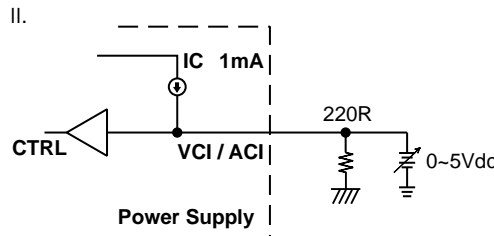
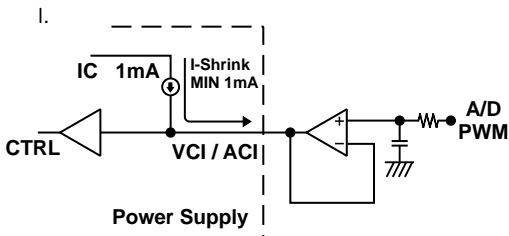
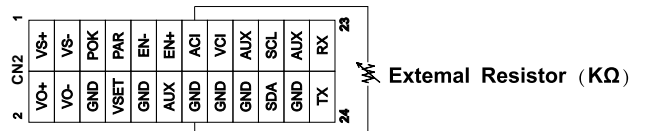
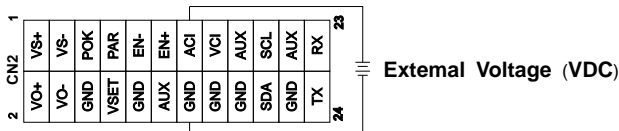
### CMD VS Output Curve:



### VCI VS OVP Curve:

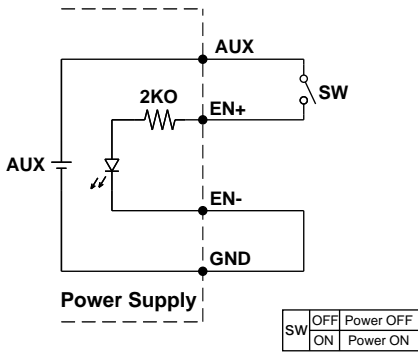


To ensure the power supply output voltage and current could be accurately adjusted, please make sure to adjust the output voltage and current > 10% vs. the rated voltage and current. (e.g. for a 24V unit, please adjust the DC output voltage above 2.4V to ensure accuracy; same applies to the output current)



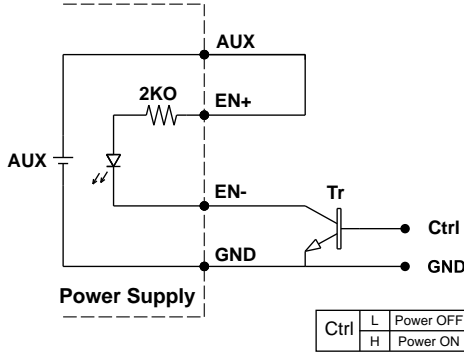
### Remote ON/OFF:

(A) Default Setting



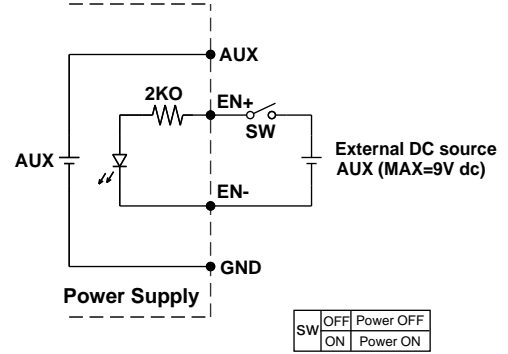
(A) Using internal 5V auxiliary source

(B)



(B) ON / OFF Control by NPN transistor

(C)



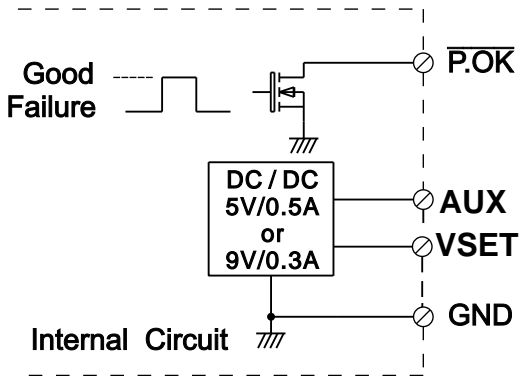
(C) Using external voltage source

### Power OK Signal:

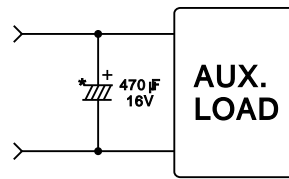
\*The grounding of "AUX" power should be connected to "GND" port. If "V-" is connected as Grounding, make sure to short the GND and V- ports.

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

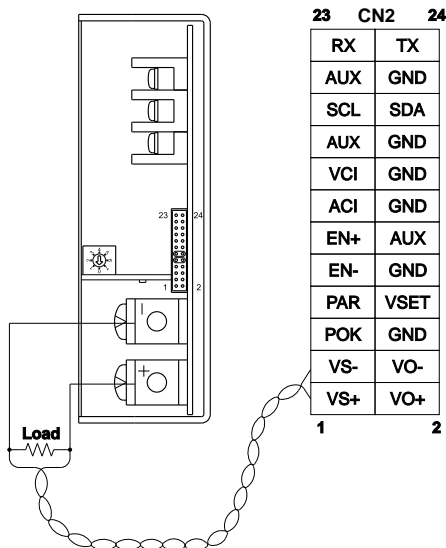
VSET	Open(Default Setting)	5V
	Short To GND	9V



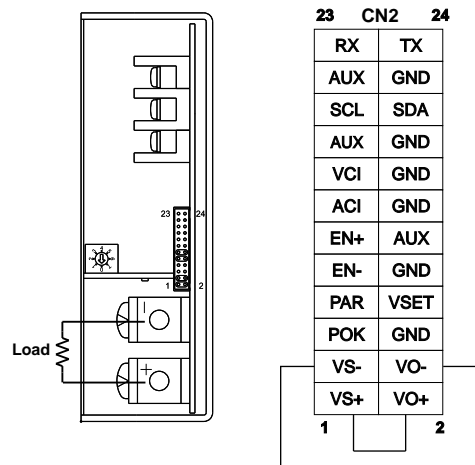
AUX and P.O.K Signal



1. Remote Sense

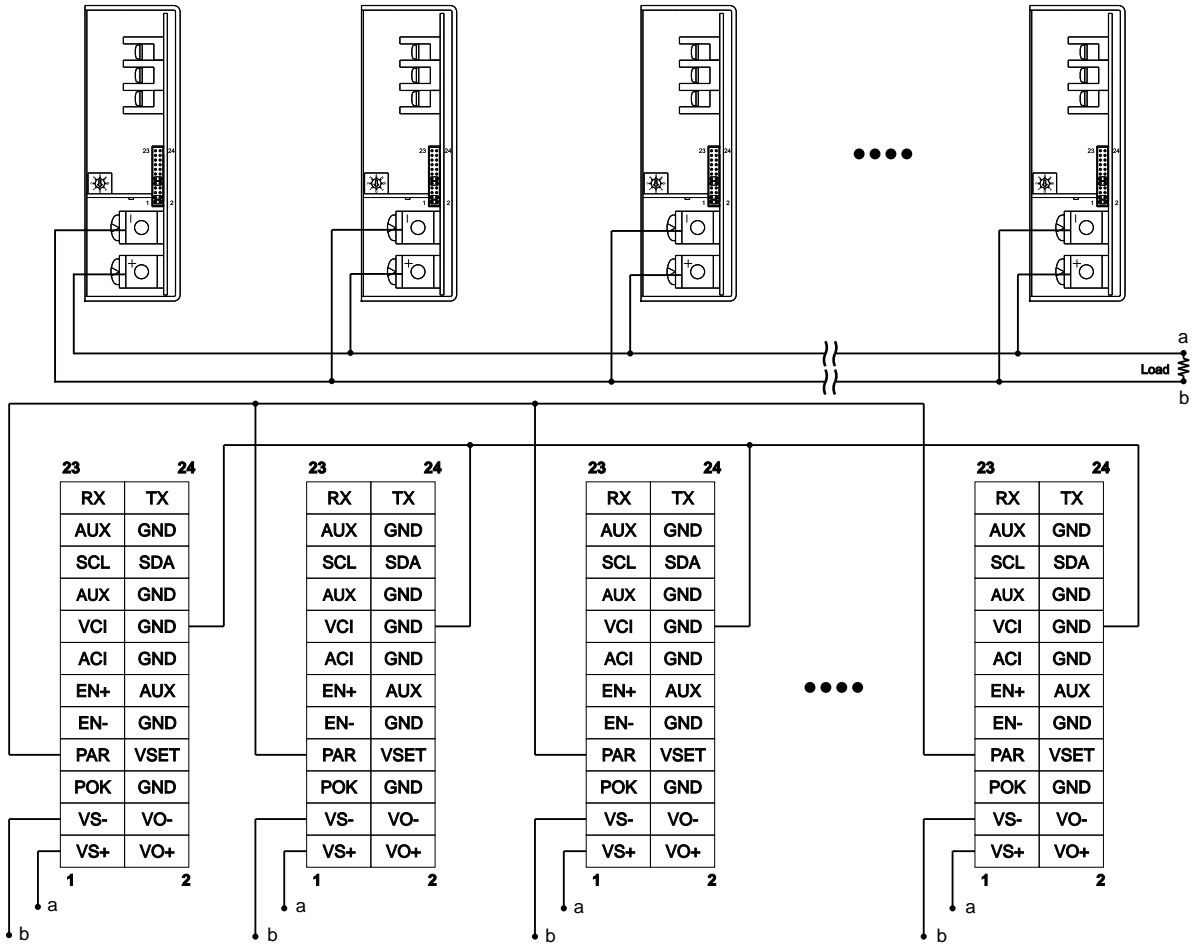


2. Local Sense (Default setting)



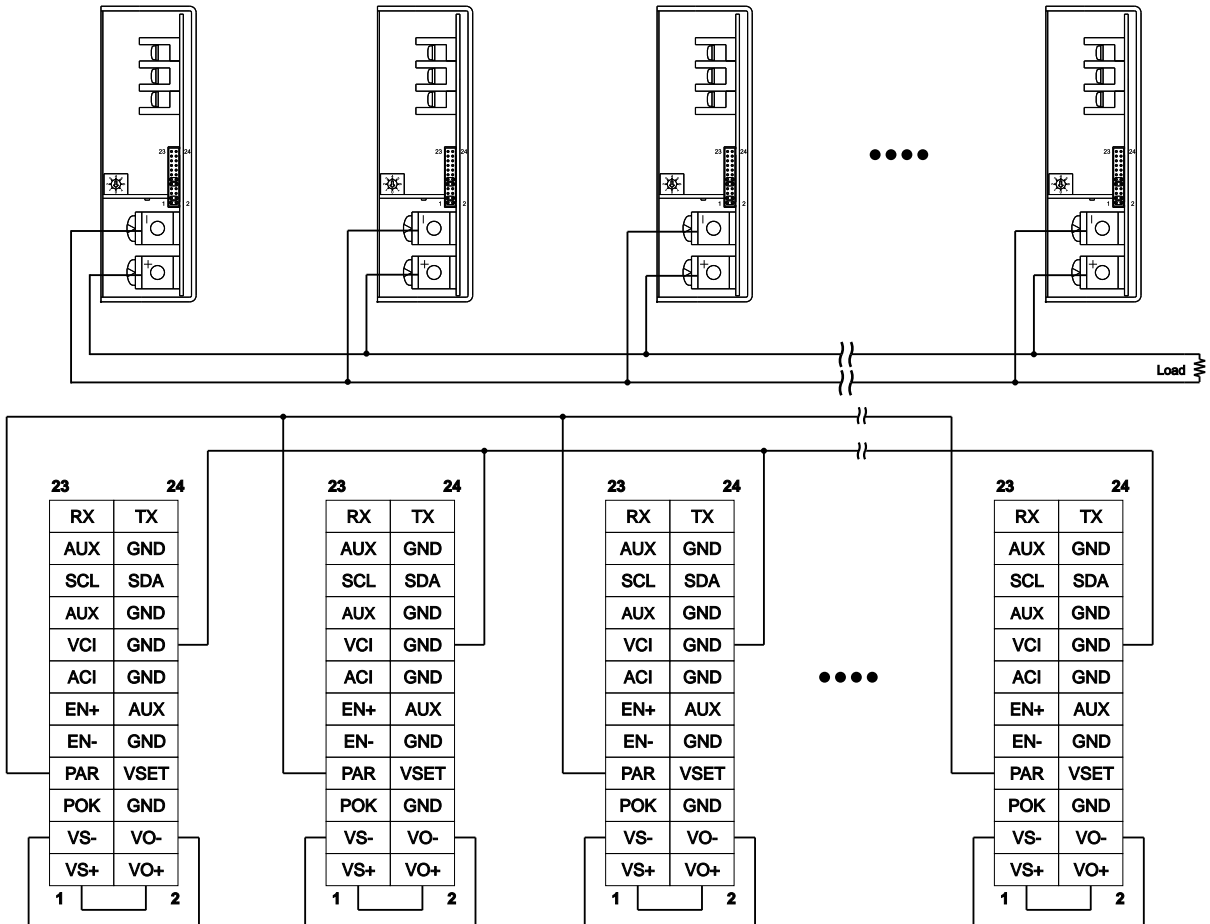
VS-,VS+ Compensation Voltage < 0.5V

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



Please connect PAR pins together for current sharing function

### 4. Current Sharing with Local Sensing

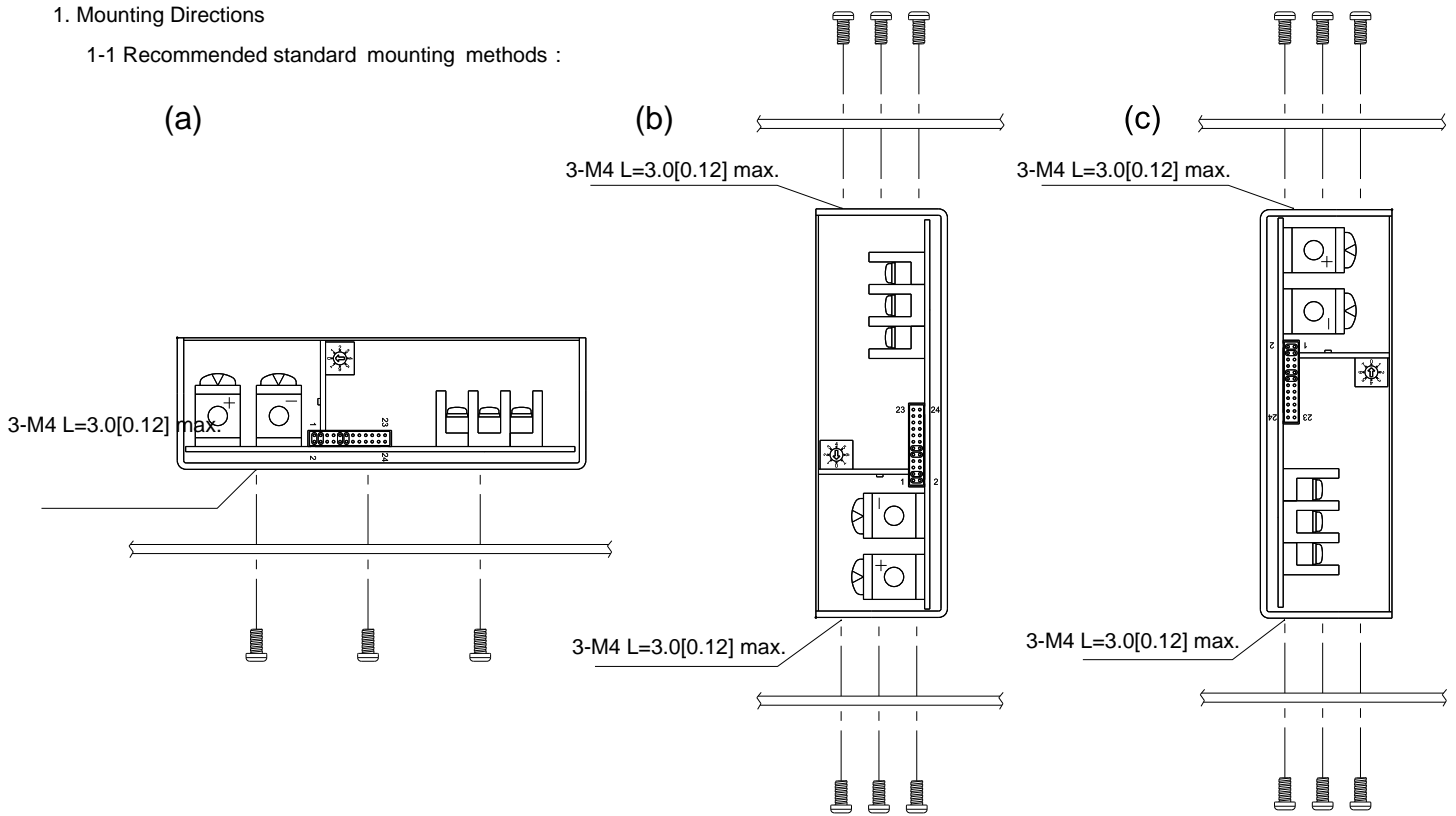


Please connect PAR pins together for current sharing function

### 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)

